Customized Apprenticeship Programming - Information Technology

FINAL REPORT

2019 - 2023

ICCB
ILLINOIS COMMUNITY COLLEGE BOARD

introduction

In 2019, the Illinois Community College Board, in partnership with ten community colleges (list) and other partners received a $4 million U.S. Department of Labor Grant for scaling apprenticeships across four years. Customized Apprenticeship Programming in Information Technology was the system's first apprenticeship consortium effort aimed at scaling apprenticeship programs in the IT sector. The ICCB exceeded its goals serving more than 3,000 participants, inclusive of 945 apprentices who completed. This final report is a compilation of the grant's accomplishments, barriers, and lessons learned as measured against the project's original goals. Grant results and impact were derived from both quantitative and qualitative data collected and analyzed over the four years.

Six student success stories are included in this CAP-IT final report. Through these multiple lenses, students inspire us by their courage and perseverance. These showcase the personal outcomes of our colleges and partners' work and the results achieved.

contents

I. grant description

The U.S. Department of Labor Employment and Training Administration (ETA) awarded approximately $184 million to 23 grantees for Scaling Apprenticeship through Sector-Based Strategies grant program in June 2019. Grantees started their work on July 15, 2019. The primary goal of this grant program was to accelerate the expansion of apprenticeships into new industry sectors reliant on H-1B visas, such as information technology (IT) and IT-related industries, advanced manufacturing, and health care. These industry sectors have not traditionally implemented apprenticeship programs, particularly small- and medium-sized businesses.

Scaling Apprenticeship was to promote the large-scale expansion of apprenticeships nationwide by supporting the training of thousands of apprentices in new or expanded programs and assisting partners in their efforts to create and scale these new or expanded apprenticeship programs. This grant program also intended to increase apprenticeship opportunities for all Americans, particularly veterans, military spouses and those individuals currently underrepresented in existing apprenticeship programs.

This grant's intent was to expand apprenticeship opportunities within H-1B industry sectors, particularly those that have not deployed apprenticeships on a large scale previously and increase the number and types of workers participating as apprentices. To achieve these goals, projects were required to undertake activities within each of the following categories:

- Grant funds were to be used primarily to support the training of thousands of apprentices in new or expanded programs. Training and training-related activities will include the academic and work-based training itself and supportive services to assist apprentices to participate and remain in an apprenticeship program.

- Collaborative partnership efforts were expected to create and scale new or expanded apprenticeship programs. Projects were expected to establish new apprenticeship programs, create the training infrastructure/network necessary to deploy these programs, expand existing apprenticeships, and promote all grant-funded apprenticeship programs nationally.

The ICCB's grant was a leader among grantees, being one of the highest achievers in performance.

student spotlight: Shane

College of Lake County

Shane was a student in College of Lake County's ICCB CAP-IT Pre-Apprenticeship Bridge Program. The Pre-Apprentice is enrolled in CLC's Computer Forensics Analyst Certificate program and is planning to complete an Associates Degree in Computer Information Technology. Shane started his Information Technology journey as a career changer. Shane moved from having a job in sales to enrolling in an IT trade school, IT Career Lab and attending full-time while also attending CLC for certificates. Shane stated, "I've always enjoyed working on my own computer, so it seemed like it could be a good career choice. Also, I have all the needed soft-skills: critical thinking, persistence, patience, attention to detail, etc." Shane decided to try out the Apprenticeship Program pathway because of the opportunity for real-world experience in a safe learning environment.

"Yes, I'm quite grateful. Being able to list six months of IT experience on my resume is a total game-changer," stated Shane. Shane's current apprenticeship is an IT Support Technician position for Community Action Partnership of Lake County. This organization supports the community by distributing grant money for living expenses to residents in need. Shane supports the case workers by answering their tech questions, and solving their tech problems when something goes awry. Shane also configures their laptops, desktops, phones, and builds new computers when necessary.

Shane has earned the ITIL Foundation 4 Certificate, for IT management. He has passed the first of two exams required for Microsoft's MDAA certificate and continues to work on his IT Associates Degree at CLC. Soon, Shane would like to explore computer security certifications.

II. project overview

Fortunately, there was growing interest in apprenticeships by Governor Pritzker, legislators, employers, and community colleges. However, the primary focus of these apprenticeship programs had previously been in the construction and manufacturing trades. The ICCB felt this grant posed a unique opportunity to create a project to diversify the occupations served by Illinois apprenticeship programs. In October 2018, the ICCB applied to the U.S. Department of Labor (DOL) for the Scaling Apprenticeship Sector Strategies Grant.

The ICCB's grant award focused on Information Technology Pathways and occupations. Some of these IT programs were:

- IT Generalist/Network Systems
- Cybersecurity
- Software Development
- Help Desk/ IT Support
- Computer Programming
- Web Design/Development

Ten Illinois community colleges wanted to participate with the ICCB and other partners in a statewide effort to expand apprenticeships in Information Technology occupations. These colleges were a collection of rural, suburban, and urban Institutions. Table I lists the college partners.

Table I. Participating Community Colleges

College Name	City (within the state of IL)	Size /Headcount (Fall 2023)	Area Description
City Colleges of Chicago	Chicago – Northeastern	39,221	Urban
College of Lake County	Grayslake - Northeastern	12,290	Suburban
Illinois Central College	Peoria – North Central	7,578	Suburban/Rural
Joliet Junior College	Joliet – Northeastern	9,863	Urban
Kishwaukee College	Malta - Central Northern	2,807	Rural
Lincoln Land Community College	Springfield - Central	5,238	Suburban/Rural
Oakton College	Skokie - Northeastern	7,032	Suburban
Parkland College	Champaign - Eastern	6,018	Suburban/Rural
Rend Lake College	Ina - Central Southern	1,871	Rural
Richland College	Decatur - Central	2,214	Rural

Employer engagement is essential to apprenticeship programming and is an integral part of the CAP-IT grant project. While apprenticeship programming has been a workforce development strategy for over a century, employers are hesitant to use this as a talent pipeline tool as they are accustomed to its concentration in the trades and its stringent requirements. Understanding these issues, the ICCB carefully sought partners with a background in working with employers and an interest in the apprenticeship field.

