

From Enrollment to Credential: Navigating the Short-Term Training Pipeline

What four short-term career training programs reveal about improving credential attainment

Authors: Amani Talwar and Neha Nanda

Project Director: Neha Nanda



Contents

Acknowledgments.....	ii
Executive Summary.....	iii
Introduction	1
Career Training Programs and Data Sources	2
Patterns of Persistence and Credential Attainment.....	4
Bilingual Teaching Assistant Program.....	6
IT Fundamentals Program.....	8
Culinary Arts Program.....	10
Nurse Aide Program.....	12
Implications for Policy and Program Design	14
Future Directions	16
Conclusion.....	17
References	18
Appendix	A–1

Exhibits

Exhibit ES1. Student Progress from Enrollment through Credentials	iii
Exhibit 1. Characteristics of the Career Training Programs	3
Exhibit 2. Students' Enrollment and Progress in the Career Training Programs	5
Exhibit 3. Characteristics of Students in the Bilingual Teaching Assistant Program	6
Exhibit 4. Students' Progress in the Bilingual Teaching Assistant Program	7
Exhibit 5. Characteristics of Students in the IT Fundamentals Program	8
Exhibit 6. Students' Progress in the IT Fundamentals Program	9
Exhibit 7. Characteristics of Students in the Culinary Arts Program	10
Exhibit 8. Students' Progress in the Culinary Arts Program.....	11
Exhibit 9. Characteristics of Students in the Nurse Aide Program	12
Exhibit 10. Students' Progress in the Nurse Aide Program	13
Exhibit A1. Characteristics of Career Training Students by Program	A–1

Acknowledgments

The authors thank Allison Kokkoros, Elani Lawrence, Lynold McGhee, and other staff at the Carlos Rosario International Public Charter School for their partnership and collaboration on this study. We are especially grateful for their support with data access and their efforts to ensure the accuracy and contextual relevance of the findings.

This research brief was developed through the [PROPEL Center: Promoting Resilience, Opportunity, and Progress in Employment and Learning](#) at the American Institutes for Research® (AIR®). The PROPEL Center is supported by the [AIR Opportunity Fund](#).

Finally, we thank Stephanie Cronen for her thoughtful feedback and guidance, as well as other AIR colleagues who contributed their time and expertise throughout the development of this brief.

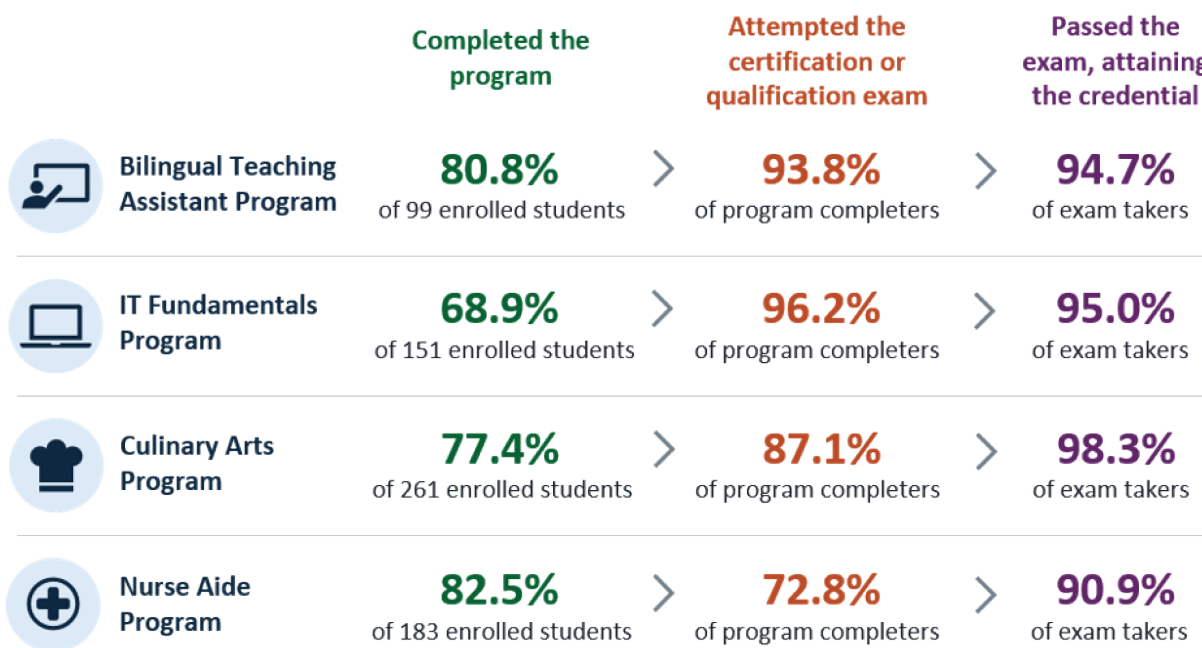
Any errors or omissions are the sole responsibility of the authors. We hope the insights presented in this brief support leaders and practitioners seeking to strengthen short-term career training pathways and expand opportunities for economic mobility.

Executive Summary

Short-term, non-degree credential programs have become an increasingly prominent strategy for expanding access to career opportunities, especially for individuals seeking middle-skill jobs in high-demand industries. As workforce systems invest in these programs, understanding how participants progress from training into certification or qualification is critical. For policymakers and practitioners, it is crucial to understand not only whether training participants ultimately earn credentials, but also where along the training pathway learners are more likely to disengage. This understanding can highlight opportunities to strengthen program design and supports for short-term training in distinct career pathways.

About This Brief. This study examines adult learners' progress through four short-term career training programs, each lasting five months, or the length of an academic term—Bilingual Teaching Assistant, Information Technology (IT) Fundamentals, Culinary Arts, and Nurse Aide—at the Carlos Rosario International Public Charter School in Washington, D.C. Each of the programs is aligned with an industry-recognized certification or qualification.¹ Drawing on administrative data from Spring 2019 through Spring 2023,² this analysis tracks students' movement through the key milestones of program completion, attempt at a certification or qualification exam, and certification or qualification attainment. This milestone-based approach provides a nuanced view of how training translates into credentials for different career pathways and where progress tends to stall. **Exhibit ES1** summarizes student progress in each program during the study period.

Exhibit ES1. Student Progress from Enrollment through Credentials



¹ The Bilingual Teaching Assistant training program prepares students to achieve a qualifying score on the ParaPro assessment, which is a qualification pathway to employment as a paraprofessional (District of Columbia Public Schools, n.d.). The IT Fundamentals training program prepares students for the CompTIA IT Fundamentals+ certification and entry level roles in IT. The Culinary Arts training program prepares students for multiple ServSafe certifications and careers in food service in the restaurant and hospitality industries. The Nurse Aide training program prepares students for the National Nurse Aide Assessment Program (NNAAP) certification and a career as a certified nursing aide.

² We followed students' certification or qualification attempts and attainment through Fall 2024. Students who enrolled in career training only during the terms most affected by the COVID-19 pandemic (Spring 2020, Fall 2020, and Spring 2021) and did not enroll before or after those terms were excluded from this analysis.

Key Findings. Across the four career training programs, nearly two-thirds (65%) of enrolled students earned their targeted industry-recognized certification or qualification. However, persistence and progression varied by program, pointing to differences in where students were most likely to face barriers along the pathway.



Bilingual Teaching Assistant and Culinary Arts programs: High retention and success. The majority of enrolled students completed these programs (77–80%), and most completers went on to take the corresponding exam (ParaPro for Bilingual Teaching Assistant and ServSafe for Culinary Arts). Nearly all who attempted the exams passed. Minimal drop-off after completion suggests strong alignment between training and exam requirements.



IT Fundamentals program: Early dropout challenge. Only 69% of enrolled students completed the program. Those who completed almost universally attempted the CompTIA IT Fundamentals+ certification exam and passed at high rates (95%), indicating that the primary barrier was persisting through training rather than students' preparation for certification.



Nurse Aide program: Transition-to-exam gap. Roughly 83% of enrolled students completed the Nurse Aide program, similar to the high completion rates for Bilingual Teaching Assistant, but only about 73% of Nurse Aide completers attempted the National Nurse Aide Assessment Program (NNAAP) exam. Among those who took the exam, more than 90% passed, indicating strong preparation. Yet one in four program completers did not attempt the exam, suggesting a bottleneck between program completion and the exam attempt (possibly due to scheduling, cost, or other personal barriers) that warrants targeted attention.

Across programs, the high pass rates among students who attempted the exam likely reflect the school's career training approach, which emphasizes applied learning and repeated practice aligned with occupational standards and informed by advisory committees of industry professionals (Allen et al., 2025). Strong completion rates in three programs may reflect institutional supports that reduce barriers to participation, such as transportation assistance, multilingual counseling and referrals, and tiered academic supports.

Implications for Policy and Program Design. The findings underscore that short-term training programs can deliver tangible results for adult learners, but maximizing success requires attention to how students move through these programs. This evidence arrives at a moment when education and workforce leaders, from federal policymakers to community college administrators, are rethinking how to measure and support short-term credential pathways.



