



**Jobs for
the Future**

Promising Approaches to Implementing Apprenticeship Programs in Information Technology

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01.

Introduction

The [U.S. Bureau of Labor Statistics](#) projects the information technology (IT) industry will have more than 377,000 annual job opportunities through 2032, which reflects a faster growth rate compared with some major career sectors.¹ Community colleges are key leaders within the workforce ecosystem that can help meet this need by providing learners and workers across IT occupations with skills training, degrees, and certifications in high-growth industries and connections to high-paying, high-demand career and apprenticeship opportunities.

Apprenticeship helps prepare and strengthen employees, companies, and the workforce for the industries of today and tomorrow. The U.S. Department of Labor has made ongoing investments in pre-apprenticeship and apprenticeship, including the \$184 million grant program [Scaling Apprenticeship through Sector-Based Strategies](#) in 2019.² Through this initiative, the [Illinois Community College Board](#) (ICCB) developed the Customized Apprenticeship Programming-Information Technology ([CAP-IT](#)) project to expand existing industry-led customized apprenticeships through IT sector partnerships, innovate new apprenticeship models for pilot and expansion, and scale and grow the apprenticeship model nationally through partnership with Jobs for the Future (JFF) and Harper College.³

This brief shares replicable examples, lessons learned, and best practices from JFF's work with ICCB and the 10 CAP-IT program colleges. The brief includes case studies of two colleges and highlights effective strategies to use to expand apprenticeships across multiple industries, including high-demand IT professions.



02.

Lessons Learned and Recommendations

The Illinois Community College Board reported the CAP-IT project exceeded its goals with over 100 employers engaged and over 2,500 participants enrolled, including more than 1,200 apprentices. This was accomplished by executing innovative and collaborative strategies, being nimble and responsive to apprentice and employer needs, and creating internal and external partnerships and investments dedicated to learner and worker success.

Through our work with ICCB, Harper College, and the CAP-IT colleges, we identified several ways community colleges can strengthen their IT apprenticeship offerings. We recommend the following lessons and best practices to help design, implement, and sustain effective apprenticeship programs.



Integrate Learner/Worker Voice, Lived Experience, and Outcomes Data:

- Include learner and worker voice in designing, implementing, and evaluating any apprenticeship or other work-based learning program. Create opportunities for peer mentorship, peer program advisors, or a peer council to integrate and amplify learner and worker experiences and voice.
- Provide ongoing apprentice mentorship and coaching services to obtain valuable insight into the apprentice's on-the-job experience related to the quality and fit of the placement, supports needed, employer performance, and opportunities for new apprentices.
- Collect disaggregated data regarding both academic and employment outcomes to track progress and help inform decisions about developing solutions to outcome gaps.



Use Career Certificates and Other Industry-Recognized Credentials:

- Ensure employers recognize and understand the value of industry credentials, such as Google Career Certificates. This should include comprehensive skills and alignment with specific jobs which can help increase buy-in and ensure learners are appropriately placed based on their skills.
- Use information and data from sources such as the U.S. Bureau of Labor Statistics to further explore industry demands and trends through discussions with local and regional employers, workforce development boards (WDBs), chambers of commerce, and other vested stakeholders.
- Engage employer partners to inform curriculum content based on their existing and future hiring, credential, and skills needs.



Ensure Administration and Institution-Wide Buy-In:

- Recognize without broad internal buy-in, it is very difficult to achieve success in student recruitment, apprentice mentorship and support, and integration between work-based learning and curriculum content. Buy-in from faculty, staff members, and administrators is key from the design phase onward.
- Explore other work-based learning programs such as internships, externships, or job shadowing to determine opportunities for transformation into apprenticeship programs or expansion of partnership interest into new apprenticeship program creation.
- Adapt and respond to shifting demands and priorities, including strategically reassessing and realigning initiatives, timelines, and resources to address the current needs of students, apprentices, and local employer partners.



Utilize Grant Dollars and Internal Investments to Build the Infrastructure to Scale:

- Utilize grant dollars to enhance and build new programs, systems, and frameworks to sustain new efforts.
- Develop a solid infrastructure to incorporate broader college resources and use internal investments and buy-in to support apprenticeship program performance, scalability, and sustainability.



Be Creative and Comprehensive in Outreach and Education to Students:

- Utilize and/or enhance existing mechanisms for student outreach and marketing.
- Use avenues to expose students to work-based learning opportunities, including classroom discussions, employer-led presentations, integration into syllabi, student-led messaging, onsite company tours, career services outreach, and social media.



