Final Evaluation Report

Prince George's Community College, TAACCCT, INsTEP

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Table of Contents

Executive Summary

TAACCCT Program/Intervention Description and Activities

In September 2012, Prince George's Community College (PGCC) was awarded a round two Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant by the U.S. Department of Labor (DOL) to implement the Information Technology Education & Career Pathways (INsTEP) program. The primary goals of the INsTEP program were to 1) prepare students to gain employment in the IT sector by providing training that leads to industry accepted certifications; and 2) to encourage participants to pursue further education in IT Support or other IT related fields. In their grant application, PGCC identified three occupations, targeted by INsTEP, that were expected to see significant demand from 2012 to 2021: computer systems analysts, computer support specialists, and network & computer systems administrators. The certifications that are often required to enter these occupations, offered by the INsTEP program included COMPTIA A+, COMPTIA Network+, COMPTIA Security+, and Microsoft Certified Technology Specialist Certification (MSTS Windows 7 Configuration). The INsTEP program was designed through a partnership between PGCC and several local entities to ensure the training is locally relevant, in demand, and provided the necessary supports that will help ensure student success.

Program instruction consisted of classroom based instruction, virtual instruction, and interactive technology-based instruction with individual and group learning emphasizing real-world scenarios, training in troubleshooting, and solution delivery. The technical skills training was delivered via a hybrid model that included online modules and classroom instruction. To augment hard technical skills, INsTEP also provided students with customer service training, professional development preparation, and opportunities to engage and network with local employers. Over the course of the program, INsTEP staff also coordinated tutoring and mentoring in response to students' requests for additional supportive services. Other support services that were offered included financial literacy training, legal assistance, career guidance, professional development training, and job search assistance.

Through the course of the program implementation, placement strategies varied for each cohort, however the admissions process remained consistent. During the admissions process, students took a Will to Win assessment, submitted an essay, and participated in an interview before being considered for the program. The INsTEP program was designed to serve a population that is unemployed or under-employed, qualifies for Trade Adjustment Assistance (TAA), or is a veteran, in accordance to the TAACCCT goals.

Evaluation Design Summary

Evaluation Goals

The goal of the INsTEP evaluation was to provide PGCC with the information, data, and analysis needed to manage the performance of the program and to deliver the most accurate outcomes measures as possible, to determine if the program was effective in helping participants improve their employment and wage situation and set them on a sustainable career pathway. To achieve this goal, the INsTEP evaluation is comprised of two parts, an implementation and an outcomes study. Given the nature of the program and the small population of participants, ICF determined that a mixed methods evaluation using a comparison cohort and pretest-posttest approach for the outcomes study would allow ICF to understand program outcomes most appropriately.

Implementation Study Design

For the implementation study ICF set out to answer the research questions identified in the TAACCCT Solicitation for Grant Applications (SGA), shown in Exhibit 1A:

Exhibit 1A: Implementation Study Research Questions

How was the particular curriculum selected, used, or created?
How were programs and program design improved or expanded using grant funds? What delivery methods were offered? What was the program administrative structure? What support services and other services were offered?
Did the grantees conduct an in-depth assessment of participant's abilities, skills and interests to select participants into the grant program? What assessment tools and process were used? Who conducted the assessment? How were the assessment results used? Were the assessment results useful in determining the appropriate program and course sequence for participants? Was career guidance provided and if so, through what methods?
What contributions did each of the partners (employers, workforce system, other training providers and educators, philanthropic organizations, and others as applicable) make in terms of: 1) program design, 2) curriculum development, 3) recruitment, 4) training, 5) placement, 6) program management, 7) leveraging of resources, and 8) commitment to program sustainability? What factors contributed to partners' involvement or lack of involvement in the program? Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?

Source: US DOL, TAACCCT SGA

To guide the development of the implementation study design, ICF created a logic model for the INsTEP program (see Appendix A). The logic model depicted the expected pathway taken from program implementation activities to the expected outcomes and impacts. This model provided the framework for ICF's evaluation design.

ICF employed a number of formative evaluation strategies as part of the implementation evaluation. Program and performance data were collected to evaluate the effectiveness of the program implementation. After initial baseline development, data collection protocols and tools were developed and interviews were conducted with program personnel and key leadership in order to understand the initial design and implementation processes. Surveys were administered to INsTEP participants that gauged pre- and post-course support services, such as employment services, student use and satisfaction with those services, and determined changes in knowledge, aspirations, and perceptions of training program efficacy. Site visits were also conducted to observe key meetings and training sessions, and to conduct focus groups with INsTEP participants. ICF also conducted annual phone interviews with key program personnel and faculty to gather their perceptions of program implementation for each cohort.

To analyze the implementation information, ICF staff transcribed notes from interviews and focus group sessions. Raw data taken from transcripts were organized into an excel document, coded, and then analyzed comparatively across cohorts to identify common themes as they emerged in categories identified in the logic model and as they related to the research questions posed in the TAACCCT SGA.

Outcomes/Impact Study Design

For the outcomes/impact study ICF set out to answer the research questions identified in the TAACCCT SGA, shown below in Exhibit 2A.

Exhibit 2A: Outcomes/Impact Evaluation Research Questions

How many Unique Participants were Served?
How many Participants Completed the TAACCCT-Funded Program of Study?
How Participants are still Retained in the Program of Study?
How many Participants Completed Credit Hours?
How many Participants Earned Credentials?
How many Participants Enrolled in Further Education after the TAACCCT-funded Program of Study Completion?
How many Participants were Employed after the TAACCCT-funded Program of Study Completion?
How many Participants were Retained in Employment after Program of Study Completion? Students would need to be non-incumbent workers for this metric.
How many Participants that were Employed at Enrollment Received a Wage Increase Post-Enrollment?

Source: US DOL, TAACCCT SGA

For the outcomes study, ICF used a comparison cohort methodology and pretest-posttest design to study the outcomes of INsTEP participants. To identify an adequate comparison group, ICF used a common participant

attribute mix for a range of factors, including (similar or common) program or courses of study and length of training, and the educational attainment and work history of the participants. The evaluation team then implemented data collection protocols to gather information on all individuals enrolled in the INsTEP program and in the comparison group. Over the course of the outcomes/impact evaluation, ICF conducted three surveys with the evaluation participants (INsTEP and comparison cohort). The first were baseline surveys conducted in person in the INsTEP classroom. The baseline surveys were completed during the first week of program instruction and were used to gather pre-program completion information. This is used as the baseline in the pretest-posttest analysis. Additional follow-up surveys were conducted at 6 months and 12 months post-program completion using an online survey platform sent by email.

A number of different metrics are used to measure progress and success through the analysis of participant outcomes. The INsTEP outcome evaluation focused on explicit milestones of certificate and/or degree attainment, employment placement and retention, and wage levels. The evaluation was designed to track program participants and the control group over the period of performance (three academic years and one follow-up year) using rolling cohorts to assess short, medium, and long-term outcomes of INsTEP program participants.

Due to the limitation of the sample size, ICF uses simple descriptive statistics and univariate analysis to describe the findings, such as distribution, central tendency, and dispersion. The distribution shows the frequency of individual values or ranges of values for a variable. The central tendency of a distribution is the "center" of a distribution of values, including the mean, median, and mode. Dispersion refers to the spread of the values around the central tendency, including the range. The range simply compares the highest and lowest values.

Implementation Findings

The following are the key implementation findings:

Capacity Building / Partnerships

- PGCC identified partnership building as the key element to capacity building. During program planning and design, PGCC established a Joint Advisory Board (JAB) for Sciences, Technology, Engineering, and Math (STEM – credit and non-credit programs), which included professionals in business, industry, and government – including technology employers in the county and region. The JAB supported the INsTEP program through mentorship, service-learning, and employment opportunities for the project's participants. These partnerships have allowed PGCC to build capacity to provide accelerated training programs targeting specific industry sectors and employers.

- PGCC also built their capacity to replicate and scale INsTEP by implementing the Will to Win and TestOut tools to assess students and place them in the appropriate program and determine when they are ready to take certification tests. Furthermore, the virtual curriculum designed by TATA Interactive for INsTEP, consisting of an online training system will contribute to the college's capacity to extend their trainings to more students.

INsTEP Development and Implementation

- As noted above, during the program planning and design phase, PGCC established a Joint Advisory Board (JAB) for Sciences, Technology, Engineering, and Math (STEM – credit and non-credit programs). In addition to supporting the INsTEP program during service delivery, the JAB also was engaged in curriculum development and program planning.

- After the planning and development phase, PGCC recruited a program manager to assemble a project team and implement the INsTEP program and a data research specialist to lead the tracking of student performance and

outcomes. Following this, the instructors were hired to teach the classes, including: three instructors for certifications (COMPTIA A+, Network+, Security+ and MSTS Windows 7 Configuration), two instructors for customer service, and six instructors to provide IT professional development training. All INsTEP staff was overseen by a Project Director, the PGCC Director of the Workforce Development Division.