These initial partners included CompTIA, Illinois Department of Commerce and Economic Opportunity, Illinois Department of Veteran Affairs, Illinois Workforce Innovation Board, Young Invincibles, Women Employed, Safer Foundation, Illinois Department of Employment Security, Illinois Department of Human Services, One Million Degrees, and Harper College. These strong partners provided support and input to meet the grant goals.

Three additional primary partners worked with ICCB and the ten participating colleges by providing technical assistance, presenting webinars with experts in many areas relevant to advancing apprenticeships, hosting learning communities, and added to or expanded the numbers of existing apprenticeship programs and/or apprentices. These three primary partners were the Illinois Center for Specialized Professional Support (ICSPS), Jobs for the Future (JFF), and Harper College. ICSPS was contracted to coordinate and host webinars, meetings, learning communities, and professional development sessions for CAP-IT participants. Staff also provided speakers and workshops such as those focused on apprenticeships, interactions and engagement with employers, diversity and equity issues, and student engagement.

JFF not only provided technical assistance and coaching to some of the participating colleges but also produced webinars on apprenticeship issues and guided employer/college meetings. In addition, JFF was contracted to participate in the CAP-IT project by assisting employers with building or expanding apprenticeship programs and supporting a specific number of student apprentices. Dr. Rebecca Lake from Harper College provided technical assistance and coaching for the participating colleges. Harper also provided written resources to assist colleges in meeting their grant performance outcome measures. Every program participated in the monthly technical assistance. ICSPS and Dr. Rebecca Lake attended monthly coaching meetings with ICCB and JFF to coordinate efforts to support the participating colleges.

student spotlight: Paul

Illinois Central College

Paul, who was born and raised in Kenya, wanted to provide a decent life for his family by earning a job with a good wage here in the US. When he began classes at Illinois Central College, however, he was struggling with tuition payments and making them via a credit card. He said, "This was definitely not sustainable and was plunging me further into debt. By paying for my tuition and books, WEI took a heavy load off my shoulders and allowed me to concentrate on my schoolwork."

Paul was also working at a nursing home part-time while taking classes. He was trying to support his family with a new baby. Paul felt like IT would be a good career. He has always had an interest in computers and earning money while attending school. He liked the idea of getting some great IT work experience. Paul's tuition, books, and fees where fully funded through the Workforce Equity Initiative grant. He is grateful that he didn't have to worry about the cost while finishing the program. Additionally, a local community-based organization was assigned to Paul to provide wraparound services as needed.

Paul's goal is now to obtain a permanent IT position with Accenture. Accenture is a company that places IT workers into positions throughout the US. Currently, Paul is in the CAP-IT apprenticeship program working a 40-hour week apprenticeship while also attending classes. Paul stated, "This opportunity has been a life-changing event for me. I have doubled my salary. I can now finish my education without worrying about the cost." He encourages other students to take this opportunity.

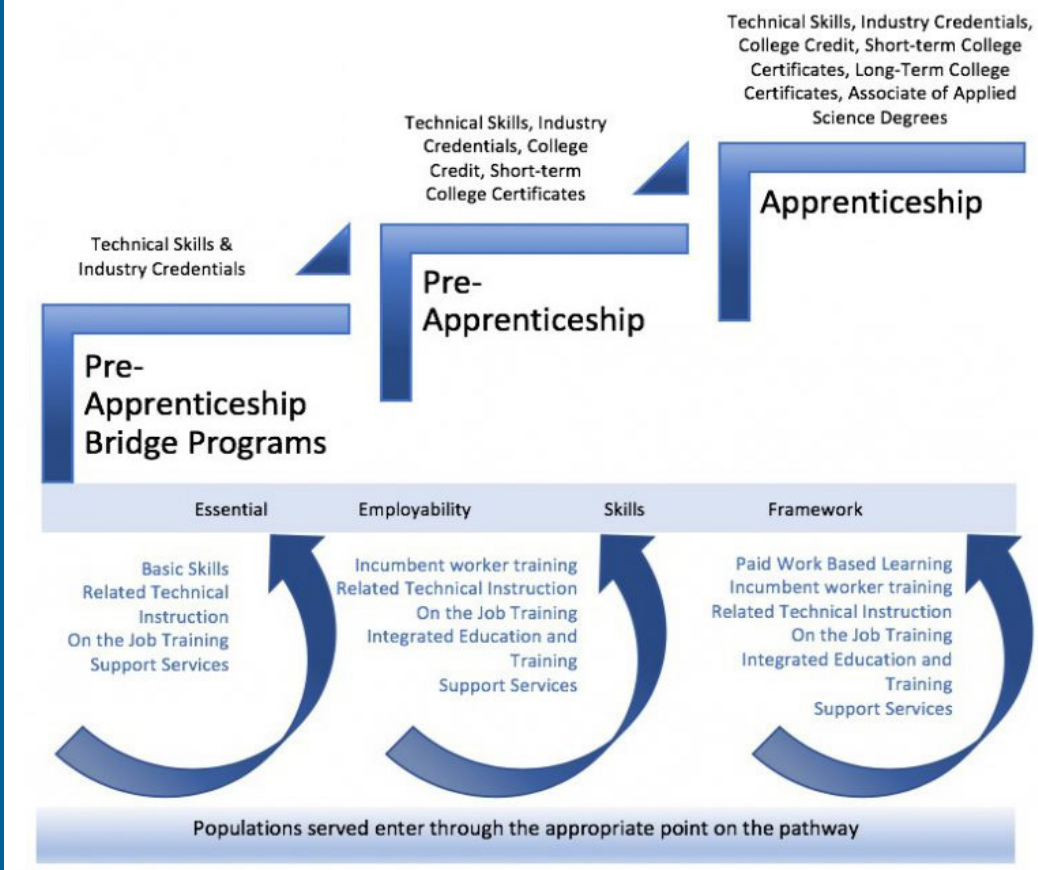
III. project focus

The project focused on high-demand occupation in Information Technology pathways. In 2018, a new apprenticeship model was shared with all those interested in growing apprenticeships across the state. This model illustrated the successful use and integration of multiple on-ramps for apprentices at various skill levels. Fortuitously, a year later, when the ICCB was an awardee of this Scaling Apprenticeship grant (CAP-IT), this model proved very relevant and useful.