Articulate a Clear Pathway for Students:

- Ensure that students are clear on the connection between their field of study, a quality job, and an apprenticeship with opportunities for advancement.
- Complete learner/worker assessments to determine career interests, technical and employability skills, professional goals, and potential employer fit.
- Provide career and employability skills training to adequately prepare learners for career opportunities and employer introductions.
- Conduct “fit match” interviews with potential apprentices to ensure possession of both requisite academic and technical skills before employer referral. Apprentices and employers value the opportunity to discuss skill, culture, and interest fit before an apprentice-employer interview.
- Rely on quality resources, such as the [Illinois Essential Employability Skills](#) framework.⁴



Provide Seamless Programmatic Supports:

- Acknowledge employers and students need ongoing support throughout the placement consideration and post-hiring process. Remember hiring retention and ensuring a good-quality apprentice experience are also important considerations for employers.
- Deliver adequate training and support for college staff members to be skilled and available to address apprentice growth, development, and retention needs, as well as the employer's mentorship and on-the-job training requirements.
- Provide structured, ongoing wraparound pre-hire and post-hire support for apprentices and employers (that is, regular apprentice status meetings, routine mentor/on-the-job-training follow-ups, etc.).
- Subsidize tuition costs to support students pursuing an apprenticeship in their chosen field of study.
- Use external resources such as JFF's [Diversity, Equity, Inclusion, and Accessibility in Mentorship for Registered Apprenticeship](#) training and [Illinois Department of Innovation & Technology](#) to further support apprentice needs and development.⁵



03.

A Closer Look: Two Case Studies

Ten community colleges received funds through the Illinois Community College Board's CAP-IT project to develop structured and customized apprenticeship programs in partnership with area employers. Several colleges, including the following two highlighted institutions, were particularly successful with deploying strategic solutions: City Colleges of Chicago, which implemented apprenticeship programs at scale, and Lincoln Land Community College (LLCC), which created a customized program that worked well at the smaller, local level. The case studies below are based on JFF interviews with the leaders of both programs.

Providing a Sustainable and Scalable Model at the District Level: City Colleges of Chicago

Through the CAP-IT grant, City Colleges of Chicago's District Office, which serves all seven community colleges in the Greater Chicago area, built the infrastructure to support the scaling of IT apprenticeships. The district had positive momentum early in the project, but several factors, including the COVID-19 pandemic and college staffing changes, disrupted the process of actively recruiting employers and the subsequent hiring of learners. Over the last two and a half years, the program has developed steady and very positive momentum, with over 25 new employers recruited and over 600 learners served, according to Corey Young, executive director of Apprenticeship and Workforce Solutions at City Colleges of Chicago. Before the CAP-IT program, the District Office had less formal and structured relationships with its employer partners. With CAP-IT, it cultivated, built, and leveraged those relationships at the district level.

Although IT companies were the initial employer recruitment focus, most current employer partnerships cut across industries, such as health care, professional services, and finance, which have varied IT talent needs. The

future of IT apprenticeships and work-based learning is to respond to the massive need for IT talent across industries. Employers appreciate how the District Office has acted like a talent agency in identifying, vetting, and preparing skilled talent from diverse backgrounds for apprenticeship openings. The apprenticeships are one semester (15 credit hours) to one- to two-year programs that are registered or unregistered with the Department of Labor. Those not registered meet the high-quality hallmarks of a registered program. As the grant neared its conclusion, the district expanded its model to include structured learning programs as well. Chrissy McNulty, program director at Northwestern Medicine, applauded the impact of the apprenticeship partnership with the City Colleges: “Do it—you won’t regret it! Everyone involved is motivated for better...from the employers to the education partners to the students. Don’t be discouraged if it takes a little time to get your program up and running. The Chicago Apprentice Network is here to help, and any employer looking to start a program has many options to ‘phone a friend.’”

The resources from the grant mainly went to professional staff salaries and special assignments to faculty to develop new IT credit and noncredit offerings. In addition, the grant funds were utilized to reduce or eliminate the programming/training costs to learners. Over the last couple of years, the number of learners in IT programs across the district has “increased exponentially,” according to Young. He shared that the conversion rate for learners to full-time employment is an impressive 85%.