First, by **focusing on milestone-level progress**, decision-makers can better identify where interventions or resources will have the greatest impact. The analysis suggests that targeting financial and programmatic support at known points of drop-off (such as the point of program completion or the exam-taking stage) could help more students reach the finish line. Given that those who attempt the exams nearly always pass, any improvement in completion or exam uptake is likely to boost overall credential attainment.



Second, **strengthening data systems** can help providers identify barriers students face during training and after completion. Systematically collecting this information would allow programs to better target supports and outreach to points where students are most likely to disengage.

These insights, drawn from a real-world case of a community-based career training provider, offer timely guidance as education and workforce leaders seek to scale short-term credential pathways and ensure they deliver on their promise of rapid, meaningful career advancement.

Introduction

Career training, or occupational training, provides individuals with the skills and credentials needed to access jobs in high-demand industries and advance along career pathways. High-quality career training has become increasingly important as the U.S. labor market faces persistent shortages in middle-skill occupations (McLeod et al., 2025). At the same time, millions of working-age adults are disconnected from training opportunities that lead to jobs with family-sustaining wages (Lumina Foundation, 2024). This gap leaves employers struggling to fill critical roles while many adults remain in low-wage jobs with limited opportunities for advancement. Short-term, non-degree credential programs have emerged as one strategy to address these challenges by aligning training with workforce demand and offering more flexible entry points to middle-skill careers (Murphy, 2025).

Despite growing interest in short-term credential programs, policymakers and practitioners have limited quantitative evidence on how adults progress through these programs prior to earning a certification (George Washington Institute of Public Policy, 2021). As such, there is limited insight into where along the training process students may disengage or encounter barriers. To attain a credential, students must successfully navigate a series of milestones, including sustained program participation, program completion, certification exam completion, and exam success. At each stage, adult learners may encounter obstacles that slow or halt progress, and these obstacles may differ across occupations and program designs. Understanding where progress stalls, and for whom, is therefore essential for designing policies and programs that improve outcomes, not just access.

This brief examines the training-to-credential pathway across four short-term career training programs offered at the Carlos Rosario International Public Charter School, an adult public charter school in Washington, D.C.: Bilingual Teaching Assistant, Information Technology (IT) Fundamentals, Culinary Arts, and Nurse Aide. Using administrative data, the analysis tracks progress across key milestones, from enrollment through passing the certification or qualification exam, to identify patterns of persistence and attrition within and across programs. By comparing program completion rates, exam attempt rates among completers, and pass rates among exam takers, the brief sheds light on where students are most likely to disengage and where preparation appears strongest.

The findings show that 65% of enrolled students across the four programs earned an industry-recognized certification or qualification. At the same time, a nontrivial share did not reach the exam stage, and the point at which progress stalled varies by program. Among those who completed training, most went on to attempt certification or qualification and pass at high rates, suggesting strong alignment between instruction and exam requirements. However, differences across programs point to specific stages where additional support may be needed to help more students reach certification or qualification. These patterns have direct implications for policy design, suggesting that improving credential outcomes may require different strategies depending on whether challenges arise during program participation, at completion, or during the transition to certification or qualification.

By adopting a milestone-based perspective, this brief aims to inform policymakers and practitioners seeking to strengthen short-term occupational training and career pathways. The analysis highlights the importance of aligning performance metrics, accountability systems, and student supports with the points at which adult learners struggle. It also underscores why intermediate outcomes (e.g., program completion, exam attempts) are key indicators of program effectiveness alongside credential attainment.

Career Training Programs and Data Sources

The Carlos Rosario School operates two campuses in Washington, D.C., and provides a combination of foundational education, career training, and student support services designed for adults pursuing education and occupational credentials, often alongside work and family responsibilities (Coffin & Rubin, 2023). The school, which began as an English instruction program in the 1970s, became the first adult public charter school in the United States in 1998 (Carlos Rosario International Public Charter School, 2019; District of Columbia Public Charter School Board, 2018). The current student population includes adults from different cultural and linguistic backgrounds, with varying prior educational attainment. Most students are classified as low-income, and a majority are 21–40 years old (Carlos Rosario International Public Charter School, 2025). The school offers support services intended to reduce barriers to participation, including distributing internet-enabled devices, providing transportation supports, and assisting students with obtaining healthcare coverage.

Embedded within this broader context, the career training programs at the school are designed to prepare adult learners for industry-recognized certifications and qualification pathways tied to in-demand occupations in healthcare, IT, culinary arts, and education, sectors that typically offer relatively rapid entry into employment and opportunities for continued skill development. Each career training program is tuition-free and lasts for five months, the length of an academic term at the school.

- The **Bilingual Teaching Assistant** training program prepares students to achieve a qualifying score on the ParaPro assessment, which is a qualification pathway to employment as a paraprofessional (District of Columbia Public Schools, n.d.).³
- The **IT Fundamentals** training program prepares students for the CompTIA IT Fundamentals+ certification and entry-level roles in IT.
- The **Culinary Arts** training program prepares students for multiple ServSafe certifications and careers in food service in the restaurant and hospitality industries. Certifications include ServSafe Food Manager, ServSafe Food Handler, ServSafe Allergens, and ServSafe Alcohol.

³ To work as a paraprofessional in D.C., individuals must have a high school diploma or equivalent (e.g., GED) and meet one of three requirements: (1) earn a qualifying score on a state-approved assessment; (2) hold an associate's degree or higher; or (3) complete at least 48 college credits (District of Columbia Public Schools, n.d.). The Carlos Rosario School offers the assessment-based qualification pathway, for which D.C. has approved the ParaPro and requires a score of 461 (District of Columbia Public Schools, n.d.; ETS, n.d.).

- The **Nurse Aide** training program prepares students for the National Nurse Aide Assessment Program (NNAAP) certification and an entry-level role as a nurse aide or patient care technician.⁴

For each career training program, applicants participate prior to enrollment in advising sessions that are designed to clarify program expectations, certification and qualification requirements, and career pathways. The key characteristics of these four career training programs are summarized in Exhibit 1. More details are provided in the program-specific sections.

Exhibit 1. Characteristics of the Career Training Programs

Program Characteristic	Bilingual Teaching Assistant Program	IT Fundamentals Program	Culinary Arts Program	Nurse Aide Program
Program duration	One semester (five months)	One semester (five months)	One semester (five months)	One semester (five months)
High school diploma required	Yes	Yes	No	Yes
Minimum English proficiency level required	High-intermediate	High-intermediate	Intermediate	High-intermediate
Advising session required	Yes	Yes	Yes	Yes
Assessment prerequisites	Passing diagnostic math or reading assessments	Passing the Microsoft Word module of the Northstar Digital Literacy assessment	None	None
Targeted certification or qualification	Qualifying score on the ParaPro assessment	CompTIA IT Fundamentals+	ServSafe Food Manager, ServSafe Food Handler, ServSafe Allergens, ServSafe Alcohol	NNAAP
Required practicum or clinical component	Practicum of 40 hours in a K–12 or adult education setting	None	None	Clinical experience of 40 hours at a local partner site

Note. Completing the Bilingual Teaching Assistant and Nurse Aide programs requires completion of the respective practicum or clinical component. Earning a qualifying score on the ParaPro assessment is one qualification pathway to employment as a paraprofessional (District of Columbia Public Schools, n.d.).

⁴ To become a certified nursing aide in Washington, D.C., individuals must complete an approved training program with a minimum of 40 hours of clinical experience, such as the program offered by the Carlos Rosario School, and earn a passing score on the NNAAP exam (District of Columbia Department of Employment Services, n.d.).

This brief draws on administrative data from the Carlos Rosario School, covering 694 students who enrolled in career training programs in an academic term between Spring 2019 and Spring 2023 and attended for at least one instructional day⁵, excluding those who enrolled only during the terms most affected by the COVID-19 pandemic (Spring 2020, Fall 2020, and Spring 2021) and did not enroll before or after those terms. The data include students' background characteristics at intake, attendance records during enrollment, program completion status, certification or qualification exam attempts, and exam outcomes. We followed students' certification or qualification attempts and attainment through Fall 2024. All measures were defined and examined consistently across programs to document patterns associated with key milestones in each career training pathway.

The exclusion of students from this study whose participation was limited to the peak pandemic academic terms is based on well-documented disruptions in adult education during that period. Programs serving adult learners reported a noticeable decline in enrollment and attendance, alongside significant shifts to remote instruction (Belzer et al., 2020). Many adult learners faced challenges such as limited access to devices and reliable internet, increased responsibilities at home, and difficulties adapting to remote instruction (Belzer et al., 2020; Lotas, 2021). These challenges disrupted engagement and learning, and so, if students who participated in the four Carlos Rosario School programs only during peak pandemic terms had been included in the study, the data might have included atypical student experiences and certification outcomes.