The entry pathway model below includes various on-ramps for potential apprentices:

1. Pre-apprenticeship bridge programs
2. Pre-apprenticeship with related instruction
3. Apprenticeships, both non-registered and registered

SCALING APPRENTICESHIP CAP-IT MODEL



student spotlight: Ashlee

Oakton Community College

Ashlee was unemployed due to the COVID-19 pandemic. She came to Oakton College through our Facebook post that promoted the IT Bridge to CompTIA A+ Certification program and inquired immediately. After working in retail for years, Ashlee understood that contributing to the IT sector would offer a better-paying job and offer a work/life balance that retail does not offer. She understood that the program would not only teach her IT skills in theory but also provide assistance with technical jargon, job expectations, and an industry-recognized certificate proving her skills.

Ashlee has always had a fondness for and interest in technology but was never able to afford a structured training program. She is grateful she was given the opportunity to harness her strong work ethic and ambition to grow as an individual, both personally and professionally. The types of support Ashlee received from Oakton were 1-on-1 meetings that included resume development, the creation of a LinkedIn profile, and searching for jobs. All of this will help Ashlee reach her goal, which is to gain full-time employment in the IT field that will offer benefits and the work/life balance that she has not had before.

Oakton's Workforce Development Program partnered with Impact Networking that allowed our students to tour their facilities and to discuss the employment options for CompTIA A+ certified program graduates as an IT Analyst. She is now part of the CAP-IT apprenticeship program.

Ashlee would tell students considering the apprenticeship route, "The support was amazing! The online access was nice, but having a CompTIA instructor, a support instructor, and a support staff member that checked in on us every step of the way was the positive reinforcement that I needed. I would tell future students to take it seriously if you want employment that can give you the work/life balance that you want."

IV. project goals

CAP-IT: Three Project Goals

Project Goal #1

Expand existing industry-led customized IT sector apprenticeships leading to industry-recognized credential(s)

a) incorporate pre-apprenticeship models, essential employability skills, support services, and paid work-based learning

The entry pathway model (CAP-IT Model) served as a foundation for Project Goal #1.

This model provided a structured guide used by the participating colleges encouraging multiple ways to expand the number of credit and non-credit apprentice programs as well as increase the number of employers and apprentices served. Because the model clearly illustrates multiple on and off-ramps, college collaborative efforts with employers in their specific area were required. The entry pathway model also encouraged the creative uses of other student pathways within their institutions to serve a wide range of potential apprentices. For example, the current community college Adult Education ICAPS Programs as pre-apprenticeship pathways lead to all computer occupations with industry-recognized credentials.

Because community colleges are open-enrollment institutions, they serve those who are low-income or first-generation college students, as well as those who are older or from underrepresented minority groups. Every participating college incorporated essential employability skills and support services into their CAP-IT grant to better assist students to succeed. Students received support to address their many personal and institutional obstacles while trying to persist in school or improve their work situation.

Incorporating essential employability skills for CAP-IT students helped them to properly prepare for employment opportunities, communicate effectively during job interviews, and successfully develop in

diverse work environments. These workforce-ready essential skills introduced apprentice students to other tasks required by their occupation, providing them with a foundation for learning other skills and enhancing their ability to innovate and adapt to workplace changes.

During the time of COVID-19, one of the ideas that was well received by employers and employees was to develop short non-credit or credit programs for incumbent worker upskilling. The attention to upskilling was, until COVID-19, happening very slowly regardless of organizational size or industry. Though employers were not at all interested in hiring apprentices or upskilling from 2019 to early 2021, upskilling later became the key for ICCB to help meet the CAP-IT Performance Outcome Measures.

Another idea at this time was to incorporate paid work-based learning (WBL) for apprentices. If the student was in a registered apprenticeship computer technology program, this was required. Although WBL programs come in various forms, primarily due to COVID-19, most employers were reluctant to hire anyone, including an apprentice, or even put an incumbent worker through a 2–3-year apprentice program.

b) develop program models inclusive of incumbent worker upskilling strategies

Later, in 2021, some employers started to understand that their workforce could benefit from upskilling through this project. Upskilling is usually an intentional learning process where employees gain exposure to deeper knowledge through content-based coursework and experiential learning opportunities. It is also an opportunity to build and maintain a quality workforce and increase a company's efficiency, productivity, and competitiveness. Essentially, a company can retain key team players and help them evolve professionally by upskilling and/or reskilling while building the skills the employees need to take on new and expanding roles.

Project Goal #2

Create new types of apprenticeship models for pilot and expansion

a) utilize new approaches for acceleration and flexibility, including competency-based education delivery and shorter-term accelerated programs

The ICCB understood the need for a variety of flexible design and delivery options that recognize the time constraints facing people who work, have family responsibilities and yet are still trying to upgrade their skills. Participating colleges were expected to create apprenticeship models that provided flexible design and delivery options. Such designs were emerging, yet their development and diffusion was slow. There was no doubt that COVID-19 became a catalyst for the building of these types of short-term upskilling programs.