The demand from learners is also high. According to Young, every [apprenticeship opening](#) receives 20 to 30 applications. To expand the employer pool, the district partners with the Chicago Apprentice Network through ongoing employer prospecting meetings.⁶

An Innovative Approach to Providing Wraparound Supports to Apprentices

When City Colleges of Chicago first developed the CAP-IT model, the district did not anticipate that apprentices would need ongoing, structured wraparound supports or that employers would need assistance in providing them. As this need became apparent from discussions with both students and employers, the district created and utilized the grant funding to hire a new student development coordinator position for tech. This role has had continuity with the same person

for the past two years, and the district plans to shift funding for the position from the CAP-IT grant to operations after the project to ensure sustainability of these necessary wraparound services. The person in this position, who is located at the district office, checks in regularly with apprentices and the employers they work with. They intentionally ensure mentors provided by the employers have sufficient support to effectively work with apprentices, including providing professional development resources and activities and technical opportunities through conferences and other events. They also conduct regular evaluations regarding apprentices' experiences and share those results with district leadership.

Customizing Solutions With the Structured Learning Program: Lincoln Land Community College

Lincoln Land Community College in Springfield, Illinois, developed the Structured Learning Program, a high-quality, nonregistered, short-term apprenticeship program. According to Brenda Elliott, Lincoln Land Community College's (LLCC) director of work-based learning, many local IT employers were uncomfortable with the word apprenticeship, posing an obstacle to moving implementation discussions forward. To date, students have engaged in a structured learning program (SLP) with three employers, and an additional dozen employers are prepared for implementation.

The goal of the SLP is to engage both the business and student at the point where a student has a definitive educational pathway. The SLP is customized and created for specific jobs, with students' career interests and employers' needs in mind. To be eligible, students must meet specific academic criteria, including a 3.0



GPA and completion of at least two semesters of classes at LLCC, including, at minimum, the four core IT courses. Eligible students meet with Elliott to be vetted and then receive career coaching that includes tips on resume writing and interview skills training with the Career Center staff. Following an electronic introduction, students are interviewed by the employer and hired. The employer and student then sign an agreement, and Elliott checks in periodically on the student's progress and needs.

The apprenticeship program is [competency-based](#) rather than time or seat-based, and the number of hours worked is up to the employer.⁷ The employer and student develop a schedule that allows the student to continue to pursue their education at LLCC, which is simplified by the fact that the remaining IT classes are offered online and asynchronously. Students are paid throughout the SLP, and upon completion of the agreed-upon on-the-job training hours with a mentor, they shift into a permanent full-time role. Once the program concludes, the student and employer complete evaluations.

According to Elliott, of the students who participated in the SLP program, 50% remained in their positions and are thriving with positive outcomes, such as successful completion of associate's and bachelor's degrees through the financial support of the employers. The other 50% who did not complete the SLP/ apprenticeship demonstrated attendance issues and/or did not feel the work environment was an ideal fit. LLCC terminated its relationship with the identified employer based on the non-supportive environment for apprentices. SLP

evaluations from employers reflected positive feedback and apprenticeship support. Employers appreciated candidates that Elliott and the career coaches vetted and prepared, and students liked the support and in-depth guidance from their mentors. Multiple new employers continue to express interest in the SLP concept, and LLCC is using diverse, targeted outreach and marketing strategies to increase student interest and engagement. Overall, the SLP has become an effective way to onboard an apprentice and provide a much-needed entry-level talent pool for area employers.

04.

Community Colleges: Valued Workforce and Employer Partners for Apprenticeship

Apprenticeship is a longstanding, proven workforce solution that marries strong skills development through on-the-job training and classroom or theoretical instruction to help fuel industries with the skilled talent needed for sustainability and growth. Community colleges are uniquely positioned to lead customization and delivery of this solution to help meet local and regional employers' needs. Lessons from Illinois Community College Board's innovative CAP-IT project can help community colleges develop and scale IT apprenticeships aligned with employer needs that promote equitable access to industries and occupations and provide a pathway to in-demand careers. By using the right data, coordinating internal resources and investments, and partnering with vested external stakeholders and employers that prioritize job quality, wraparound supports, and equitable opportunities for advancement ([impact employers](#)), community colleges can serve as trusted workforce and employer partners, training providers, intermediaries, and leaders for apprenticeship programs, ensuring their students have high-quality education and training experiences that lead to quality jobs and economic advancement.⁸



Endnotes

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