Program Delivery

- INsTEP is a hybrid program which was developed to provide participants with both online and in person instruction. INsTEP provided four certifications, COMPTIA A+, COMPTIA Network+, COMPTIA Security+, and Microsoft Certified Technology Specialist Certification (MSTS Windows 7 Configuration). The technical skills for these certifications were provided via classroom based instruction, virtual instruction, and interactive technology-based instruction with individual and group learning emphasizing real-world scenarios, training in troubleshooting, and solution delivery.

- To complement the technical hard skills, the program included customer service and professional development training. Customer service training was provided via online modules and classroom instruction. Additionally, participants were provided professional development guidance, including resume assistance, career planning, and job search assistance via classroom instruction and one-on-one mentoring. Students were also provided with tutoring via classroom instruction.

- The professional development components of the INsTEP program which included presentations in customer service, resume writing, career guidance, and interview preparation, were introduced for cohorts 2 and 3, which started in January 2015 and May 2015, respectively.

Participant Placement / Performance Assessment

- The aptitude assessment tool "Will to Win" was used to determine applicants' candidacy for the INsTEP program. INsTEP instructors reported that they found the Will to Win assessment results to be helpful in determining which students might need additional assistance with specific topics in the curriculum, and that knowledge allowed them to adjust their work accordingly.

- The TestOut online assessment tool was used to determine students' readiness for the COMPTIA certification exams. Instructors and staff had mixed feelings on the use and efficacy of TestOut. Program staff found the TestOut assessment results were helpful in determining which students were ready to take the certification test; however, instructors and students reported that the assessment tool was not well aligned to the requirements of the COMPTIA exams.

Support Services / Career Guidance

- The INsTEP program provided students with a number of support services that helped them navigate the course work and prepare them for employment, including tutoring, mentoring, and other trainings such as financial literacy. Some students, however, reported the need for additional support services such as a stipends, transportation and childcare assistance.

- The INsTEP program's career guidance services included one-on-one mentoring via the Vets 1st program and the various instructors teaching both the technical skills and professional development sections of the curriculum. The one-on-one mentoring was offered to cohorts 2 and 3 in response to students' requests for additional coaching and mentoring services.

Participant Satisfaction

- Respondents' use of different resources as well as satisfaction with those resources and other services varied. The majority of respondents feel that the INsTEP training has prepared them for employment and/or further training in the IT field; 30% of respondents reported that the training led directly to jobs in IT and 78% indicated that they want to further their education in the IT field to develop their careers.
- Overall, 86% of INsTEP respondents indicated they were somewhat to very satisfied with the training they received.

Participant Impacts and Outcomes

The following are the key participant impact and outcome findings:

- The outcomes shown below in Exhibit 3A measure how successful the INsTEP program was in serving participants and in participant completion, credential attainment, and employability, showing the nine outcomes articulated in the SGA.
- In regards to changes in wages for incumbent workers, at 6 months post-program completion 15 of the 17 incumbent workers who provided wage data (at baseline and at 6 months) received a wage increase and at 12 months post-program completion, all 12 workers who provided wage data (at baseline and at 12 months) received a wage increase.

Exhibit 3A: Outcome Measures Articulated in the SGA

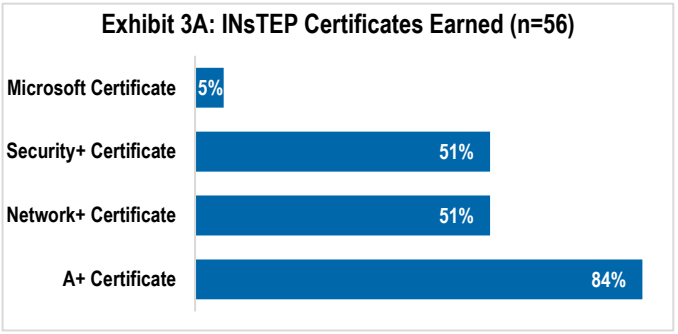
Total unique participants served	65
Total number of participants who completed a TAACCCT-funded program	52
Total number of participants still retained in their program of study or another	0
Total number of participants completing credit hours	52
Total number of participants earning credentials	56
Total number of participants enrolled in further education after grant-funded program of study completion	3
Total number of participants employed after grant-funded program of study completion	20
Total number of participants retained in employment after program of study completion	11
Total number of those participants employed at enrollment (for purposes of this reporting, "incumbent workers") who receive a wage increase post-enrollment (6 months post-program completion)	15 (n=17)
Total number of those participants employed at enrollment (for purposes of this reporting, "incumbent workers") who receive a wage increase post-enrollment (12 months post-program completion)	12 (n=12)

Source: US DOL, TAACCCT SGA

Certificates Earned

A primary measure of success for the INsTEP program is the number of participants earning certificates. The certificates are the participants' catalyst to employment, the ultimate goal of the INsTEP program. Of the 65 participants that enrolled in INsTEP, 56 earned one or more certificates (86%). Exhibit 3A shows the four certificates that were awarded in the INsTEP program and the percentage of certificate earners that earned each certificate, as reported in PGCC administrative records. Many individual INsTEP completers earned multiple certificates. A total of 47 participants earned the The COMPTIA A+ certification, 84% of all individuals who attained a certificate. The COMPTIA Network+ and COMPTIA Security+ certificates were earned by 31 individuals (51%). Only 3 completers earned a Microsoft

Exhibit 3A: INsTEP Certificates Earned (n=56)



Source: PGCC Administrative Data

certificate. The COMPTIA A+ certification is the first certification that the program completers earn in the course, followed by COMPTIA Network+, COMPTIA Security+, and then the Microsoft certificate.

Enrollment in Further Education

Enrollment in further education was prevalent for both the INsTEP participants and the comparison group. As shown in Exhibit 4A, 58% of INsTEP respondents indicated in the twelve month survey they had participated in additional trainings and 65% of the comparison group reported that they have pursued additional training. Enrollment in further education and training is a primary goal of the INsTEP program.

Exhibit 4A: Both INsTEP and the comparison group have pursued further education at similar rates.

Source: Twelve month post-program completion participant survey

Employment & Wage Outcomes

INsTEP appears to be very successful in employing participants in higher paying sustainable jobs in the IT sector. At the time of enrollment, only 55% of INsTEP participants reported having a job. At the 12 month post-program completion period, 80% of INsTEP respondents reported having a job and 80% of those jobs were reported to be in an IT related field. The average wage for all participants that reported wages, those that had jobs at program start and those that did not, increased from $16,368 at program start to $39,614 six months after program completion and $50,373 twelve months after program completion, a 142% and 208% increase, respectively. Among incumbent workers (those that were employed at the start of the program) that reported, wages increased from an average of $18,156 at program start to $37,510 six months after program completion and $46,852 twelve months after program completion, a 107% and 158% increase, respectively (shown in Exhibit 5A.

Exhibit 5A: INsTEP Yearly Wages Incumbent Workers (Includes only participants that were employed at baseline)

	Baseline (n=18)	6 Months Post-Program (n=13)	12 Months Post-Program (n=12)
Average	$18,156	$37,510	$46,852
Median	$16,770	$36,000	$40,352
Maximum	$39,000	$90,000	$90,000
Minimum	$1,000	$8,788	$14,703

Source: Baseline participant survey, six month and 12 month post program completion participant survey

Limitations

Limitations to the implementation study include a small sample size, changes in the program implementation schedule, and the varying support services that were offered among cohorts. ICF primarily analyzed qualitative data collected through interviews with staff, instructors and focus group data from students to assess the INsTEP implementation. ICF experienced a challenge collecting consistent implementation data across cohorts as cohort 3 was implemented ahead of schedule and overlapped with cohort 2 and because of some changes to the support services that were offered to each cohort. In response to the scheduling change, ICF consolidated the interviews for the instructors and staff over cohorts 2 and 3 into one round of interviews, which limited our ability to capture data on implementation changes from cohorts 2 to 3.

While the data from these three different sources (program staff, instructors, and students) were analyzed to provide corroborated assessments of the INsTEP services, there was limited variety of data available for analysis that could have allowed for more robust findings. ICF was able to capture perceptions of instructors who also were local IT employers, however, the duality of their roles as instructor and employer somewhat confounded the data analysis.

Limitations to the outcomes study also include the small sample size and also the reliance on self-reported survey data. The INsTEP participants and the comparison group were small in size, 58 and 29, respectively. Where PGCC administrative data was used, which was primarily only for the demographic data, all participants are included. However, where surveys were used to collect information, which includes the majority of the outcomes data, there are smaller sample sizes due to the varying response rates for each survey question. Given these small sample sizes, ICF was not able to conduct any tests of statistical significance or analyze the data to infer a causal relationship between the training and the participants' employment outcomes.

Additionally, since Unemployment Insurance (UI) data was not available for the study participants, ICF used survey data on participants' employment status and wages and in some cases responses were limited. Additionally, this data is self-reported and ICF has no way to guarantee that it is accurate or that respondents have not exaggerated their employment status or earnings.