Competency-Based Education (CBE) was encouraged by the CAP-IT project for short-term apprenticeship programs. It is an educational approach that focuses on students' mastery of specific skills or competencies rather than the traditional emphasis on time spent in a classroom or completion of a predetermined curriculum. It is a student-centered approach that aims to ensure that learners acquire the necessary knowledge, skills, and abilities to succeed in computer-based occupations. Important to CBE programs is the understanding that incumbent workers and/or adults have a robust portfolio of skills and knowledge based on their work, life experiences,

and other academic experiences. The most important characteristic of competency-based education is that it measures learning rather than time spent in courses. A course or program based on CBE is workforce-aligned by design because the curriculum is built in conjunction with industry experts to include skills and competencies needed in the workforce. This was done by meeting with the employers, listening to their needs, and designing a program specifically for their employees.

b) partner with CompTIA to scale industry credentials and address emerging industry skillsets related to cybersecurity

For over 20 years, CompTIA has been the gold standard for beginning and expanding IT careers. CompTIA A+ remains one of the most important endorsements of ability and work ethic that an aspiring IT professional can earn in a constantly changing and evolving field. CompTIA certifications are useful for all employers, those with jobs and those seeking employment. The certification objectives are created and kept current by a team of subject matter experts (SMEs) from across the IT profession. These individuals make sure candidates are tested on the skills currently in demand throughout the IT workforce. CompTIA credentials are a perfect example of competency-based education.

The ICCB staff made sure CompTIA would be one of the CAP-IT project partners. CompTIA staff joined and contributed to discussions at every Advisory Meeting, whether virtual or face-to-face. CompTIA also presented at many of these meetings and/or during CAP-IT learning communities to provide relevant information, share pertinent ideas, and answer questions. Many Illinois community colleges already worked with CompTIA in credit and non-credit programs. This familiarity was useful in expanding the integration of CompTIA credentials in the CAP-IT project work.

c) result in family-sustaining employment

An expected benefit of the CAP-IT project was facilitating student apprentices to obtain family-sustaining employment or advancement in their company. But starting in March 2020, that was not achievable. Overnight, responses to COVID-19 changed both the workplace and home life.

The business response to the pandemic led to an unimaginable number of worker lay-offs and/or workers simply dropping out of the workforce. Because of this, people's wages and earnings quickly and drastically fell or, in many cases, just vanished. Lower-income families, ethnic minorities, vulnerable groups, and women all were hurt disproportionately by this. But by 2022-2023, restrictions were being lifted, and employment opportunities were growing. Simultaneously, the CAP-IT project restarted its work on providing funding for programs that led to family-sustaining computer-based occupations.

Project Goal #3

Scale and expand apprenticeship model nationally through partnerships with Jobs for the Future and Harper College

a) emphasize partner recruitment, strong external communication, and dissemination plan

Community colleges play a key role in driving talent development in the United States,

producing workers with the kinds of training that employers need while enhancing economic mobility for students. Unquestionably, there are many challenges that effective employer engagement, including convincing employers who are not hiring or do not want incumbent workers to upskill to take the chance on a "new" possibility - apprenticeship. Employers engage with a community college for a variety of reasons, such as to fill a specific training need for current employees or build a pipeline of skilled workers for the benefit of their company.

This was a tremendous problem throughout the first 2 years of the CAP-IT project. The CAP-IT project recognized that most successful efforts to engage employers were found in what is termed "sector partnerships." The CAP-IT project involved efforts to work with a group of employers in industry sectors that are important to the regional economy in a wide range of IT and computer occupations. This sector approach has often demonstrated increased productivity for employers and higher wages and better placement and advancement rates for workers. Therefore, enabling the dissemination of accurate, pertinent, and useful information, participating community colleges joined and contributed to advisory group meetings, operational meetings, and learning community meetings.

These meetings were held throughout the time of the project: a) eight semi-annual meetings, which included the CAP-IT Advisory Committee members and participating 10 colleges; b) eight operational meetings for the 10 colleges; and c)18 Learning Community Sessions and Professional Development Sessions. All meetings were recorded and available for each college and partner. A CAP-IT fall retreat was held on November 3, 2023, at the Trutter Center at Lincoln Land Community College. Employers were invited to take part in an employer round table discussion. All participating colleges were required to attend and engage in conversation with six Illinois employers. To share what was learned during the CAP-IT project, a 2-day Capstone In-Person Conference was held June 6 & 7, 2023. This convening looked at community colleges' role in apprenticeship programming - a critical workforce development tool. Over 60 attendees learned how community colleges can partner with local employers to build and improve their workforce through apprenticeship programming. The 2-day event included national, state, and local perspectives. Lessons learned from the ICCB-led Customized Apprenticeship Programming in Information Technology grant, a 10-college consortium project, were also shared.

The CAP-IT Learning Community was intentionally designed to promote and maximize information sharing by participating college members. Staff from Illinois State University Center for Specialized Professional Support (ICSPS) hosted and led these events. The objective was to have a recurring space (virtual meeting time) for this interaction. As a result, the community colleges strongly agreed that learning community meetings were supportive environments where members could engage in a variety of activities, share project problems, issues, and concerns, and learn from invited experts speaking on specific but pertinent topics. The Learning Community meetings also produced a sense of group identity and cohesiveness and counteracted the isolation many college staff felt because of COVID-19. At these meetings, the project performance outcome measures were reviewed for transparency and quarterly data from each college was shared with all.

b) provide professional development/coaching activities related to model expansion

To facilitate success, the CAP-IT project included the assistance and support of two performance coaches, JFF and staff from Harper College. The coaching was

results-oriented and solution-focused to assist participant colleges in meeting the project's intent and performance outcomes. Coaching meetings were held monthly or more frequently as needed. These virtual coaching meetings provided an opportunity to learn of problems, issues, and concerns each were experiencing so they could be addressed quickly. The ICCB acknowledged the uniqueness of the participant colleges. Because of COVID-19, this proactive coaching approach ensured the participants continued to focus on the project, monitored their progress, received encouragement, guidance, all types of suggestions, and build trust with their coach.