Patterns of Persistence and Credential Attainment

We examined student progress through key milestones: program participation and persistence, program completion, exam attempts, and certification or qualification attainment. These milestones reflect decision points that are especially relevant to policymakers and practitioners concerned with access, completion, and credential attainment in non-credit-bearing workforce training programs.

In **Exhibit 2**, we show the number of students who enrolled in the program between Spring 2019 and Spring 2023 (after applying our exclusion criteria related to the pandemic); students' average attendance rate in the program;⁶ and the percentage of enrolled students who (1) completed the program, (2) attempted the certification or qualification exam, and (3) passed the exam,⁷ respectively.

Average attendance rates ranged from 68% to 78% across programs, with the highest attendance in Bilingual Teaching Assistant and Nurse Aide programs and the lowest in the Culinary Arts program. In three programs, approximately four out of five students completed their respective program (77%–83% completion rate); in IT Fundamentals, 69% completed the program. The exam attempt rate

⁵ This criterion differs from common reporting definitions. For context, the National Reporting System for Adult Education (2026) defines a participant as an individual who has received at least 12 hours of instruction. The District of Columbia Public Charter School Board (2016) defines the population included in adult education reporting as learners who were enrolled for at least 15 consecutive days and received at least 12 hours of instruction.

⁶ Each student's attendance rate in their career training program is based on the number of days the student attended out of the number of days they were offered instruction, as calculated by the school.

⁷ On the ParaPro assessment, passing refers to earning a score of 461 or higher, which meets the qualification requirements for paraprofessionals in Washington, D.C. (District of Columbia Public Schools, n.d.).

was the highest for the Bilingual Teaching Assistant program (77%) and the lowest for the Nurse Aide program (61%). Across the four programs, between 55% and 73% of enrolled students ultimately passed the exam and attained an industry-recognized certification or qualification.⁸ The subsections that follow describe each program in more detail and highlight where patterns differ across the measured milestones.

Exhibit 2. Students' Enrollment and Progress in the Career Training Programs

Student Characteristic	Bilingual Teaching Assistant Program	IT Fundamentals Program	Culinary Arts Program	Nurse Aide Program
Number of students who enrolled in the program (Spring 2019–Spring 2023)	99	151	261	183
Average attendance rate	78.1%	73.0%	68.1%	77.8%
Percentage of enrolled students who completed the program	80.8%	68.9%	77.4%	82.5%
Percentage of enrolled students who attempted the certification or qualification exam	76.8%	67.6%	70.9%	60.7%
Percentage of enrolled students who passed the exam	72.7%	64.2%	69.7%	55.2%

Note. For each percentage, the denominator is the number of students who enrolled in the corresponding program, depicted in circles in the first row. The number of students in each program does not include any students who enrolled only during the terms most affected by the COVID-19 pandemic (Spring 2020, Fall 2020, and Spring 2021) and did not enroll before or after those terms.

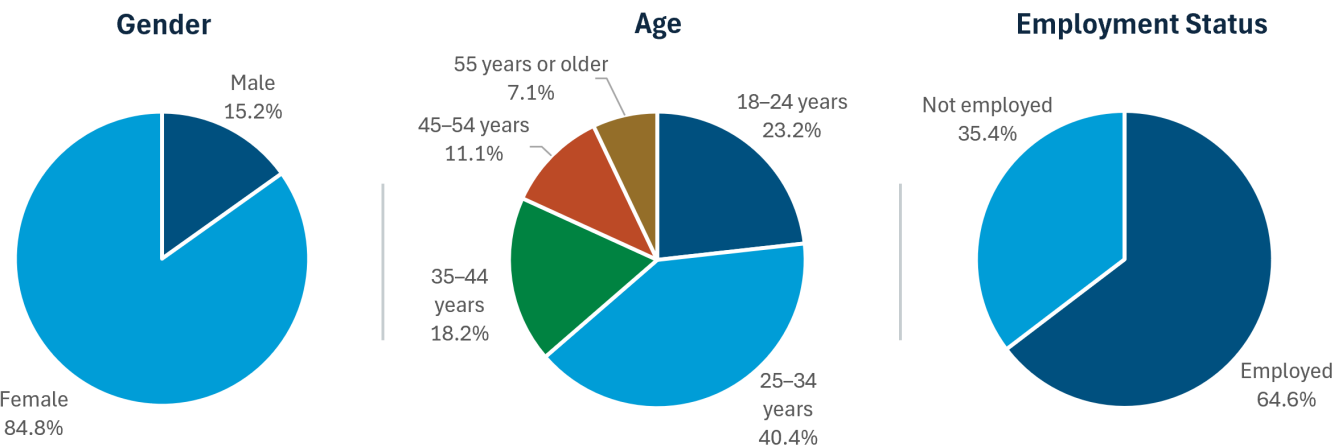
⁸ The CompTIA IT Fundamentals+ certification is recognized in all states (Pearson, n.d.). ServSafe certifications are recognized in most states, but some jurisdictions have additional requirements for specific certifications (ServSafe, n.d.). Because states set different eligibility requirements for paraprofessionals, a qualifying ParaPro score in D.C. does not guarantee acceptance elsewhere, although many states recognize the ParaPro assessment as one qualification pathway (ETS, n.d.). The NNAAP certification is state-regulated, and individuals with NNAAP certification in Washington, D.C., must apply for endorsement and reciprocity to meet other states' requirements, including Maryland and Virginia (Maryland Department of Health Board of Nursing, n.d.; Virginia Board of Nursing, 2026).

Bilingual Teaching Assistant Program

To enroll in the Bilingual Teaching Assistant program, students must have a high school diploma or equivalent credential and demonstrate English proficiency at or above the high-intermediate level. An advising session is required, and other program eligibility requirements include successfully passing diagnostic math and reading tests, undergoing a criminal background check, and providing proof of COVID-19 immunization. Given the bilingual skills required for this career path, students need to demonstrate intermediate or advanced proficiency in a language other than English. The program requires a practicum of 40 hours or more in a K–12 or adult education setting. Students who complete this program also earn a Seal of Biliteracy (District of Columbia Office of the State Superintendent of Education, 2026).

Between Spring 2019 and Spring 2023, 99 students enrolled in the Bilingual Teaching Assistant program. As shown in **Exhibit 3**, the vast majority of students in this program were women (85%). About 23% of students were 18–24 years old, 40% were 25–34 years old, and another 18% were 35–44 years old. Nearly two-thirds were employed at the time of enrollment (65%). Additional characteristics are reported in **Exhibit A1** in the appendix.

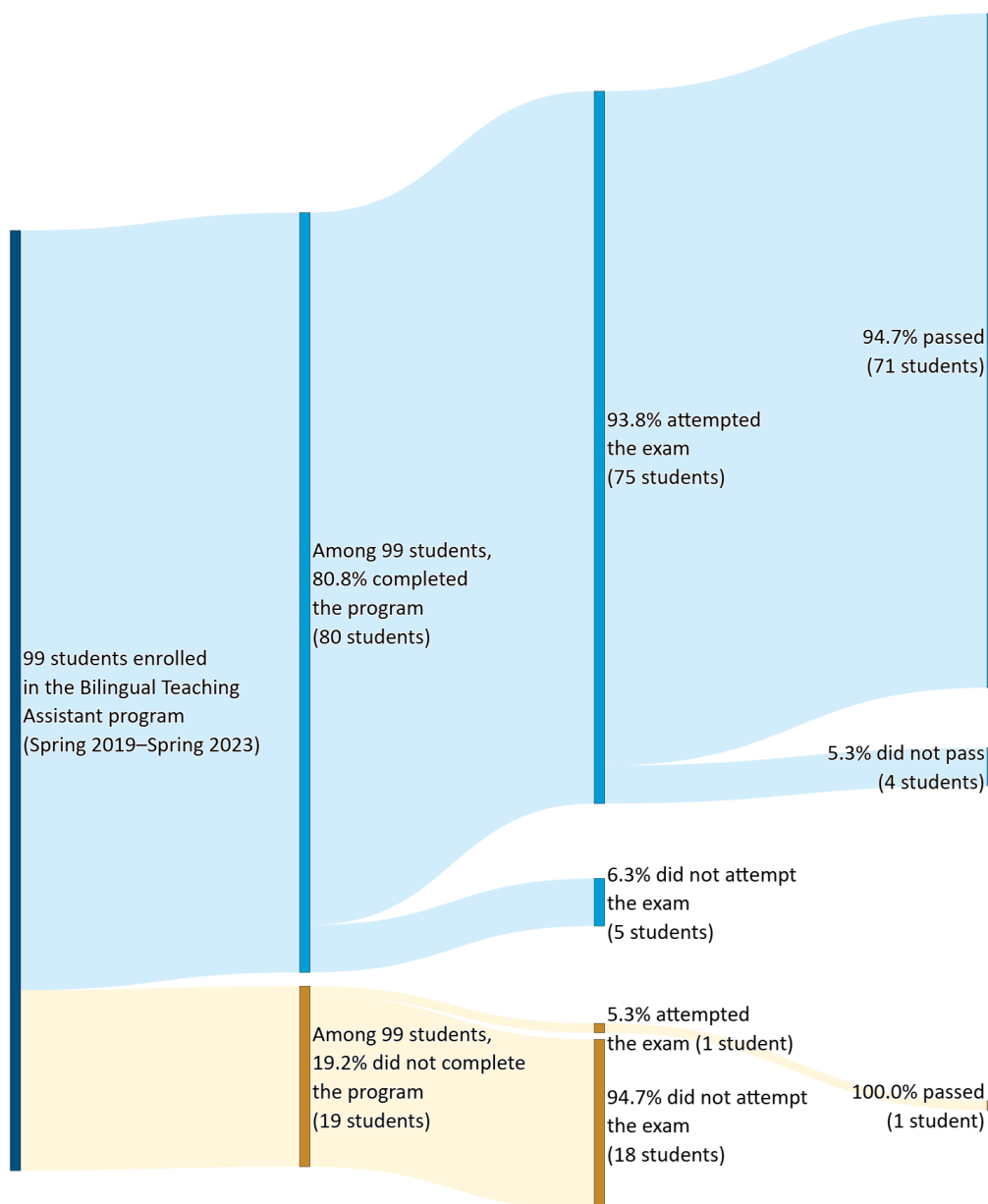
Exhibit 3. Characteristics of Students in the Bilingual Teaching Assistant Program