Conclusion

Key Lessons Learned

- **INsTEP prepares students for further education.** Analysis of student's satisfaction data from the six month survey suggests that the training program is providing students with relevant content that motivates them to pursue further education in the field. This finding was confirmed by survey data from the 12 month survey which indicated that INsTEP students had furthered their education by participating in other trainings since completing the program.

- **INsTEP was successful in employing participants in higher paying sustainable jobs**. At 6 months post-program completion 15 of the 17 incumbent workers who provided wage data (at baseline and at 6 months) received a wage increase and at 12 months post-program completion, all 12 workers who provided wage data (at baseline and at 12 months) received a wage increase. The average wage for incumbent workers (that reported wages) increased from $18,156 at program start to $37,510 six months after program completion and $46,852 twelve months after program completion. The average wage for all participants (that reported wages), those that had jobs at program start and those that did not, increased from $16,368 at program start to $39,614 six months after program completion and $50,373 twelve months after program completion.

- **Creating IT training courses that prepare students for one or two certifications in a semester might be an ideal course design.** Data on certificates earned suggests that most students were able to earn three certifications, but unable to earn all four over the course of a 16 week semester. As discussed in the program implementation findings section, the majority of students reported that the pace of the program was too intense or fast given the amount of material they had to cover in accordance with the certification testing schedule of the 16 week course.

- **Trainings for low-income individuals that require 40 hour weeks should consider providing students with additional supports where feasible such as food, housing, or childcare assistance to help mitigate the stresses of the time commitment.** Several students reported that they struggled to meet their basic needs and could have benefitted from additional resources such as a stipend or child care assistance.

- **Implementing a comprehensive communication plan is more likely to increase student use of services and resources, and course satisfaction.** The disconnect between how program staff describe the employer engagement aspects of the professional development training and services offered to students contrasts with the students' reports of those services. This suggests the need for better communication throughout the course. Developing a comprehensive communication plan to accompany the program that spans student recruitment,

orientation, curriculum delivery and course close out could serve to better ensure that students are fully aware of the resources and services available to them.

Implications for Future Workforce and Education Research

- Future studies of interest would be to examine the pace of program delivery to ensure that it meets the needs of the participants and employers. Further exploration of different timeframes for program completion and the impact on participant outcomes and overall satisfaction would be useful for the next phase of training programs. Most community colleges are equipped to offer associate degree programs, many offered over a two year period that can be completed on a part-time basis allowing for the student to stay employed while they take coursework. Other TAACCCT models offer stackable, short-term certificates which allows for students to have multiple exit and re-entry points so that they can gradually expand their skillsets over a longer period of time. Future evaluation of workforce programs would benefit from exploring differences in outcomes for these different delivery models.
- Another area of exploration would be to examine the connections between the level of employer involvement and the success of programs and their participants. Does the involvement of employers at key stages of program and curriculum development lead to greater success for students, faster employment and longer retention?

Introduction

In September 2012, Prince George's Community College (PGCC) was awarded a round two Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant by the U.S. Department of Labor (DOL). Programs awarded round two DOL TAACCCT funding focus on creating and expanding innovative partnerships between community colleges and businesses to train unemployed and under-employed individuals, veterans, and those who qualify for Trade Adjustment Assistance (TAA) with in-demand skills. In response, PGCC designed the Information Technology Education & Career Pathways (INsTEP) program, an innovative hybrid course of study.

As part of the grant requirements to engage a third-party evaluator, PGCC contracted ICF to be the evaluator for the INsTEP program. ICF was tasked with evaluating the implementation and outcomes of the INsTEP program. ICF is submitting this final report to PGCC and to the INsTEP administration as the final requirement of its contract.

This report is organized into five main sections: 1) description of the INsTEP program; 2) description of the evaluation design; 3) implementation study findings; 4) outcomes study findings; and 5) the conclusion, which describes the key lessons from the evaluation of INsTEP and implications for future workforce and education research.

The INsTEP Program Description and Activities

The INsTEP program addresses two main needs (1) the need for skilled Information Technology (IT) workers in the Maryland region, and (2) the need to create a pathway to higher wage jobs, for TAA-eligible, veterans, displaced, or other adults seeking to transition from low wage jobs to higher wage jobs. In their grant application, PGCC identified three occupations that were expected to see significant demand from 2012 to 2021: computer systems analysts, computer support specialists, and network & computer systems administrators. Within PGCC's targeted region, the number of jobs in these occupations totaled 83,225 in 2012 and were projected to grow to 94,351 jobs by 2017 and

104,268 by 2022, an increase of 21,043 jobs or 25% in the 10 year span[1]. INsTEP was designed to prepare students for key certifications needed for entry-level positions in these high demand industry sectors. The certifications included COMPTIA A+, COMPTIA Network+, COMPTIA Security+, and Microsoft Certified Technology Specialist Certification (MSTS Windows 7 Configuration). Prior to INsTEP, PGCC offered several IT training courses that prepared students with the skills to take one or two of these certification tests, per semester. INsTEP is designed as an accelerated program, preparing students to take four certification per semester. A sample list of some of IT training courses offered by PGCC are shown in Appendix G. The INsTEP program was designed through a partnership between PGCC and several local entities to ensure the training is locally relevant, in demand, and provided the necessary supports that will help ensure student success. This strategy aligns with the Workforce Innovation and Opportunity Act (WIOA) strategic goal that reinforces the partnerships and strategies necessary for one-stops to provide job seekers and workers with high-quality career services, education and training, and the supportive services they need to get good jobs and stay employed, and to help businesses find skilled workers and access other supports, including education and training for their current workforce.[2]

Program Model

The primary goals of the INsTEP program were to 1) prepare students to gain employment in the IT sector by providing training that leads to industry accepted certifications; and 2) to encourage participants to pursue further education in IT Support or other IT related fields. The program was designed to enable students to transfer credits to an associates program at PGCC or pursue a bachelor's degree at another institution. As mentioned above, key certifications offered by PGCC were the Computing Technology Industry Association (CompTIA) A+, CompTIA Network+, and CompTIA Security+, and Microsoft Certified Technology Specialist Certification (MSTS Windows 7 Configuration). The program consisted of classroom based instruction, virtual instruction, and interactive technology-based instruction with individual and group learning emphasizing real-world scenarios, training in troubleshooting, and solution delivery. The technical skills training were delivered via a hybrid model consisting of online modules and classroom instruction.

To augment hard technical skills, INsTEP also provided students with customer service training, professional development preparation, and opportunities to engage and network with local employers. INsTEP students received a loaner computer and the one-time fee for certification tests. Over the course of the program, INsTEP staff also coordinated tutoring and mentoring in response to students' requests for additional supportive services. There were also a number of other support services that were offered to students to help them navigate the course work and help prepare them for employment, such as financial literacy training, legal assistance, and professional development training, career guidance, and job search assistance.

Program Development and Refinements

During program planning and design, PGCC established a Joint Advisory Board (JAB) for Sciences, Technology, Engineering, and Math (STEM – credit and non-credit programs), which included professionals in business, industry, and government –including technology employers in the county and region. The JAB served as the College's and INsTEP project's group of industry advisors that: 1) supported the academic goals and priorities of the College; 2) provided citizens, businesses and employees with open access to training and education services and information; and 3) promotes technology innovation and workforce effectiveness in Prince George's County. The JAB supported

[1] Source: EMSI, using data from the Maryland Department of Labor, Licensing, and Regulation, Office of Labor Market Analysis and Information.

[2] https://www.doleta.gov/wioa/Overview.cfm

the INsTEP program through mentorship, service-learning, and employment opportunities for the project's participants.

After the initial planning phase the Project Director (PD) was hired in November 2013. Following that, the development of the INsTEP program was quite intensive as it incorporated the efforts of several subject matter experts and local organizations including representatives from Agemo Technology Inc., Strategic Management Services, Aitheras Consulting, Vets 1st, as well as individual PGCC program staff, INsTEP staff, and local employers; INsTEP implementation partners and their roles are shown in Exhibit 1. The period of performance of the grant was November 2012 to September 2016; the curriculum development phase was primarily from November 2013 to August 2014 and implementation of INsTEP occurred from September 2014 to June 2015.