Coaching meetings allowed each college to share what was working, positive results with employers, problems and frustrations. In return, the coach was able to share these ideas and results with other colleges which played a significant role ensuring the CAP-IT project met its performance outcome measure. Coaches encouraged and even assisted with collaborative activities among colleges. These collaborative activities resulted in leveraging best practices which spread swiftly among the participants and lead to expansion of useful models.

c) articulate a continuous improvement and national replication strategy

Continuous quality improvement (CQI) activities were interwoven into the agendas during the CAP-IT operational and Learning Community meetings. Continuous Quality Improvement (CQI) is a quality management process that enables team members to continuously ask the questions, "How are we doing?" and "Can we do it better?" During the coaching meetings as well as at all other group meetings, time was made to review the CAP-IT system, its processes and ask for improvement suggestions. Colleges shared employer breakthroughs and what strategy was successful to fund upskilling programs or apprentice programs. Encouraging all CAP-IT participants to share creative solutions helped all accomplish their outcome measures and eventually became strategies to be replicated.

student spotlight: Roy

Joliet Junior College

Roy was a student in Joliet Junior College's ICCB CAP-IT Computer System Analysts Program. In May 2022, Phares earned his Associates Degree in applied science, web design, and social media. For a long time, Roy has known the importance of getting a college degree, but the high cost of college made pursuing his dreams of working in computer programming difficult. For several years, he attended Joliet Junior College (JJC) part-time while working in retail jobs. Prior to starting as an apprentice, he was working as an assistant manager for a T-Mobile store. Even while working as an assistant manager, Roy struggled to pay for college and his living expenses. He had to take a break from classes during the 2021 Spring and Summer semesters in order to work on paying off an outstanding tuition bill.

Fortunately for Roy, the GAD Group Technology, Inc. was struggling to hire new staff to provide help desk support for the Village of Bolingbrook's police, fire, and emergency IT systems. When GAD Group Technology reached out to JJC seeking to fill IT openings for computer systems analysts, Joliet's apprenticeship specialist was able to provide them with resumes for over 20 students within days.

Roy was one of those 20 students. When he received an email with information about a computer systems analyst apprenticeship position, he recognized this would be a valuable opportunity to earn full-time wages and get his tuition paid for while gaining hands-on industry experience. He worked with Joliet's apprenticeship specialist to improve his resume and applied for the apprenticeship. Roy was one of three students hired into GAD Group's CAP-IT apprenticeship program.

While apprenticeships are not frequently utilized in the Information Technology industry, Roy believes they offer a successful entry point into an IT career. Roy said, "It's a very innovating experience considering the fact that there are many aspects and skills that have been gathered from classes that I had previously taken at Joliet. To put that knowledge in the actual job really allows for me to get familiar and to put my intellect to the test with everything that I have learned." He added, "The best thing about being an apprentice is that I'm in a way developing more and more skills and essentially growing to become more of an expert on certain things that we learn in the job." Roy's apprenticeship with GAD Group Technology has provided him with hands-on experience fixing hardware components and remotely assisting customers with networking issues.

Roy recommends to others looking to get started in a career, "If the opportunity is given to you, take it because with being an apprentice it not only lets you jump into a career field, but it helps you get a better understanding and comfortability in what you are trying to learn or trying to fulfill in your career. Of course, in the end you would want to become more refined and knowledgeable from everything that you are learning as an apprentice." After earning his associate in applied science in Web Design and Social Media, Roy plans to continue working for GAD Group Technology, Inc. and will finish his apprenticeship in January of 2023.

V. performance

The performance measures selected for the CAP-IT project were quantifiable metrics to evaluate and assess desired impact. Data obtained for each performance outcome measure documented the funded CAP-IT project results and community impact. There was a total of 10 targeted outcome measures, with seven (7) reflective of the apprenticeship employment and training apprentice performance outcomes and three (3) reflective of the expanding apprenticeship programs outcomes. Gathering quantitative data allowed the ICCB to quickly and accurately know how the CAP-IT project was progressing in meeting its goals as outlined in the CAP-IT grant application.

Through its innovative model with various on and off-ramps, the ICCB was able to exceed many of its original goals. Particularly, community college partnerships with adult education and the use of the pre-apprenticeship built into existing ICAPS programs led to a significantly diverse pipeline of participants and apprentices. Over 50% of participants served were students of color with 54% of participants being women.

Below is Table II, Targeted and Actual Performance Outcome Measures, which displays a compilation of the final data obtained. After reviewing these outcome measures, it is apparent that 7 of the 9 measures were met by July 15, 2023, the 4th year of the grant funding. These results demonstrate the hard work of the ICCB, participating partners, employers, and community colleges.

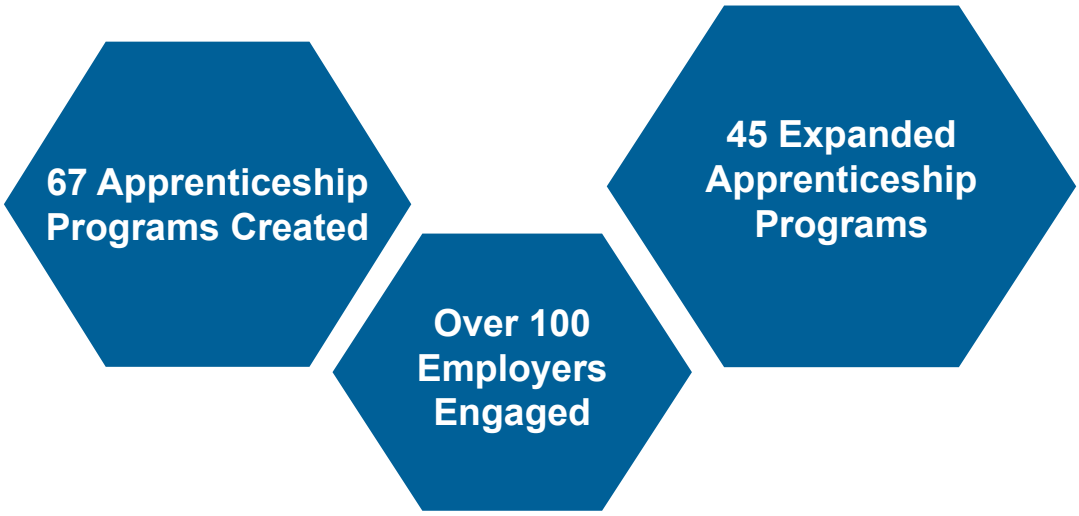


Table II. Targeted and Actual Performance Outcome Measures

		Total		
A.	Apprenticeship Employment & Training Apprentice Performance Outcomes	Projected	Actual	% To Goal
1	Total number of all participants served (receiving a grant-funded service and/or grant-funded education/training) in pre-apprenticeship and apprenticeship programs.	1728	2546	147%
2	Total apprentices that are hired by an employer and enrolled in an apprenticeship education/training program	842	1210	144%
3	Total apprentices who complete an apprenticeship education/training program	590	825	140%
4	Total apprentices who complete an apprenticeship education/training program and receive a degree or other credential	589	798	135%
5	Total number of unemployed and underemployed apprentices prior to enrollment who complete an apprenticeship education/training program and maintain their employment status with a current or new employer	330	159	48%
6	Total number of incumbent worker apprentices who complete an apprenticeship education/training program and advance into a new position. This includes incumbent workers who advanced into a new position with their current employer or a new employer following the completion of a training program.	118	508	431%