Students’ progress in Bilingual Teaching Assistant program is shown in **Exhibit 4**. About 81% of students completed the program. Among completers, 94% attempted the ParaPro exam. Among those who completed the program and attempted the exam, 95% achieved a qualifying score. The strong completion rate, combined with very high exam attempt and pass rates among completers, suggests effective alignment between the curriculum and qualification requirements. About 19% of students did not complete the program, and most of those students did not attempt the exam.

In the Bilingual Teaching Assistant program, the strong completion rate, combined with very high exam attempt and pass rates among completers, suggests effective alignment between the curriculum and paraprofessional qualification requirements.

Exhibit 4. Students' Progress in the Bilingual Teaching Assistant Program



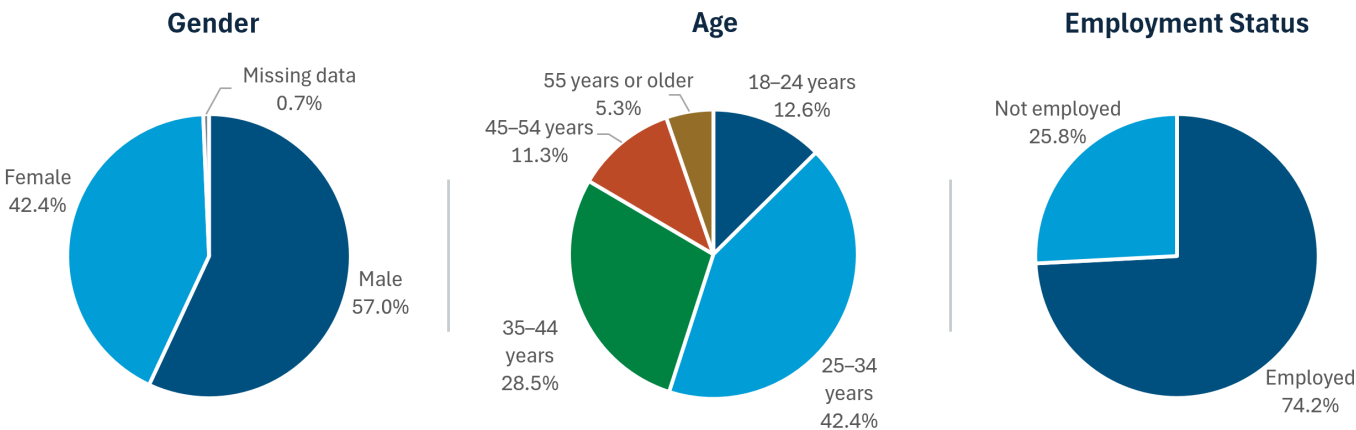
Note. Overall, 76.8% of enrolled students attempted the ParaPro assessment, and 72.7% earned a qualifying score.

IT Fundamentals Program

The IT Fundamentals program requires a high school diploma or equivalent credential as well as English proficiency at or above the high-intermediate level. Other program eligibility requirements include an advising session and passing the Microsoft Word module of the Northstar Digital Literacy assessment.

Between Spring 2019 and Spring 2023, 151 students enrolled in the IT Fundamentals program. As shown in **Exhibit 5**, the majority of students were men (57%). About 13% of students were 18–24 years old, 42% were 25–34 years old, and another 29% were 35–44 years old. About three out of four students were employed at the time of enrollment (74%). Additional characteristics are reported in **Exhibit A1** in the appendix.

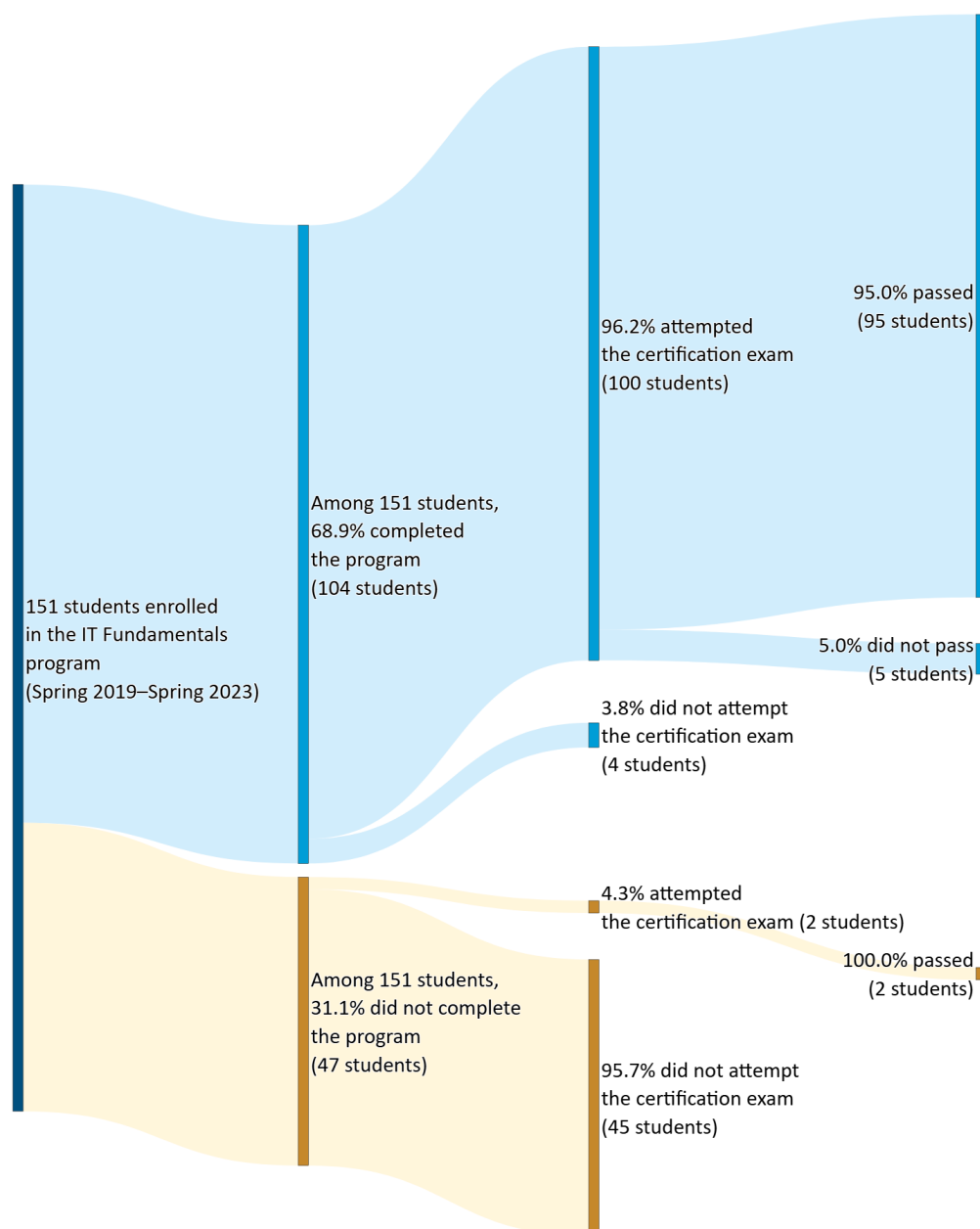
Exhibit 5. Characteristics of Students in the IT Fundamentals Program



Students’ progress in the IT Fundamentals program is shown in **Exhibit 6**. About 69% of students completed the program, making the completion rate for this program the lowest among the four programs. Among students who completed the program, 96% attempted the CompTIA IT Fundamentals+ certification exam. Among those who completed the program and attempted the exam, 95% passed, thereby earning their certification. This combination—lower program completion alongside high exam attempt and pass rates among completers—suggests that students who completed the program were generally well prepared for the CompTIA IT Fundamentals+ certification, while challenges may have arisen for some students prior to program completion. These challenges may reflect barriers to sustained participation, such as competing obligations or the need for timely academic support, which we explore further in the “Implications for Policy and Program Design” section. Nearly a third of the students in this program (31%) did not complete the program, and most of those students did not attempt the certification exam.