Exhibit 1: INsTEP Project Implementation Partners

Partners	Goals and Role
Recruitment: **Strativia** **Maria Brown** **Maryland Department of Labor, Licensing, & Regulation (DLLR)**	Strativia is a Maryland (MD) based company responsible for the branding and website development of the INsTEP program Maria Brown was a MD based media producer contracted to produce a promotional video of the program MD DLLR assisted with recruiting participants via the MD One Stop sites
Technical Training: **TestOut** **TATA Interactive** **BroadBlast**	TestOut is a U.S. based company responsible for providing the virtual platform used to provide students with technical training for the A+, Security+, Network+, and Microsoft certifications. TATA Interactive is an international company based in India that created a virtual platform that provided the IT customer service training. BroadBlast provided a notification based IT customer service training platform
Assessment: **Will to Win** **TestOut**	Will To Win is an MD based assessment service company that provided the "Will to Win" assessment tool that was used by program staff to determine applicants' candidacy for the INsTEP program, in conjunction with a review of a written essay and interview. Will to Win is a two part test; Battery A included assessments of students computer literacy, internet knowledge, basic skills, employee personality profile and workplace assessment; Battery B included assessments of students customer service aptitudes and a mini-cognitive rapid assessment. TestOut online scenario based training with assessments were used by INsTEP program instructors and staff to determine students' readiness for the certification exams.
Employment Support: **Job Fairs** **Workforce readiness training instructors**	PGCC recruited a number of employers to participate in a job fair for each cohort of students at the end of each semester. The full list is available in Appendix C. Some of the workforce readiness training providers were affiliated with local IT companies, thus providing students with direct interaction with employers.
Workforce Readiness Training: **Vets 1st** **Agemo Technology Inc.** **Alethes Consulting Group**	Vets 1st is a MD based veteran's owned training provider that provided professional development training on IT certification guidance and career planning. Agemo Technology Inc. is a MD based cybersecurity company that provided security awareness and cyber security training. Alethes Consulting Group is a MD based workforce training company that provided professional development training including: business etiquette, resume writing, interviewing techniques, and financial literacy training.

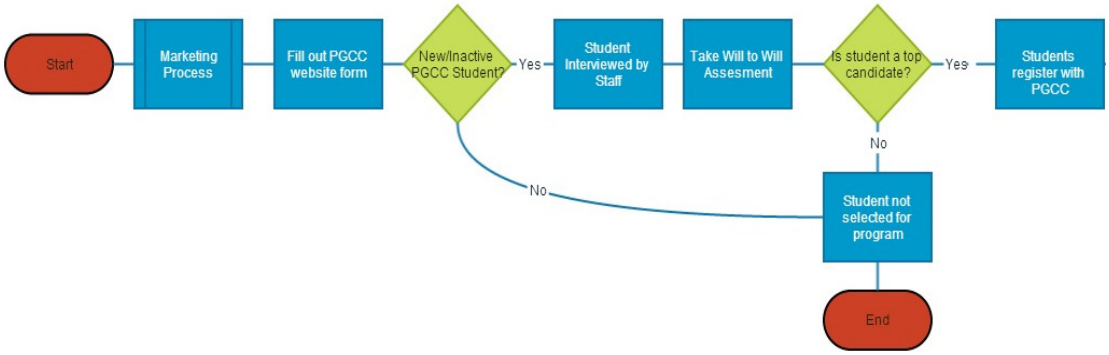
Source: PGCC records and interviews

Program Recruitment and Placement

Through the course of the program implementation, placement strategies varied for each cohort, however the admissions process remained consistent. During the admissions process, students took a Will to Win assessment, submitted an essay, and participated in an interview before being considered for the program. For the first INsTEP cohort, 15 students who had the best Will to Win scores were selected from a large pool of over 300 applicants to enroll in the INsTEP program. For cohort 2, PGCC asked applicants who applied to cohort 1 and were not accepted

as part of the first cohort to apply again, in addition to recruiting new applicants. Due to a small number of applicants for cohort 2, PGCC admitted students with lower Will to Win scores than those of cohort 1, and finalized a moderately larger class of 22 students. Finally for cohort 3, PGCC returned to its original strategy used to select the first cohort, and recruited a large pool of applicants and selected 21 participants with the highest Will to Win scores to enroll in INsTEP. Exhibit 2 illustrates the INsTEP recruitment process from marketing the program to student selection.

Exhibit 2: INsTEP Recruitment Process



Student Characteristics

The INsTEP program was designed to serve a population that is unemployed or under-employed, qualifies for TAA, or is a veteran, in accordance to the TAACCCT goals. In this section, baseline student survey data and student administrative data is examined to describe the INsTEP student demographics, socio-economic data, educational attainment, and work experience. We also include the comparison group demographics here to show similarities between the study groups; the development of the comparison group is discussed in the evaluation design section. The sample size for the baseline participant data, collected from PGCC administrative records was 58 for the INsTEP students and 29 for the comparison group; a total of 65 students enrolled in INsTEP and 45 were enrolled in the comparison group programs. INsTEP administrative data are aggregated from cohorts one through three, while the comparison data only includes cohorts two and three as the cohort 1 comparison group did not consent to share their administrative data. It should be noted that the data in the following tables and charts, collected from participant surveys, reflect varying sample sizes; this is the result of participants choosing not to respond to some questions.

Demographics

Exhibit 3 shows the demographics of the INsTEP and comparison group participants. Both the INsTEP participants and the comparison group are predominately Black or African American (84% and 89%, respectively), with an average age of about 36 years. This is reflective of the general population of Prince Georges County, PGCC's primary service area, where the population is roughly 65% Black or African American.[3] The INsTEP group was predominantly male (71%) while the comparison group was predominately female (67%). Most respondents in both the INsTEP and comparison group had at least a high school diploma and many had also completed some college courses. Twenty-three percent of the INsTEP group and 28% of the comparison group, have attained a Bachelor's Degree or higher. One difference between the INsTEP and comparison group, is that 5% of INsTEP students had not attained a high school diploma while all comparison group responders reported having a high school diploma or GED. There is also a significant difference in annual wages between the groups. On average the INsTEP participants have much lower annual wages than the comparison group, $16,368 compared to $39,658. This demographic data

[3] U.S. Census Bureau (2015) *QuickFacts Prince George's County, Maryland* : http://www.census.gov/quickfacts/table/PST045215/24033

suggests that PGCC was successful in enrolling participants that the TAACCCT program is intended for, unemployed and underemployed low-wage individuals.

Exhibit 3: Demographic Characteristics of Treatment and Comparison Group

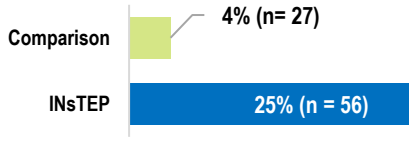
Characteristics	INsTEP	Comparison Group
Gender Sample	58	29
Male	71%	33%
Female	29%	67%
Gender data was collected from PGCC administrative records		
Race and Ethnicity Sample	58	29
Asian	0	6%
Black or African American	84%	89%
Hispanic/ Latino and non-white	2%	0
Mixed/ More than one race	12%	0
White or Caucasian	2%	6%
Race and ethnicity data was collected from PGCC administrative records.		
Age Range Sample	58	29
18 - 29 Years Old	43%	45%
30 - 39 Years Old	21%	18%
40 - 49 Years Old	24%	18%
50 - 60 Years Old	12% 36	18% 35
Mean Age ***Age data was collected from PGCC administrative records***		
Education		
Sample	43	29
Less than HS Diploma	5%	0
HS Diploma or GED	19%	11%
Some College	51%	39%
Associates Degree	2%	22%
Bachelor's Degree or Higher	23%	28%
Educational data is only reflective of cohorts 2 and 3 and was collected during the baseline surveys.		
Annual Wages (Baseline for all respondents)		
N	20	12
Average	$16,368	$39,658
Median	$16,380	$27,500

Wage data is reflective of baseline data collected for all three cohorts during the baseline surveys

Socio-Economic Data

Among the INsTEP and comparison group participants that responded to the baseline surveys, there is a notable difference in the tendency of public assistance collection, as shown in Exhibit 4. Of the INsTEP participants, 25% reported collecting some form of public assistance, while only 4% of the comparison group reported collecting public assistance. This is consistent with the wage information discussed above; the INsTEP group contains individuals that on average have significantly lower wages then the comparison group.

Exhibit 4: Public Assistance Collection: INsTEP and Comparison Group

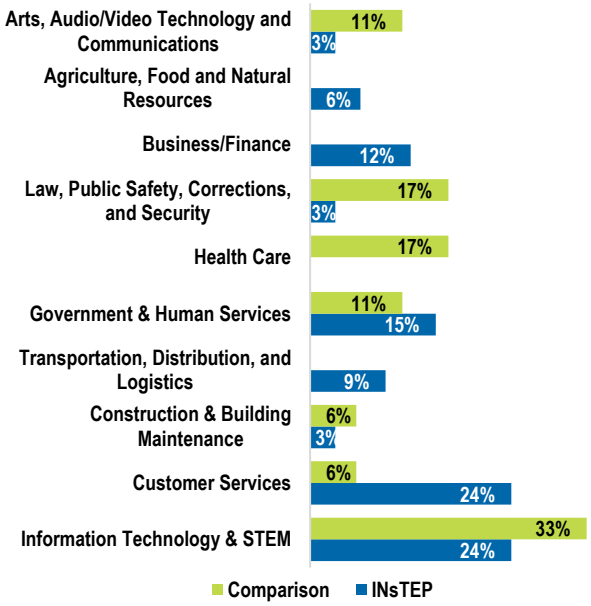


Source: Baseline participant surveys

Work Experience

Exhibit 5 shows the industry sectors that INsTEP and comparison group participants reported having the most work experience in at baseline. The industry that is most represented for both the INsTEP participants and the comparison group is Information Technology (IT) and Science, Technology, Engineering and Math (STEM), where 32% and 22% of the participants reported having work experience, respectively. Occupations in STEM are often also IT related. Of the respondents, 3% and 11% of the INsTEP and comparison group, respectively, also reported experience in arts, audio/video technology and communication; other sectors that can contain IT related jobs and functions. Following IT/STEM, the industries cited most frequently by the INsTEP students include customer service; government and human service, business and finance, and transportation, distribution, and logistics.