VI. pandemic impact

It is important to understand the timing of the grant, the COVID-19 pandemic, and the impact on the CAP-IT project. The CAP-IT grant was awarded on July 15, 2019. Governor Pritzker issued shut-down orders in April 2020. What resulted from the pandemic pertinent to education was the rise in the use of virtual platforms for educational and workforce systems. There was a learning curve for all as we strived to understand and use telecommunications.

For Illinois employers, the sudden emergence of the COVID-19 pandemic dealt a severe blow to the state economy. Many businesses across the country saw supply chain interruptions, decline in demand, supply shortages, and government-mandated closures. This led to what has come to be called the "Great Resignation," in which 38 million workers quit their jobs. For two years of the CAP-IT grant cycle (2020- 2021), employers and their workplace remained in a state of severe disruption and many were not hiring.

For Illinois community college students, the sudden emergence of the COVID-19 pandemic severely disrupted their education. Colleges were closed, examinations postponed, and clinical/internships or hands-on experiences with equipment stopped. Classrooms and teaching went virtual, and admissions for academic years 2020 and 2021 were fraught with confusion.

The pandemic highlighted the digital divide and led to more disruption in learning. This divide encompasses inconsistent broadband access, cost of devices and services, unreliable Internet infrastructures, and varying knowledge and skills for using devices and technologies.

For Illinois community colleges, the sudden emergence of the COVID-19 pandemic was especially challenging since Illinois community college funding is based on enrollment, tuition and fees, state apportionment funding per student, and area taxes. Action by Congress through the Coronavirus Aid, Relief, and Economic Security Act (CARES Act, 2020) helped by allocating nearly $14 billion to support higher education institutions and providing emergency financial aid for college students. COVID-19 led to a steep decline in enrollments at community colleges, especially among Black, Hispanic, and Indigenous populations, males, and part-time students.

The pandemic triggered an unprecedented need for faculty to quickly shift to online teaching in community colleges. The majority of faculty were unprepared and had not used multi-media delivery methods in their classes. Community college faculty had to significantly increase their workload, transforming and moving courses online, mentoring students in need, and reworking entire programs. This requirement overwhelmed many faculty, producing stressful situations and a great deal of fatigue.

student spotlight: Tyler

Kishwaukee Community College

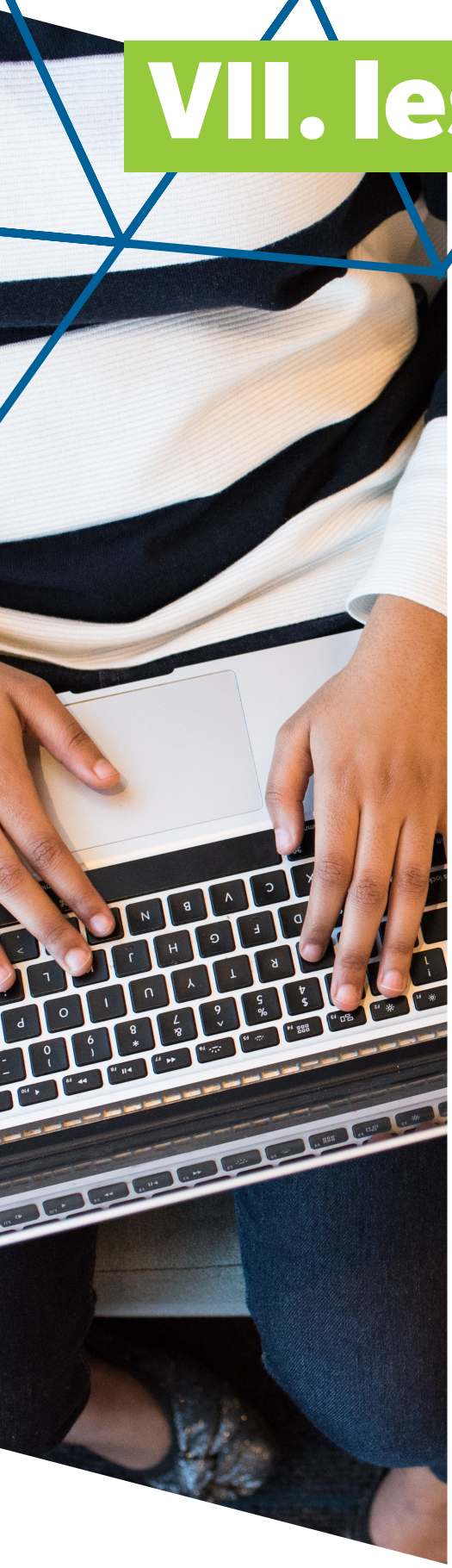
Prior to enrolling, Tyler was working at a grocery store in an entry-level position looking to further define his career path. He had always been interested in technology and had already built his own personal computer. Enrolling in the CIS program at Kishwaukee College was an exciting prospect for Tyler. He wanted to participate in an opportunity where he could gain experience with a reputable company and practice classroom objectives in the field. As a result of Tyler joining the CIS program, he gained valuable exposure to many processes during his time at Sundog IT. Tyler specifically mentioned witnessing the procedures involving taking on a new client and updating all their systems. He was grateful for the experience because he contributed to the team's success and was able to see the process through from start to finish.