In the IT Fundamentals program, the pattern of lower completion but high exam attempt and pass rates among completers suggests that students who completed the program were generally well prepared for the CompTIA IT Fundamentals+ certification, while challenges may have arisen for some students prior to program completion.

Exhibit 6. Students' Progress in the IT Fundamentals Program



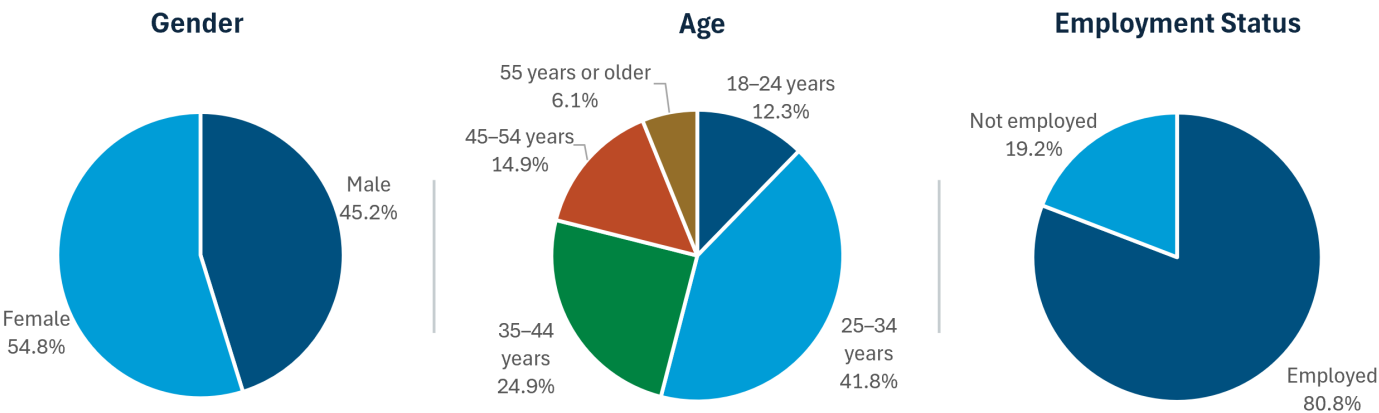
Note. Overall, 67.6% of enrolled students attempted the certification exam, and 64.2% passed.

Culinary Arts Program

Unlike the other career training programs, the Culinary Arts program does not require a high school diploma. The English proficiency requirement is at or above the intermediate level. An advising session is required, and other program eligibility requirements vary depending on the specific ServSafe certification sought by the student. For instance, no prior experience is required for students seeking the entry-level ServSafe Food Handler certification; those seeking the more advanced ServSafe Manager certification are required to have basic cooking experience in the hospitality industry or prior attainment of the ServSafe Food Handler certification.

Between Spring 2019 and Spring 2023, 261 students enrolled in the Culinary Arts program. As shown in **Exhibit 7**, the majority of students were women (55%). About 12% of students were 18–24 years old, 42% were 25–34 years old, and another 25% were 35–44 years old. About four out of five students were employed at the time of enrollment (81%). Additional characteristics are reported in **Exhibit A1** in the appendix.

Exhibit 7. Characteristics of Students in the Culinary Arts Program

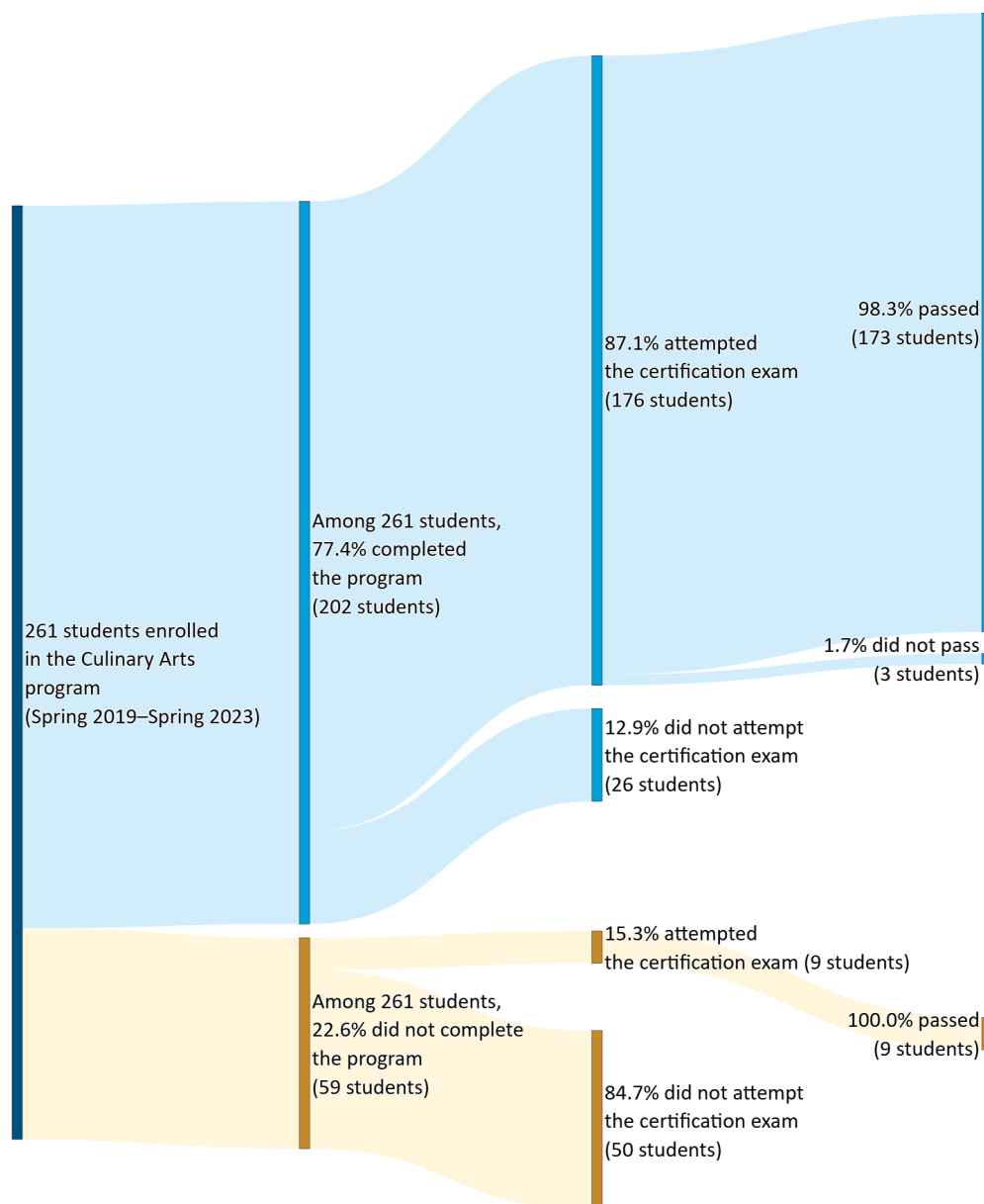


Students’ progress in the Culinary Arts program is displayed in **Exhibit 8**. Although this program had the lowest average attendance rate among the four (**Exhibit 2**), about 77% of students completed the program. Among completers, 87% attempted a ServSafe certification exam.⁹ Among those who completed the program and attempted the exam, 98% passed and earned the corresponding ServSafe certification. Despite the relatively low average attendance rate, program completion, exam attempt, and pass rates were high, suggesting strong alignment between the curriculum and certification requirements. About 23% of students did not complete the program, and the vast majority of those students did not attempt a certification exam.

⁹ Details on which ServSafe certification each student attempted were not available.

Despite the relatively low average attendance rate, the Culinary Arts program had high rates of program completion, exam attempts, and successful certification, suggesting strong alignment between the curriculum and ServSafe certification requirements.