Exhibit 5: Several students in both INsTEP and the Comparison group had IT experience (INsTEP n = 36; Comparison n = 19)



Source: Baseline participant surveys

Evaluation Design

The goal of the INsTEP evaluation was to provide PGCC with the information, data, and analysis needed to manage the performance of the program and to deliver the most accurate outcomes measures as possible, to determine if the program was effective in helping participants improve their employment and wage situation and set them on a sustainable career pathway. To achieve this goal, the INsTEP evaluation is comprised of two parts, an implementation and an outcomes study. Given the nature of the program and the small participant population, ICF determined that a mixed methods evaluation using a comparison cohort and pretest-posttest approach for the outcomes study would be most appropriate. As a part of the outcomes study, INsTEP participants were compared to students enrolled in non-grant-funded courses and the aggregate outcomes for both groups were compared to evaluate the level of success achieved by INsTEP participants. Additionally, outcome metrics, such as wages, were measured pre-program and post-program to evaluate changes that may be attributed to the training. INsTEP participants were not randomly assigned. Using the DOL/ETA-provided "Framework of Evaluation Methodologies," we determined the proposed methodology to be the most rigorous and appropriate for assessing participant outcomes and impacts because: 1) the project devoted considerable grant-funded resources toward the development/enhancement of the Information Technology program of study with innovative strategies that will utilize technology and multimedia features. The result of the investment was the enrollment of a moderate number of participants into three cohorts to test and refine the model; 2) ICF determined that random assignment was not be a viable method as the approach requires large numbers of participants in order to ascertain outcomes at appropriate levels of significance; and 3) an appropriate comparison group in a non-grant-funded program of study was available at the college. Exhibit 6 provides a snapshot of the overall project and evaluation timeline.

Exhibit 6: INsTEP Evaluation Timeline

Year	INsTEP Program Phase	
2012		
	Grant Award	
	Initial Program Planning and Design	
2013		
	Project Director hired	
	Program and partnership development	
ICF submits five page evaluation plan memo to PGCC INsTEP leadership		
2014		
	Curriculum development	
ICF prepares an evaluation plan approved by the ICF Institutional Review Board (IRB) (April 2014) and submits Logic Model (September 2014) to INsTEP program staff		
	INsTEP Cohort 1 (09/14 – 12/14)	Comparison Group course: DPR-697 CompTIA A+ (08/14 – 12/14)
ICF submits Focus Group Findings (November 2014) and First Annual Interim Report (December 2014) to program staff		
2015		
	INsTEP Cohort 2 + (01/15 – 04/15)	Comparison Group course: DPR-697 CompTIA A+ (01/15 – 04/15)
	INsTEP Cohort 3 + (05/15 – 08/15)	Comparison Group course: DPR-735 CompTIA Network+ (07/15 – 09/15)

Source: PGCC records

Implementation Study Design

For the implementation study ICF set out to understand the INsTEP program model, the opportunities and challenges participants and program staff faced during implementation, the context surrounding the implementation, and to track the program refinement.

Research Questions

There are four basic research questions, articulated in the SGA, that the implementation study seeks to answer, shown in Exhibit 7.

Exhibit 7: Implementation Evaluation Research Questions

How was the particular curriculum selected, used, or created?
How were programs and program design improved or expanded using grant funds? What delivery methods were offered? What was the program administrative structure? What support services and other services were offered?
Did the grantees conduct an in-depth assessment of participant's abilities, skills and interests to select participants into the grant program? What assessment tools and process were used? Who conducted the assessment? How were the assessment results used? Were the assessment results useful in determining the appropriate program and course sequence for participants? Was career guidance provided and if so, through what methods?
What contributions did each of the partners (employers, workforce system, other training providers and educators, philanthropic organizations, and others as applicable) make in terms of: 1) program design, 2) curriculum development, 3) recruitment, 4) training, 5) placement, 6) program management, 7) leveraging of resources, and 8) commitment to program sustainability? What factors contributed to partners' involvement or lack of involvement in the program? Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?

Source: US DOL TAACCCT SGA

Program Logic Model

To guide the development of the implementation study design, ICF created a logic model depicting the INsTEP program, shown in Appendix A Before the data collection process began, based on information gathered from key documents (e.g., grant application, program development materials), information gathered during the kick off meeting with PGCC, and the staff and the partner/faculty orientation meeting, ICF created a logic model of the INsTEP program that graphically described the detailed strategy for carrying out the INsTEP's programmatic activities, and achievement of outcomes. The logic model included the partners involved in the different stages of the program, the proposed strategies, the expected outputs, and intended outcomes. The logic model, developed in cooperation with PGCC, was intended to capture the expected pathway taken from the program implementation activities to the

expected outcomes. This model provided the framework for ICF's subsequent evaluation design. As the program evolved over the course of its implementation, ICF refined the logic model and evaluation activities; a further refined logic model based on actual program implementation is shown in Appendix B.

Methodology / Data Collection and Analysis

The implementation evaluation was an important tool that informed PGCC of its progress and effectiveness in achieving the INsTEP program goals. ICF employed a number of formative evaluation strategies as part of the implementation evaluation. Understanding the structure of the INsTEP program model and its implementation was key to understanding the program implementation process, progress made, and results achieved.

Program and performance data was collected to evaluate the effectiveness of the program implementation. Data collection protocols and tools were developed and interviews were conducted with program personnel and key leadership in order to understand the initial design and implementation processes. Using the program logic model, described above, as the framework for the evaluation design, along with the research questions, ICF developed data collection protocols and instruments to capture the required information. ICF submitted the data collection procedures to its internal IRB and was approved in the summer of 2012 to begin data collection, which started in the Fall 2012.

ICF gathered data from INsTEP program staff, instructors, program partners, and students via document review, classroom observation, interviews, focus groups, and surveys. Exhibit 8 displays the various data collection activities conducted as part of the implementation study for each of the four primary research questions. Additionally, surveys administered to INsTEP participants gauged pre- and post-course offerings and measured knowledge attainment, aspirations, and perceptions of training program efficacy. Semi-annual site visits included observation of key meetings and training sessions, document review, focus groups, and interviews with key program personnel. Other data collection activities included online surveys of program stakeholders, and document review of curricula and key policy decision making. Finally, best practices and lessons learned were shared with PGCC for continuous program improvement.

As a follow-up to the Interim Process Brief ICF submitted on December 19, 2014, INsTEP staff requested the evaluation try and capture students' perceptions of the recruitment and application process. In response to that request, ICF altered the focus group protocols to gather more information on student experiences with key aspects of the recruitment process: how they heard about the INsTEP program, their experiences taking the Will to Win assessment, writing the essay, and participating in the interview process.

Exhibit 8: Implementation Evaluation Data Collection Crosswalk

Evaluation Question	Outcome	Data Collection method/tool	Data source	Frequency
How was the particular curriculum selected, used, or created?	Program model leading to increased institutional capacity	Document review Observation Interviews	PGCC TAACCCT grant application INsTEP participants INsTEP program staff INsTEP instructors	Interviews: two rounds of interviews with staff and instructors; three focus groups with program participants
How were programs and program design improved or expanded using grant funds? **What delivery methods were offered?** **What was the program administrative structure?** **What support services and other services were offered?**	Program model leading to increased institutional capacity	Document review Interviews	PGCC TAACCCT grant application INsTEP participants INsTEP program staff INsTEP instructors	Interviews: two rounds of interviews with staff and instructors; three focus groups with program participants

Evaluation Question	Outcome	Data Collection method/tool	Data source	Frequency
Did the grantees conduct an in-depth assessment of participant's abilities, skills and interests to select participants into the grant program? **What assessment tools and processes were used?** **Who conducted the assessment?** **How are the assessment results used?** **Were the assessment results useful in determining the appropriate program and course sequence for participants?** **Was career guidance provided and if so, through what methods?**	Program model leading to increased institutional capacity	Document review Interviews Focus groups Pre- and post-training surveys	PGCC TAACCCT grant application INsTEP participants INsTEP program staff INsTEP instructors	Interviews: two rounds of interviews with staff and instructors; three focus groups with program participants
What contributions did each of the partners (employers, workforce system, other training providers and educators, philanthropic organizations, and others as applicable) make in terms of: 1) program design, 2) curriculum development, 3) recruitment, 4) training, 5) placement, 6) program management, 7) leveraging of resources, and 8) commitment to program sustainability? **What factors contributed to partners' involvement, or lack of involvement, in the program? Which contributions from partners were most critical to the success of the grant program? Which contributions from partners had less of an impact?**	Program model leading to increased institutional capacity, replicability, and scalability	Surveys Interviews	INsTEP program staff INsTEP instructors	Interviews: two rounds of interviews with staff and instructors

Source: US DOL TAACCCT SGA, ICF, PGCC records

To analyze the implementation information, ICF staff transcribed notes from interviews and focus group sessions. Raw data taken from transcripts were organized into an excel document, coded and then analyzed comparatively across cohorts to identify common themes as they emerged in categories identified in the logic model. Following that, ICF staff reviewed the data across all cohorts and identified the emerging themes as they related to the research areas posed in the SGA: program and curriculum development, student assessment, employment supports, and partnerships for program development.