Kishwaukee College assisted with the initial connection between Tyler and Sundog IT. and is in the CAP-IT apprenticeship program. The program also offered on-the-job training, mentorship, and funding for materials to obtain his Network+ Certification. Tyler's goal is to earn his Google IT Support Professional Certificate and then his Associate of Science in Networking and Systems Administration.

Who is Sundog IT? Sundog's owner, Cohen Barnes started out providing Internet Access to people in the mid-1990's in a friend's basement and watched in awe as the small company turned into more than he thought possible. Barnes attended Kishwaukee College in 1990-1992 and graduated with an AA degree and then went on to attend NIU in 1992-1995 to obtain his BA degree. Dale Boughton, Service Manager/Integrator, serves on the Kishwaukee College CIS Advisory Board. Including Tyler, three Kishwaukee College students participated in an apprenticeship at Sundog IT which resulted in full time employment offers at the conclusion of the program. Sundog has and continues to be a great Kishwaukee College partner.

When asked to pick one word describing his experience at Sundog IT, Tyler stated, "Rewarding." He suggests that all students visit their Career Center to have their resumes looked at so they can be prepared to apply for internships and/or apprenticeships.

VII. lessons learned



The purpose of documenting lessons learned is to share and use knowledge and/or understanding derived from experience to promote the achievement of desirable outcomes as well as prevent repetition of undesirable outcomes. Some lessons learned were expected, others a reaffirmation of common-sense lessons, and some unexpected.

Lesson Learned #1: Education of employers needed to happen early and frequently. Awareness of apprenticeship programs was very limited in the computer technology sector. There was a need to educate employers about registered apprenticeships. Participating colleges needed to educate employers about the ways and benefits of upskilling incumbent workers.

Lesson Learned #2: Clear and constant communication with employers helped to alleviate employer fear and trepidation. A key to partnerships with employers was regular and consistent communication. Also important was the message itself; it must be crafted to resonate with the employer's needs. Also, communications and interactions with employers should include materials to leave with them and talking points that make strong cases for participation. Materials that explain how registered apprenticeships, alongside other work-based learning strategies, can address a variety of hiring concerns. These helped advance not only the hiring of apprentices but also the upskilling initiatives by employers.

Lesson Learned #3: Early interactions with employers need to be "listening and discovering" conversations. Understanding what an employer needs and being flexible and quick enough to design the appropriate program will lead to employer participation. Most of the employers whose colleges assisted with CAP-IT funds and programming had their own preferences on program design and many other important decision points along the way. When colleges responded and were flexible regarding the more customized programs to meet the IT skill sets needed by an employer, the employer was more interested in participating.

Lesson Learned #4: Communicate early and often in the grant process if state and federal funds can be used to support apprenticeships with employers because it can lead to an increased amount of support from employers, which in turn leads to an increase in the number of apprentices served. Providing these funds to offset any employer's upfront investments encouraged their participation. Once employers understood that costs could be covered by the grant for short-term upskilling programs, it was an important motivator for employers. As a result of CAP-IT, colleges were able to pay for these programs for employers which offered an opportunity for upskilling and other ways to help employers.

Lessons Learned #5: Grant managers should acknowledge the need and adapt oversight approaches that can have a positive direct and indirect impact on grant performance. Remote work caused all to re-think how to facilitate high-quality virtual communications for remote employees in higher education institutions, grant managers, grant funders, and companies. Throughout the pandemic with the community colleges closed and when they reopened for remote student classes and support services, ICCB staff wisely engaged in more supportive grant management practices involving frequent meetings, using motivational language, sharing of information, and, as needed, providing virtual one-on-one guidance on the use of AGS Prime. These meetings served as a different type of grant oversight by ICCB for the 10 participating colleges.

Lessons Learned #6: Federal and state funders should explore broader apprenticeship definitions for future grant opportunities with the intended outcome of creating shorter apprenticeship programs. Several participating colleges were able to strengthen (and/or establish) their own unique apprenticeship model. These new models were shared across the college in different areas such as agriculture, building and construction, and healthcare, allowing for better sustainability of apprenticeship programs

Lessons Learned #7: Funders should stress how many apprenticeship occupations can be appropriate for a wide range of employers. During 2020 – 2022, colleges continued to contact employers, but very few were amenable to even having conversations about what the CAP-IT project could do for them. Participant colleges had to change outreach strategies. What was discovered is that non-

computer technology employers wanted and needed new computer technology talent or needed to upgrade and upskill their current workers. For example, because of moving their tech support department to another state, the Caterpillar Company needed to upskill their current workers, particularly those that would remain here in Illinois. Another example was a bank that was upgrading its software system and needed upskilling for all its employees.

Lessons Learned #8: Funders should encourage braiding of multiple funding sources to serve students in different ways. Colleges had a variety of different grants and needed to spend the funds, meet their performance outcome numbers, and serve as many students as possible. Colleges agreed they needed to better understand how to use braided funding for multiple grants, institutional dollars, WIOA money, etc. and serve more students. ICCB staff and the CAP-IT coaches worked with each college to develop methods to braid these funding streams. Various grants could be used to fund different student needs (i.e., one grant for books, another for stipends, and another for equipment). Braiding funding absolutely enhances the benefits to students.

Lessons Learned #9: Provide Virtual Learning Communities for each grant opportunity. Virtual Learning Communities allow for cohorts to be established. In Year 2 of this 4.5-year grant, ICCB established a monthly virtual learning community (VLC). This allowed our community college staff to come together to share successes, struggles, and questions in a safe space. They were able to learn from each other and, in turn, achieve higher outcomes. Speakers were strategically brought in to present on topics that the community colleges said they needed – how to ask employers questions; marketing their apprenticeships; how to spend their grant dollars; how to input data in AGS Prime; etc. As a result of the VLC in this grant, ICCB has established other VLCs for other grants.

student spotlight: Manisha

Parkland College

Manisha began her Adult Education in IT using the Illinois Integrated Education and Training Model (ICAPS) at Parkland as part of the CAP-IT pre-apprenticeship program. She is a stay-at-home mother who recently received work authorization in the United States. She was looking for options in post-secondary that aligned with her training in India. She learned that the IT field has many opportunities, and it felt like her degrees in Economics might help her perform IT management duties if given the opportunity.