Exhibit 8. Students' Progress in the Culinary Arts Program



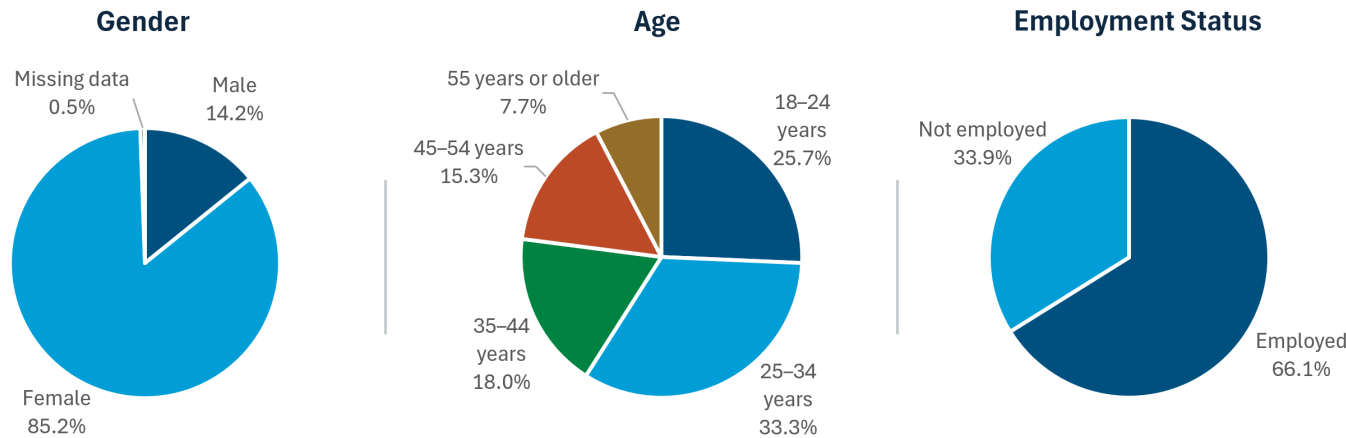
Note. Overall, 70.9% of enrolled students attempted the certification exam, and 69.7% passed.

Nurse Aide Program

To enroll in the Nurse Aide program, students must have a high school diploma or equivalent credential and demonstrate English proficiency at or above the high-intermediate level. An advising session is required, and other program eligibility requirements include a criminal background check, drug test, and mandated immunizations, including COVID-19 immunization. The program requires a 40-hour clinical experience at a local partner site, which occurs over 10 days during the term. Completing this clinical experience is required for program completion and to be eligible for the NNAAP certification exam. (The NNAAP certification exam includes two components: a knowledge test and an in-person skills demonstration).

Between Spring 2019 and Spring 2023, 183 students enrolled in the Nurse Aide program. As shown in **Exhibit 9**, the vast majority of students were women (85%). About 26% of students were 18–24 years old, 33% of students were 25–34 years old, and another 18% were 35–44 years old. Nearly two-thirds were employed at the time of enrollment (66%). Additional characteristics are reported in **Exhibit A1** in the appendix.

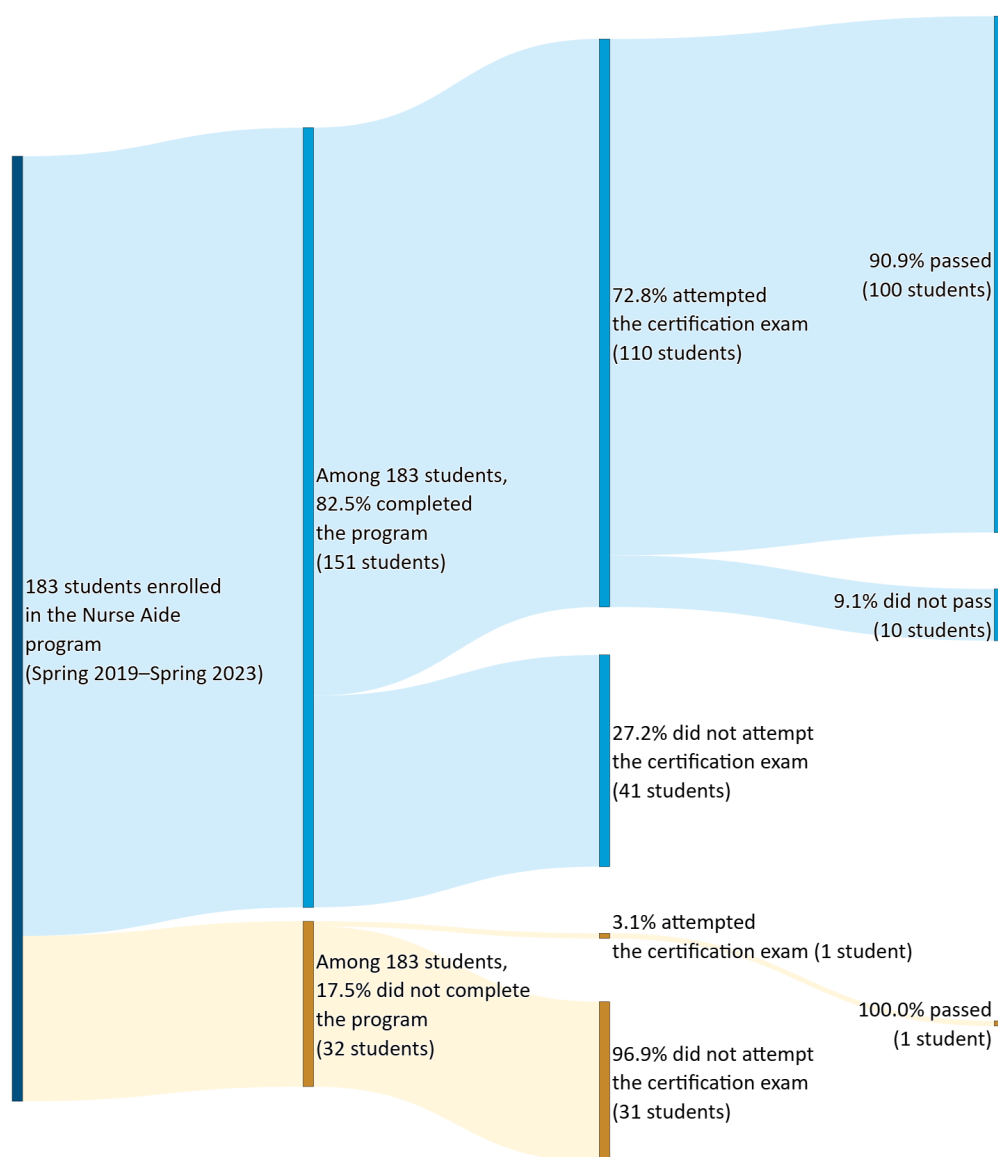
Exhibit 9. Characteristics of Students in the Nurse Aide Program



Students’ progress in the Nurse Aide program is illustrated in **Exhibit 10**. This program had the highest completion rate, coupled with the lowest exam attempt rate. While 83% of students completed the program, only 73% of completers attempted the NNAAP certification exam. In contrast, the exam attempt rate for program completers ranged from 87% to 96% in the other programs. Notably, among Nurse Aide students who completed the program and attempted the exam, 91% passed, thereby earning their NNAAP certification. This high pass rate suggests that students who reach the exam stage are generally well prepared, while some students may face barriers between program completion and exam attempt. These barriers may stem from factors such as navigating exam registration, potential delays in scheduling exam components, or test anxiety, which we explore further in the “Implications for Policy and Program Design” section. About 18% of students did not complete the program, and most of those students did not attempt the certification exam.

In the Nurse Aide program, the combination of the high completion rate, low exam attempt rate among completers, and high pass rate suggests that those students who reached the exam stage were generally well prepared for NNAAP certification, while some students may face barriers between program completion and the exam attempt.

Exhibit 10. Students' Progress in the Nurse Aide Program



Note. Overall, 60.7% of enrolled students attempted the certification exam, and 55.2% passed.

Implications for Policy and Program Design

Across the four career training programs examined in this analysis, nearly two-thirds of enrolled students (65%) ultimately earned an industry-recognized certification or qualification, demonstrating that short-term occupational training can translate into credential attainment for adult learners when key milestones are reached. Students who completed program requirements were substantially more likely to attempt the exam, and most students who attempted an exam earned the targeted certification or qualification.¹⁰ These high pass rates suggest that, for students who reach the exam stage, instruction and preparation were generally well aligned with occupational requirements. For policymakers and practitioners, this pattern suggests that improving credential outcomes may depend less on redesigning curricula and more on ensuring that more students reach and successfully navigate the milestones that precede certification or qualification.

At the same time, the results underscore that where progress breaks down differs by program, pointing to a need for targeted supports rather than uniform strategies. In the IT Fundamentals program, completion was the primary challenge: the program had the lowest completion rate among the four programs, at 69%. Yet among those who completed the program, 96% attempted the certification exam, and 95% of those who attempted passed, indicating strong preparation among completers. This pattern suggests that efforts to improve IT Fundamentals outcomes may be most effective when focused on supports to help students persist through completion, such as instructional scaffolding and proactive outreach when engagement begins to decline.

Postsecondary research suggests that non-persistence in IT programs is often associated with competing obligations and resource constraints, including work and family responsibilities, financial pressures, and difficulty sustaining engagement over time, even when institutions implement policies intended to support adult learners (Jin et al., 2023). Research findings from coding bootcamps, an accelerated technology training model, emphasize that persistence in intensive technical learning environments can depend on clear scaffolding, access to instructional support, and timely assistance when learners encounter difficulty (Lang & Sharp, 2022). While these prior findings offer plausible explanations for the lower completion rate observed in the IT Fundamentals program, additional research is needed to identify the barriers that shape students' sustained engagement with coursework and persistence through program completion in this context.