Outcomes/Impact Study Design

For the outcomes/impacts study, ICF set out to measure the impact of the INsTEP program on the participants. The outcomes and impacts include program completion, certificate attainment, further educational attainment, employment attainment, and wage increases.

Research Questions

There are nine basic research questions, articulated in the SGA, that the outcomes/impact study seeks to answer, shown in Exhibit 9.

Exhibit 9: Outcomes/Impact Study Evaluation Research Questions

How many Unique Participants were Served?
How many Participants Completed the TAACCCT-Funded Program of Study?
How Participants are still Retained in the Program of Study?
How many Participants Completed Credit Hours?
How many Participants Earned Credentials?
How many Participants Enrolled in Further Education after the TAACCCT-funded Program of Study Completion?

How many Participants were Employed after the TAACCCT-funded Program of Study Completion?
How many Participants were Retained in Employment after Program of Study Completion? Students would need to be non-incumbent workers for this metric.
How many Participants that were Employed at Enrollment Received a Wage Increase Post-Enrollment?

Source: US DOL TAACCCT SGA

Methodology

For the outcomes study, ICF used a comparison cohort methodology and pre/post design to study the outcomes of INsTEP participants. In order to conduct an effective comparison cohort, common attributes of the INsTEP treatment and comparison cohort groups were defined up-front and data was collected for needed attribute information. While a greater number of common participant attributes provides greater reliability in the results, this must be weighed against the likelihood of identifying an adequate number of students that can be compared to the INsTEP group. To identify an adequate comparison group, ICF used a common participant attribute mix for a range of factors, including (similar or common) program or courses of study, length of training/academic program, educational attainment, and/or prior work history.

As discussed in the December 2011 webinar convened by the US Department of Labor and Workforce3One[4], "different programs of study in the same industry or discipline with the same credential type/level" present a strong participant cohort for comparison to participants in grant-funded programs. ICF focused on identifying participants in different programs of study in the same industry (Information Technology) to develop a comparison cohort. ICF sorted through information from PGCC to identify an appropriate number of comparison cohort participants from current and recent students for the Information Technology course of study who were not grant-funded that can be compared with students who will be enrolled in INsTEP. To ensure an adequate pool of students for participation in the comparison cohort, ICF used information from students who did not participate in grant-funded course offerings within current academic periods using the factors cited above (length of training/academic program, educational attainment, and/or prior work history).

Based on the above methods, ICF worked with INsTEP and PGCC staff to identify an IT training course that prepared students for similar certifications. For cohorts 1 and 2, the DPR-697 CompTIA A+ course which prepares students for the COMPTIA and A+ certifications was selected as the comparison group. For cohort 3, the DPR-735 CompTIA Network+ Certification Preparation course was selected as a substitute for the DPR-697 CompTIA A+ course as it was postponed indefinitely from the summer of 2015 onwards.

Data Collection / Analysis

To ensure compliance with the Family Educational Rights and Privacy Act (FERPA), at the onset of the grant period ICF executed a confidentiality agreement with PGCC to protect the identification information of student participants. The evaluation team then implemented data collection protocols to gather data on all individuals enrolled in the INsTEP program and in the comparison group. Over the course of the evaluation, ICF conducted three surveys with the evaluation participants (INsTEP and comparison cohort). The first were baseline surveys conducted in person in the classroom. The baseline surveys were completed during the first week of program instruction and were used to gather information pre-program completion. This is used as the baseline in the pretest-posttest analysis. Additional follow-up surveys were conducted at six months and 12 months post-program completion using an online platform sent by email. The online surveys were kept open for approximately 6 weeks to allow students to respond. ICF staff reminded and encouraged respondent participation via email and phone over the 6 week period. ICF modified the original data collection timeline in order to be responsive to the needs of the program and the staff. Cohort 3 started earlier than expected in March 2015, thus ICF conducted both the cohort 3 baseline and cohort 2 focus group during

[4] US Department of Labor. (2011, December). Trade Adjustment Assistance College and Career Training Grant Performance Reporting Grantee Q&A. (Slide 18) Retrieved from https://www.workforce3one.org/view/2001134734616546217

a site visit on March 17th, 2015. ICF also conducted one set of faculty and staff interviews during the period of March to May 2015 and a focus group for cohort 3 during a site visit on April 20, 2015.

Exhibit 10 shows the questions for the outcomes/impact evaluation and the data collection method and source for each. Data that was gathered for the outcomes study included program completions information, certificates earned, additional educational attainment, employment characteristics and experience, and earnings.

Exhibit 10: Outcome Evaluation Data Collection Crosswalk

Evaluation Questions	Data Collection method/tool	Data source	Frequency
To what extent does the INsTEP program increase graduation and retention rates relative to the comparison group?	Extant student data Student surveys	Program coordinators INsTEP and comparison participants	Surveys: Baseline, six-month follow-up, 12-month follow-up
To what extent does the INsTEP program increase employment rates relative to the comparison group?	Student surveys	INsTEP and comparison participants	Surveys: Baseline, six-month follow-up, 12-month follow-up
To what extent does the INsTEP program increase educational attainment and enrollment?	Student surveys	INsTEP and comparison participants	Surveys: Baseline, six-month follow-up, 12-month follow-up
Number of Unique Participants Served	Number of participants enrolled in the INsTEP program (the grant-funded program)	PGCC Administrative Data	Collected for each of the three cohorts
Number of Participants Completing TAACCCT-Funded Program of Study	Number of participants enrolled in an INsTEP course that complete the course	PGCC Administrative Data	Collected for each of the three cohorts
Number of Participants Still Retained in Program of Study	Number of participants enrolled in the INsTEP program that remain in the program at the time of data collection	PGCC Administrative Data	Collected for each of the three cohorts
Total Number of Participants Completing Credit Hours	Number of participants enrolled in the INsTEP program that earn credit hours	PGCC Administrative Data	Collected for each of the three cohorts
Total Number of Participants Earning Credentials	Total number of participants enrolled in an INsTEP course that earn credentials	PGCC Administrative Data	Collected for each of the three cohorts
Total Number of Participants Enrolled in Further Education after TAACCCT-funded Program of Study Completion	Total number of participants enrolled in the INsTEP program that complete the program and are enrolled in further education	INsTEP and comparison participants	Surveys: six-month follow-up, 12-month follow-up
Number of Participants Employed after TAACCCT-funded Program of Study Completion	Number of participants enrolled in the INsTEP program that complete the course and are employed after program completion	INsTEP and comparison participants	Surveys: six-month follow-up, 12-month follow-up
Number of Participants Retained in Employment after Program of Study Completion. Students would need to be non-incumbent workers for this metric.	Number of participants enrolled in the INsTEP program that complete the course and are employed 6 months and 12 months after program completion	INsTEP and comparison participants	Surveys: Baseline, six-month follow-up, 12-month follow-up
Number of Participants Employed at Enrollment who Received a Wage Increase Post-Enrollment	Number of participants that complete the INsTEP program that were employed prior to the entering the program and that received a wage increase after completing the program and 6 months and 12 months after program completion	INsTEP and comparison participants	Surveys: Baseline, six-month follow-up, 12-month follow-up

Source: US DOL TAACCCT SGA, ICF, PGCC records

As mentioned earlier, ICF incorporated a pretest-posttest and a comparison cohort analysis to measure participant outcomes. In the pretest-posttest analysis, which is used to measure changes in earnings, participant earnings pre-program are compared to their earnings for up to one year post-program. For the comparison cohort analysis, INsTEP participants were compared to students enrolled in non-grant-funded courses and the outcomes for both groups were compared to evaluate the level of success achieved by INsTEP program completers.

A number of different metrics were used to measure progress and success through the analysis of participant outcomes. The INsTEP outcome evaluation focused on explicit milestones of certificate and/or degree attainment, employment placement and retention, and wage levels. The evaluation was designed to track program participants and the control group over the period of performance (three academic years and one follow-up year) using rolling cohorts to assess short, medium, and long-term outcomes of INsTEP program participants.