Manisha also chose ICAPS as it seemed like a great way to improve her command of the English language alongside native-born U.S. college students and allow her to add a post-secondary credential that would pair well with the Econ/Business-focused education credentials she had previously earned. She also felt it was possible that professional opportunities may not be available to her as she transitioned to the United States, and she was afraid there would never be an avenue to overcome her English language barrier.

Despite having a master's degree in economics from a university in India, Manisha was not sure she could be a professional and execute beyond the classroom in a country she was not born in. She is very grateful for the confidence she built as an ICAPS student and for the ability to avoid 100% co-dependence on her husband. She said, "It felt great to know that the possibility of becoming an IT professional is now a real one."

Manisha explained that the following types of support were offered to her: Class visits by IT professionals; Support class with Adult Education faculty; support lab run by an IT professional; Career counseling (including resume/interview assistance); Internship/Employer Connection Events; Computer Technology Center Tutoring; and Grant Funding.

Her goal was to be capable of being an IT professional in an English-speaking environment, and to be able to show her children that both of their parents can be successful in the United States. Manisha is currently a candidate for an IT Internship with the University of Illinois (U of I Collaborative IT Internship Program). She is also working with the Parkland College Career Counselor on interview preparation and identification of other obtainable IT jobs.

This past May she earned a Certificate in Computer Foundations (I.T. Networking). Manisha will likely study for the CompTIA ITF+ Certification next. Manisha stated, "I would let future ICAPS students know that ICAPS is amazing, and that it can really help an ESL student grow in their confidence to communicate more in-depth when speaking with U.S. natives. I was afraid that I would never reach the point where I could operate in the United States on my own, and that the skills I learned in India would never be used, because I could not speak the English language well enough. Now I am really happy to be in the United States, and I hope I never have to leave." Her advice to others would be to be ready for the sacrifice that it takes to do well in class and maintain balance in your personal life. It is not easy, but it is worth it!

VIII. conclusion

The Illinois Community College Board (ICCB) wants to thank the Department of Labor and Employment and Training Administration for this opportunity to successfully participate in the Scaling Apprenticeship Through Sector-Based Strategies grant. Apprenticeships in the computer technology sector present an opportunity to expand access to underrepresented workers while meeting employers' needs for a talented workforce. Yet, as with other white-collar or no-collar apprenticeships, the path to expanding and creating IT apprenticeships has numerous barriers. The DOL ETA Scaling Apprenticeships was an unprecedented investment for growth in registered apprenticeships. The use of registered Apprentices has become a successful strategy at providing employers with the skilled workforce they need and building diversity, equity, and inclusion in the IT sector.

As the country recovers from the COVID-19 pandemic and its negative effects on the economy, the use of registered apprentices in computer technology can be a tool in preparing workers with the skills vital for employers today and in the future. The success of the ICCB CAP-IT project and what was learned is transferable and can be shared with other colleges. Work between these 10 participating colleges built and solidified relations and partnerships with area companies that will remain in the future. Recommendations from the lessons learned can benefit interactions, collaborations, and partnerships between community colleges and their area companies.

student spotlight: Aaron

Rend Lake College

When Aaron was a young boy, he and his younger brother, Marcus, would take stuff apart and put it back together. Their curiosity and desire to learn how things were made and operated led Marcus to pursue a degree in information technology after his high school graduation. Aaron chose a different path upon graduating from high school and went directly into the work force.

After several years of working for larger corporations, Aaron said he realized he needed to make a change. "When you start to dread going to work every day, you start thinking about other options," he said.

A co-worker who was attending Rend Lake College and pursuing a degree in IT talked with Aaron about the program. Those conversations, along with his brother's success as an IT technician, helped Aaron make the decision to enroll as a first-time non-traditional student at Rend Lake in January 2020. Aaron was in the middle of completing his first semester at Rend Lake when he heard about the CAP-IT apprenticeship program. He said the staff at Rend Lake helped him to prepare a resume, something he had not done since high school. They also placed Aaron in an apprenticeship program.

Aaron was hired as an apprentice at Kunce Computers in Mt. Vernon, IL in August of 2020. Because many customers were relying on technology to operate during the pandemic, Kunce Computers needed extra help as their small business was rapidly growing. Jenny Kunce a company manager said, "Aaron's practical knowledge, past experiences and the technical training from Rend Lake was exactly what we needed during a time when our business was growing."

When asked what he liked most about the program, Aaron said, "Being in an apprenticeship helps me to use what I have learned in the classroom in an actual job setting and vice versa. Many of the jobs that I complete on-the-job, helps me to learn and succeed in the classroom." As for advice for those considering applying for an apprenticeship, Aaron said, "Go for it! Once you start the program, you will learn a lot about the career you have chosen."

ICCB & primary partners

ICCB CAP-IT Team

Jennifer Foster, Deputy Executive Director

Whitney Thompson, Deputy Director for Workforce Education

Lavon Nelson, Senior Director for Workforce Education

Angela Gerberding, Director for Work-Based Learning

Jay Brooks, Associate Deputy Director for Research & Analytics

Todd Jorns, Senior Director for Professional & Tehcnical Services

Jennifer Franklin, Deputy Director for Finance & Operations

Bill Dart, Senior Director for Finacial Compliance & Grants Management

Jobs for the Future (JFF)

Illinois Center for Specialized Professional Support

Harper College


BUSINESS PANEL

401 East Capitol Avenue

Springfield, IL 62701

For questions contact:

ICCB.itapprenticeshipgrant@illinois.gov

www.iccb.org

Scaling Apprenticeship Through Sector-Based Strategies - HG-33033-19-60-A-17

Four Year Grant (July 15, 2019 – July 14, 2023)

Award amount: $3,999,400