In contrast, the Nurse Aide program showed a different bottleneck: although 83% of students completed the program (the highest completion rate), only 73% of completers attempted the NNAAP exam, compared with 87% to 96% in the other programs. Among Nurse Aide program completers who attempted the exam, 91% passed, indicating strong readiness among those who reached the

¹⁰ To explore what might distinguish students who complete a career training program, we compared the characteristics of students who completed their program with those who began one of the programs but did not complete the program. We conducted separate comparisons for each program on age, gender, race, ethnicity, and employment status. No statistically significant differences emerged, suggesting that program completion was not associated with observed demographic characteristics.

testing stage. This combination of findings suggests that improving credential outcomes in the Nurse Aide program may require supports concentrated between completion and exam attempt, including structured exam navigation and targeted supports to address barriers that delay or deter scheduling and completing certification requirements.

After completing the Nurse Aide program, students are required to register with an external vendor to schedule the two components of the NNAAP exam: the knowledge test and the skills demonstration. While the Carlos Rosario School serves as a testing site for the NNAAP exam, the external testing provider manages exam scheduling and administration. Students may need to wait for available test dates or proctors, which might impact their motivation and follow-through to an exam attempt. Higher test anxiety may also affect students' intentions to take an exam (Lenski et al., 2024). Prior research indicates that test anxiety is common in health professions education and shaped by assessment conditions, preparation demands, and support systems (Quinn & Peters, 2017; Wadi et al., 2022). One evidence-informed strategy to address test anxiety is to implement interventions focused on resilience and a growth mindset, which have been shown to reduce students' perceived stress in healthcare training programs (Cato et al., 2024).

Finally, while we do not have data on why some students did not complete their program, prior research suggests that external challenges, such as work schedules, family responsibilities, and transportation issues, can interfere with adult learners' engagement with their program (Greenberg, 2008; Patterson & Song, 2018; Patterson et al., 2020). Additionally, some English learners may struggle with coursework and assessments even after meeting program English proficiency requirements (Kosobucki et al., 2025; Martirosyan et al., 2015). Further research is needed to identify the factors that influence program completion in the context of career training. A related actionable strategy for providers is to closely monitor attendance to identify when a student may be at risk of disengaging and reach out with support before the student stops participating in the program (Arnold & Pistilli, 2012; Bellevue College, 2021; Reddick et al., 2014). Providers can also use short surveys to identify students' academic and non-academic needs at intake and connect them to targeted supports proactively, rather than relying on students to seek institutional resources on their own (Community College Research Center, 2021).

To provide additional context for the quantitative patterns in this brief, we draw on findings from a previous qualitative implementation study of the Carlos Rosario School conducted by our research team (Allen et al., 2025). The findings provide context and surface promising instructional practices and support services that may help adult learners persist in program coursework and reach later milestones.

The implementation findings, based on interviews and focus groups with school administrators, staff, and students, offer insights into two broad patterns in the current analysis. First, the high exam pass rates across career training programs are consistent with the school's instructional approach, which emphasizes applied learning and repeated practice aligned with occupational skill standards.

Instructors described hands-on learning embedded within career training intended to build mastery through feedback and repetition. These components included lab simulations, structured skill checklists, and formative assessments, in addition to clinical or practicum experiences, as applicable. For example, a Culinary Arts instructor described assessing students weekly on a comprehensive set of skills across multiple domains, including hospitality and front-of-house practices, knife and cooking techniques, managerial and planning skills, and workplace-readiness behaviors. Moreover, the career training programs are supported by advisory committees of industry professionals who provide input on curriculum updates and help maintain alignment with current practice. This instructional context provides a plausible explanation for why students who reached the certification or qualification exam stage were generally successful across programs.

Second, the support services offered by the school contextualize the relatively strong program completion rates observed across programs. These services, including transportation supports, multilingual counseling and referrals, and tiered academic supports, may help reduce practical barriers to sustained participation. Taken together, these supports suggest that addressing logistical and non-academic challenges may help more students reach the program completion milestone.

Future Directions

This brief draws on measures from administrative data that training providers routinely track, such as attendance, program completion, and certification and qualification outcomes. Building the evidence base on short-term career training programs will benefit from additional outcome measures and complementary data sources that deepen understanding of how and why participants advance through key milestones. In particular, linking program participation and credential attainment to employment and earnings outcomes would clarify whether short-term credentials translate into economic mobility. Because short-term programs are often designed as entry points into high-demand occupations for underserved adults, understanding whether credentials translate into employment in the intended sector would help providers and policymakers assess the value of different programs and credential pathways.

In addition, advancing the evidence base requires better documentation of what happens between milestones. Capturing structured information on barriers that arise for students during training and after completion would provide insight into potential reasons for stopping training or delaying certification. For example, practitioners may learn that interruptions are primarily due to specific external constraints (e.g., childcare, transportation) or challenges engaging with coursework and exam preparation. These insights would help providers identify which supports are most likely to strengthen program completion and certification and qualification outcomes.

Conclusion

This brief provides descriptive evidence on adult learners' progress through short-term career training by tracing a set of milestones between enrollment and certification or qualification. Across the four programs examined, program completion emerged as a central milestone: students who completed the program were much more likely to attempt the exam, and most students who attempted an exam passed, thereby earning the targeted industry-recognized certification or qualification. The high pass rates suggest that instruction and preparation are generally well aligned with certification and qualification expectations. However, the point at which progress was less likely to continue differed across programs, indicating that supports and process improvements may be most effective when timed to the milestone where follow-through is most likely to break down.

As interest in short-term, non-degree credentials grows nationally and workforce systems seek strategies to meet talent needs in high-demand fields, the findings from the Carlos Rosario International Public Charter School's career training programs offer a valuable blueprint. For practitioners, the findings emphasize that helping students persist through program completion and navigate certification or qualification requirements is critical for translating enrollment into credential attainment. For policymakers and system leaders, these findings underscore the importance of viewing short-term credential programs through a milestone-based performance lens, rather than relying solely on enrollment counts or credential pass rates. Success in short-term occupational training is the cumulative result of multiple steps—consistent participation, program completion, certification or qualification exam attempt, and exam passage—each of which represents a potential point of drop-off. This pattern suggests that performance metrics and accountability systems that focus only on final credential outcomes risk obscuring where and why progress stalls. Instead, policies that incentivize providers to track and improve students' progression through intermediate milestones, especially program completion and timely exam attempts, may be better aligned with how adult learners actually move through short-term training pathways.

References

- Allen, K., Sauls, J., Oates, S., Nanda, N., & Talwar, A. (2025). *Integrating education, career training, and community for adult learners in Washington, D.C.* American Institutes for Research. https://www.air.org/sites/default/files/2025-08/PROPEL-Center-Carlos-Rosario-School-Brief-508_0.pdf
- Arnold, K. E., & Pistilli, M. D. (2012). Course Signals at Purdue: Using learning analytics to increase student success. In *LAK '12: Proceedings of the 2nd International Conference on Learning Analytics and Knowledge (LAK)* (pp. 267–270). Association for Computing Machinery. <https://dl.acm.org/doi/pdf/10.1145/2330601.2330666>
- Bellevue College. (2021, March 3). *Early Alert for Academic Support Program processes & procedures*. <https://www.bellevuecollege.edu/wp-content/uploads/sites/18/2021/03/Early-Alert-Outreach-Program-Processes-and-Procedures-Revised-3.pdf>
- Belzer, A., Leon, T., Patterson, M., Rhodes, C., Salas-Isnardi, F., Vanek, J., Webb, C., & Willson-Toso, B. (2020). *COVID-19 rapid response report from the field*. ProLiteracy. https://www.proliteracy.org/wp-content/uploads/2023/07/2020-07_EBAES-COVID19_white-paper.pdf
- Calo, M., Judd, B., & Peiris, C. (2024). Grit, resilience and growth-mindset interventions in health professional students: A systematic review and meta-analysis. *Medical Education*, 58(8), 902–919. <https://doi.org/10.1111/medu.15391>
- Carlos Rosario International Public Charter School. (2019). *Achieving the dream: Carlos Rosario School celebrates its 20th anniversary as a public charter school* [Press release]. <https://www.carlosrosario.org/achieving-the-dream-carlos-rosario-school-celebrates-its-20th-anniversary-as-a-public-charter-school>
- Carlos Rosario International Public Charter School. (2025). *Annual report: School year 2023 - 2024*. <https://www.carlosrosario.org/wp-content/uploads/2025/02/Annual-Report-2023-2024.pdf>
- Coffin, C. & Rubin, J. (2023, May 23). *D.C.'s adult public charter schools: Who they serve, how they serve, and what they achieve*. D.C. Policy Center. <https://www.dcpolicycenter.org/wp-content/uploads/2023/05/Adult-PCS-FINAL.pdf>
- Community College Research Center. (2021, July). *Advising and student supports at community colleges* [Policy fact sheet]. Columbia University, Teachers College. <https://ccrc.tc.columbia.edu/wp-content/uploads/2021/07/advising-student-supports-community-colleges.pdf>
- District of Columbia Department of Employment Services. (n.d.). *Certified nursing aide*. <https://does.dc.gov/page/certified-nursing-aide>