Short-term outcomes, where students make progress toward earning a degree or credential, were monitored for the number of participants that: (1) enter the INsTEP program, (2) complete the INsTEP program, (3) continue to be retained in the program, and (4) complete credit hours. This data was obtained from college administrative records. The medium-term outcomes, where students complete a program and gain employment, include the number of participants that (1) attain a certificate or degree, (2) are enrolled in further education after completing the INsTEP program, and (3) are employed after completing the program. The number of certificates and degrees granted and enrollment in further education were obtained from college administrative records, while employment data will be provided by PGCC through obtainment from DOL. Data on long-term outcomes, where students have retained stable employment, were collected from PGCC, using data obtained that we understand will be provided by DOL. This information included the number of participants who: (1) retain employment after program completion and initial job attainment, and (2) receive a wage increase after program completion. Long-term outcome data collection was conducted on a yearly basis beginning after the first cohort completes the program, and extend through the fourth follow-up year (Year 4), so that the last cohort will be evaluated.

Due to the limitation of the sample size, ICF used simple descriptive statistics and univariate analysis to describe the findings, such as distribution, central tendency, and dispersion. The distribution shows the frequency of individual values or ranges of values for a variable. The central tendency of a distribution is the "center" of a distribution of values, including the mean, median, and mode. Dispersion refers to the spread of the values around the central tendency, including the range. The range simply compares the highest and lowest values.

Study Limitations

As with all evaluations, there are limitations to the results in this study. For the implementation study the primary limitations are the small sample size, changes in the program implementation schedule, and the varying support services that were offered among cohorts. ICF primarily analyzed qualitative data collected through interviews with staff, instructors and focus group data from students to assess the INsTEP implementation. ICF experienced a challenge collecting consistent implementation data across cohorts as cohort 3 was implemented ahead of schedule and overlapped with cohort 2 and because of some changes to the support services that were offered to each cohort. In response to the scheduling change, ICF consolidated the interviews for the instructors and staff over cohorts 2 and 3 into one round of interviews, which limited our ability to capture data on implementation changes from cohorts 2 to 3.

While the data from these three different sources (program staff, instructors, and students) were analyzed to provide corroborated assessments of the INsTEP services, there was limited variety of data available for analysis that could

have allowed for more robust findings. ICF was able to capture perceptions of instructors who also were local IT employers, however, the duality of their roles as instructor and employer somewhat confounded the data analysis.

Limitations to the outcomes study also include the small sample size and also the reliance on self-reported survey data. The INsTEP participants and the comparison group were small in size, 58 and 29, respectively. Where PGCC administrative data was used, which was primarily only for the demographic data, all participants are included. However, where surveys were used to collect data, which includes the majority of the outcomes data, there are smaller sample sizes due to the varying response rates for each survey question. Given these small sample sizes, ICF was not able to conduct any tests of statistical significance or analyze the data to infer a causal relationship between the training and the participants' employment outcomes. Additionally, ICF was not able to conduct any sub-population analysis as each INsTEP cohort was very small (Cohort 1= 12, Cohort 2= 25, Cohort 3= 25). Thus, the findings are not representative of the breadth of IT training programs at PGCC and elsewhere and are not generalizable to other programs due to the small sample size.

As Unemployment Insurance (UI) data was not available for the study participants, ICF used survey data on participants' employment status and wages where in some cases responses were limited. Additionally, this data is self-reported and ICF has no way to guarantee that it is accurate or that respondents have not exaggerated their employment status or earnings.

Implementation Study Findings

For the implementation study, ICF employed a number of strategies to understand the development, implementation and evolution of the INsTEP program. This information was reported back to PGCC and led to continuous improvement changes throughout the life of the program. ICF collected qualitative data via interviews with the staff, instructors and focus groups with the participants. This data was used to inform the following findings on program delivery, student performance assessment, program administrative structure, program improvement, program supports, capacity building, and participant satisfaction.

Program Delivery

INsTEP is a hybrid program which was developed to provide participants with both online and in person instruction, as described in the program model section. INsTEP provided four certifications, COMPTIA A+, COMPTIA Network+, COMPTIA Security+, and Microsoft Certified Technology Specialist Certification (MSTS Windows 7 Configuration). The technical skills for these certifications were provided via classroom based instruction, virtual instruction, and interactive technology-based instruction with individual and group learning emphasizing real-world scenarios, training in troubleshooting, and solution delivery.

To complement the technical hard skills, the program included customer service and professional development training. Customer service training was provided via online modules and classroom instruction. Additionally, participants were provided professional development guidance, including resume assistance, career planning, and job search assistance via classroom instruction and one-on-one mentoring. Students were also provided with tutoring via classroom instruction.

Technical Skills Training

INsTEP provided IT customer service training scenarios using classroom and virtual web-based resources and TestOut for certification training. The virtual sessions trained students in how to respond to different situations and solve different problems that an IT help desk would encounter. Students found that the hybrid course design overemphasized the online components and did not provide enough hands-on training with actual hardware and software. While students valued the online resources, they felt that the online/ virtual components dominated the coursework and that there was not enough time to use them comprehensively over the course. Students in all three cohorts expressed a need for a more hands-on approach to training with actual hardware.

Cohort 1 student: "It would be nice for some of it to be hands on, so that after we learned something in the book that we apply it on a physical object, like a switch or router, right after we learn it. That would make a lot of sense with what they are saying, because if you are at home and study, once you come to the labs you can do hands on things and then take the exam."

Cohort 2 student: "TestOut is a program designed to teach you, it is not designed for a compacted program. We don't have time, there are not enough hours in the day to come to class for 8 hours, 5 days a week and finish all the TestOut [scenarios] and retain all the information… just no time."

Professional Development Training

The professional development components of the INsTEP program, which included presentations in customer service, resume writing, career guidance, and interview preparation, were introduced for cohorts 2 and 3. Students in both cohorts had mixed reactions to the professional development training. Students in both cohorts did not report finding value in the customer service classes, which could be reflective of their previous work experience in this area; 22% of INsTEP participants have worked in customer service related jobs.

Pace

As mentioned earlier, the INsTEP program was designed to train students for four certifications (COMPTIA A+, COMPTIA Security+, COMPTIA Network+ and Microsoft Certified Technology Specialist) in 16 weeks, along with professional development training. Program staff noted this as an extraordinary goal as compared to other certification preparation programs. Other PGCC IT training courses focus on training students for two certifications over a 16 week semester. Most students reported that the pace of the training was intense as they were in the classroom five days a week from eight in the morning to five in the afternoon, after which they often remained for additional tutoring.

Student Performance Assessment

INsTEP students were assessed as a basis for placement into the program and those selected were also assessed on an ongoing basis while they were enrolled in the training.

Placement Assessment

As described above, the Will to Win assessment tool was used to determine applicants' candidacy for the INsTEP program. During the training, INsTEP instructors reported that they continued to use the results of the Will to Win assessments, as they found them to be helpful in determining which students might need additional assistance with specific topics in the curriculum, and that knowledge allowed them to adjust their work accordingly. Many instructors reported that the Will to Win results were adequate in measuring students' strengths and weaknesses, but they also relied on the tool to understand the students' needs.

Ongoing Assessment

The TestOut online assessment tool, described in Exhibit 1, was used to determine students' readiness for the COMPTIA certification exams. Instructors and staff had mixed feelings on the use and efficacy of TestOut. Program staff found the TestOut assessment results were helpful in determining which students were ready to take the

certification test; however, instructors and students reported that the assessment tool was not well aligned to the requirements of the COMPTIA exams. Additionally instructors and students reported that there were instances where students did not perform well on the TestOut assessment, but went on to pass the certification tests.

Program Administrative Structure

After the initial program planning and design phase, PGCC recruited a program director to assemble a project team and implement the program. The program director was hired in 2013 almost a year after the grant award. Subsequently, the program director assembled a team of local employers and technical experts to create the curriculum. In early 2014, the program director hired a program coordinator to assist with implementation and a data research specialist to assist with tracking student performance and outcomes. Following this, the instructors were hired to teach the first cohort of students, they were: three instructors for certifications (COMPTIA A+, Network+, Security+ and MSTS Windows 7 Configuration), two instructors for customer service, and six instructors to provide IT professional development training (career guidance mentoring, professional development training, and resume assistance and workforce readiness). In the first two weeks of the first cohort implementation of Fall 2014, one of the instructors was dismissed from teaching. For the second cohort, the technical skills were taught by one instructor and a tutor was hired to assist students.

Program Improvement

During the INsTEP program's implementation there were a few changes made to the courses for each cohort in an effort to continuously improve services offered and refine the program design. As mentioned, the grant period spanned the Fall of 2012 to September 2016; the program was developed from the Fall of 2013 to August 2014; program implementation spanned September 2014 to June 2015; and the evaluation spanned from Fall 2013 to September 2016. The grant timeline and key project changes demonstrating continuous improvements over the course of program implementation, which was one of the program's goals, are documented in Exhibit 11.