- District of Columbia Office of the State Superintendent of Education. (2026, April). *Seal of biliteracy: Local education agency toolkit*. <https://osse.dc.gov/publication/dc-seal-biliteracy>
- District of Columbia Public Charter School Board. (2016). *2015–16 Performance Management Framework policy and technical guide*. https://dcpcsb.org/sites/default/files/Vote--2015-16%20PMF_Policy%20%20Tech_March%20Meeting%20Final%20Clean%20Copy.pdf
- District of Columbia Public Charter School Board. (2018, March 19). *2017–18 twenty-year charter review report: Carlos Rosario International Public Charter School*. https://dcpcsb.org/sites/default/files/media/file/2018-04-02-Carlos-Rosario-20-Year-Review-Report-SY17-18_0.pdf
- District of Columbia Public Schools. (n.d.). *Central office employment opportunities – FAQs*. <https://dcps.dc.gov/page/central-office-employment-opportunities-faqs>
- ETS. (n.d.). *State requirements*. <https://parapro.ets.org/state-requirements.html>
- George Washington Institute of Public Policy. (2021). *New directions for non-degree credentialing research: Report of the Non-Degree Credentials Research Network*. https://gwipp.gwu.edu/sites/g/files/zaxdzs6111/files/downloads/NCRN%20Spring%202021%20Report%20Researchers_compressed.pdf
- Greenberg, D. (2008). The challenges facing adult literacy programs. *Community Literacy Journal*, 3(1), 39–54. <https://digitalcommons.fiu.edu/record/4585?v=pdf>
- Jin, W., Lawson, V., & Park, H. (2023, October). Assessing adult learner challenges in an IT program at an open-access and minority-serving Institution. In *Proceedings of the 24th Annual Conference on Information Technology Education* (pp. 8–14). <https://doi.org/10.1145/3585059.3611417>
- Kosobucki, G., Smith, B., & Reinhard, C. (2025). Barriers to English learning for adult immigrants in urban America. *Adult Literacy Education*, 7(3), 4–16. <https://www.proliteracy.org/wp-content/uploads/2025/10/7.3.1-Research-1.pdf>
- Lotas, S. V. (2021). The COVID-19 pandemic from an adult literacy practitioner-scholar perspective: Where we were, where we are, and where we should be going. *Adult Literacy Education: The International Journal of Literacy, Language, and Numeracy*, 3(2), 50–54. <http://doi.org/10.35847/SLotas.3.2.50>
- Lang, G., & Sharp, J. H. (2022). Coding bootcamp satisfaction: A research model and survey instrument. *Information Systems Education Journal*, 20(2), 49–60.
- Lenski, S., Zinke, N., Merkt, M., Reich-Stiebert, N., Stürmer, S., & Schröter, H. (2024). Early indicators of study delay and dropout: Test anxiety and its link to exam participation and performance. *Journal of College Student Retention: Research, Theory & Practice*. <https://doi.org/10.1177/15210251241266547>

- Lumina Foundation. (2024). *A stronger nation: Credentials of value*.
<https://strongernation.luminafoundation.org/credentials-of-value>
- Martirosyan, N. M., Hwang, E., & Wanjohi, R. (2015). Impact of English proficiency on academic performance of international students. *Journal of International Students*, 5(1), 60–71.
<https://doi.org/10.32674/jis.v5i1.443>
- Maryland Department of Health Board of Nursing. (n.d.). *Nursing assistant certification for out-of-state endorsement applicants*. <https://health.maryland.gov/mbon/Pages/cna-endorsement-facts.aspx>
- McLeod, E. N., Campbell, K. P., Mabel, Z., & Strohl, J. (2025). Bridging the middle-skills gap: Connecting a diverse workforce to economic opportunity through certificates and associate’s degrees. Georgetown University Center on Education and the Workforce.
https://cew.georgetown.edu/wp-content/uploads/cew-bridging_the_middle-skills_gap-fr.pdf
- Murphy, S. M. (2025). *A 2025 update of state investments in short-term credential pathways*. HCM Strategists.
https://static1.squarespace.com/static/62bdd1bbd6b48a2f0f75d310/t/693b37a3b4a0d41cdea07490/1765488547594/HCM+-+2025+STC+Typology+Update_122025.pdf
- National Reporting System for Adult Education. (2026). *Technical assistance guide for performance accountability under the Workforce Innovation and Opportunity Act*.
<https://nrsweb.org/sites/default/files/2026-05/NRS-TA-Guide-May-2026-508.pdf>
- Patterson, M. B., Rasor, A., & Hunt, T. (2020). “When you are pushing, you’re going to want somebody’s help”: Support systems for adult learners.
<https://www.researchgate.net/publication/343948147>
- Patterson, M. B., & Song, W. (2018, May). *Critiquing adult participation in education, report 1: Deterrents and solutions*. Research Allies for Lifelong Learning. <https://researchallies.org/wp-content/uploads/2018/05/CAPE-Report-1-Deterrents-and-Solutions.pdf>
- Pearson. (n.d.). *CompTIA*. <https://www.pearsonvue.com/us/en/comptia.html>
- Quinn, B. L., & Peters, A. (2017). Strategies to reduce nursing student test anxiety: A literature review. *Journal of Nursing Education*, 56(3), 145–151. <https://doi.org/10.3928/01484834-20170222-05>
- Reddick, K. W., Trifilo, J., Asby, S. B., Majewski, D., & Geissler, J. (2014). Maximizing the use of an early alert system through advisor outreach. *Academic Advising Today*, 37(4).
<https://nacada.ksu.edu/Resources/Academic-Advising-Today/View-Articles/Maximizing-the-Use-of-an-Early-Alert-System-through-Advisor-Outreach>
- ServSafe. (n.d.). *Regulatory requirements*. <https://www.servsafe.com/ss/regulatory/default.aspx>

Virginia Board of Nursing. (2026, January 21). *Application instructions for endorsement of nurse aide certification*. https://www.license.dhp.virginia.gov/apply/Forms/NurseAide/CNA_End.pdf

Wadi, M. M., Yusoff, M. S. B., Rahim, A. F. A., & Lah, N. A. Z. N. (2022). Factors influencing test anxiety in health professions education students: A scoping review. *SN Social Sciences*, 2(9), Article 174. <https://doi.org/10.1007/s43545-022-00459-9>

Appendix

Exhibit A1. Characteristics of Career Training Students by Program

Student Characteristics	Percentage of Students in the Bilingual Teaching Assistant Program	Percentage of Students in the IT Fundamentals Program	Percentage of Students in the Culinary Arts Program	Percentage of Students in the Nurse Aide Program
Total Students	99 (100.0%)	151 (100.0%)	261 (100.0%)	183 (100.0%)
Gender				
Male	15.2%	57.0%	45.2%	14.2%
Female	84.8%	42.4%	54.8%	85.2%
Missing data	0.0%	0.7%	0.0%	0.5%
Age				
18–24 years	23.2%	12.6%	12.3%	25.7%
25–34 years	40.4%	42.4%	41.8%	33.3%
35–44 years	18.2%	28.5%	24.9%	18.0%
45–54 years	11.1%	11.3%	14.9%	15.3%
55 years or older	7.1%	5.3%	6.1%	7.7%
Employment Status				
Employed	64.6%	74.2%	80.8%	66.1%
Not employed	35.4%	25.8%	19.2%	33.9%
Race				
White	80.8%	46.4%	59.8%	43.2%
Black or African American	14.1%	45.7%	36.0%	52.5%

Student Characteristics	Percentage of Students in the Bilingual Teaching Assistant Program	Percentage of Students in the IT Fundamentals Program	Percentage of Students in the Culinary Arts Program	Percentage of Students in the Nurse Aide Program
All other groups	5.1%	7.3%	4.2%	4.4%
Missing data	0.0%	0.7%	0.0%	0.0%
Ethnicity				
Hispanic or Latino	78.8%	36.4%	58.6%	42.1%
Not Hispanic or Latino	21.2%	62.3%	41.4%	57.9%
Missing data	0.0%	1.3%	0.0%	0.0%
Children in D.C. schools				
Has children in D.C. schools	15.2%	11.3%	13.4%	21.3%
Does not have children in D.C. schools	70.7%	78.8%	77.0%	71.0%
Missing data	14.1%	9.9%	9.6%	7.7%
Homeless Status				
Homeless	1.0%	5.3%	5.0%	2.7%
Not homeless	85.9%	84.8%	86.6%	89.1%
Missing data	13.1%	9.9%	8.4%	8.2%

Note. The “All other groups” race category includes students who are Asian, American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, or more than one race. For this analysis, having children in D.C. schools includes children enrolled in public schools or public charter schools located in D.C.