Exhibit 11: INsTEP Grant Timeline and Improvement Changes 2012 – 2015

Year	Program Phase	Continuous Improvement Changes
2012		
	Grant Award	
2013		
	Project Director hired	
	Program and partnership development	
2014		
	Curriculum development	
	Cohort 1	Changed A+ instructor during first weeks of classes Tutoring offered mid-way through semester
2015		
	Cohort 2	Length of instruction extended from 14 weeks to 16 weeks, included an extra day of orientation to acquaint students with the program, the technology tools, and faculty. Changed curriculum implementation to have only one instructor teach technical skills classes (COMPTIA A+, COMPTIA Security+, COMPTIA Network+ and Microsoft). Changed the timing of the sections, allowing for more days for technical skills classes (COMPTIA A+, COMPTIA Security+, COMPTIA Network+ and Microsoft) to provide students with more time to learn the content of each component prior to each certification test. Changed customer service section timing from being three sequential 8-hour day classes to six, 4-hour increments over the course.
	Cohort 3	Cohort 3 starts in March earlier than planned. Tutoring was not offered during Cohort 3.

Source: PGCC Records

Program Supports

The INsTEP program provided students with a number of support services that helped them navigate the course work and prepare them for employment. Supports that were offered to all INsTEP students included: tutoring (cohorts 1 and 2 only), mentoring, financial literacy training, legal assistance, professional development training, career guidance, and job search assistance. Mentoring services were added mid-way through cohort 1 and tutoring services were discontinued for the third cohort, as a response to student needs. As is described in more detail in the participant satisfaction section, INsTEP participants had mixed reactions to the helpfulness of the support services.

> **Cohort 2 student:** "Whoever the tutor is…she was very willing to help, but not on an accelerated level. She was not, they did not prepare her or let her know what level we were operating at, or how soon the test was going to be. So the tutoring was basically a waste of time, because she doesn't know what we are doing, and we can't really explain it to her in a way that she is going to understand how to help us."
>
> **Cohort 3 student:** "Tutoring should be included in the budget up front. Resources should be allocated early on to tutoring."

Students also expressed needs for additional support services such as a stipend, transportation and childcare assistance. Many of them reported that it was challenging to participate in a program as intensive as INsTEP without these additional supports.

Career Guidance

The INsTEP program's career guidance services included one-on-one mentoring via the Vets 1st program and the various instructors teaching both the technical skills and professional development sections of the curriculum. The one-on-one mentoring was offered to cohorts 2 and 3 in response to students' requests for additional coaching and mentoring services. Students in cohorts 2 and 3 reported that they did not find the mentoring services provided via Vets 1st under the career guidance services to be helpful in providing them with knowledge of how to navigate the IT sector with their experience.

Capacity Building

Capacity building is a critical element of program implementation to ensure scaling and replicability. PGCC identified partnership building as the key element to capacity building. During program planning and design, PGCC established a Joint Advisory Board (JAB) for Sciences, Technology, Engineering, and Math (STEM – credit and non-credit programs), which included professionals in business, industry, and government –including technology employers in the county and region. The JAB served as the College's and INsTEP project's group of industry advisors that: 1) supported the academic goals and priorities of the College; 2) provided citizens, businesses and employees with open access to training and education services and information; and 3) promotes technology innovation and workforce effectiveness in Prince George's County. The JAB supported the INsTEP program through mentorship, service-learning, and employment opportunities for the project's participants. These partnerships have allowed PGCC to build capacity to provide accelerated training programs targeting specific industry sectors and employers.

In addition to capacity building through partner relationship building, PGCC built their capacity to replicate and scale INsTEP by implementing the Will to Win and TestOut tools to assess students and place them in the appropriate programs and determine when they are ready to take certification tests. Furthermore, the virtual curriculum designed by TATA Interactive for INsTEP, consisting of an online training system, will contribute to the college's capacity to extend their trainings to more students.

Participant Satisfaction

The implementation evaluation included measurements of program satisfaction from INsTEP participants to determine how they felt and perceived the value of the program. Satisfaction measurements focused on the

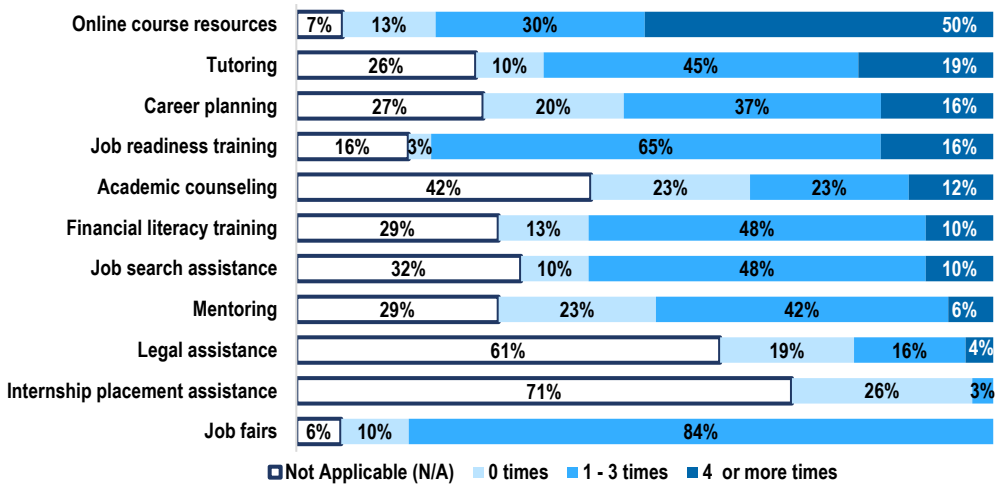
resources and services offered by the INsTEP program and the overall satisfaction and value of the program. The information on program satisfaction was collected by ICF from the six month and twelve month follow up surveys. The INsTEP participant responses are compared to the comparison group responses, who received similar services.

Use and Satisfaction with Resources and Support Services Offered

Respondents' use of the resources that were offered varied. Exhibits 12 and 13 below show the frequency of the use of the various resources and services that were offered to INsTEP participants and the comparison group. Not all resources and services shown were available to all three cohorts, for both the INsTEP participants and the comparison group, and others may not have been aware that is was available. Where respondents noted that a resource or service was not available, not applicable (N/A) is used.

A majority of INsTEP respondents reported using the online resources, such as the scenario based training modules developed by TATA Interactive and the TestOut training and assessment modules, most frequently. Additionally, 84% of INsTEP respondents reported that they attended the job fairs which were held at the end of each semester, which suggests the program staff did a good job of marketing the events to students. INsTEP respondents also indicated they used other key INsTEP program components, such as the job readiness training (65% of them used it 1 – 3 times over the semester and another 16% used it 4 or more times). Comparison Group students used Online Course Resources, mentoring, and job readiness training most frequently.

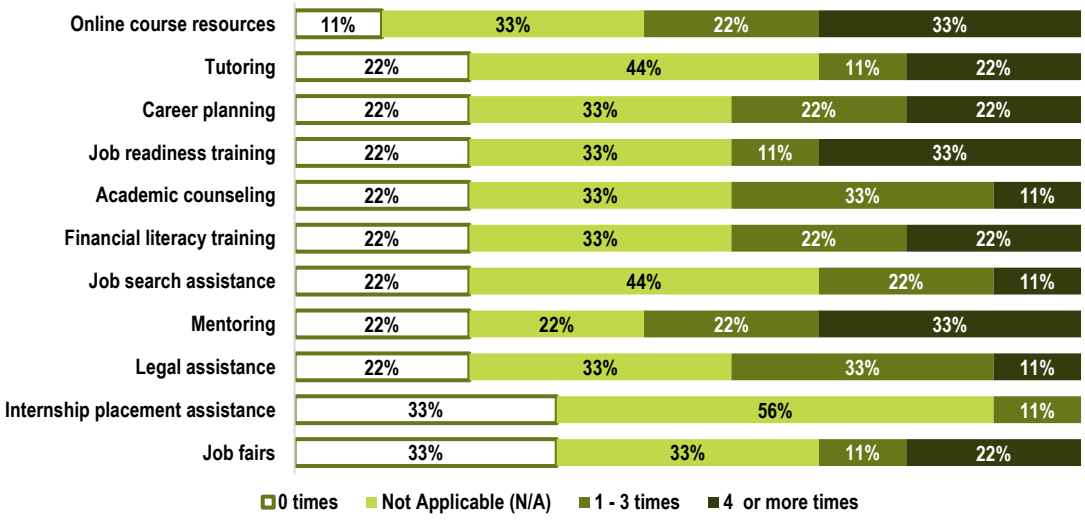
Exhibit 12: INsTEP respondents used the job fairs the most, followed by online resources, tutoring and career planning resources, which reflects the design of the course (n= 31)



Mentoring and tutoring were not offered formally to cohort 1 participants. Tutoring was not offered to cohort 3 participants

Source: Six month post-program completion participant Surveys

Exhibit 13: Comparison Group students used online course resources, mentoring, and job readiness training) most frequently (n = 9)

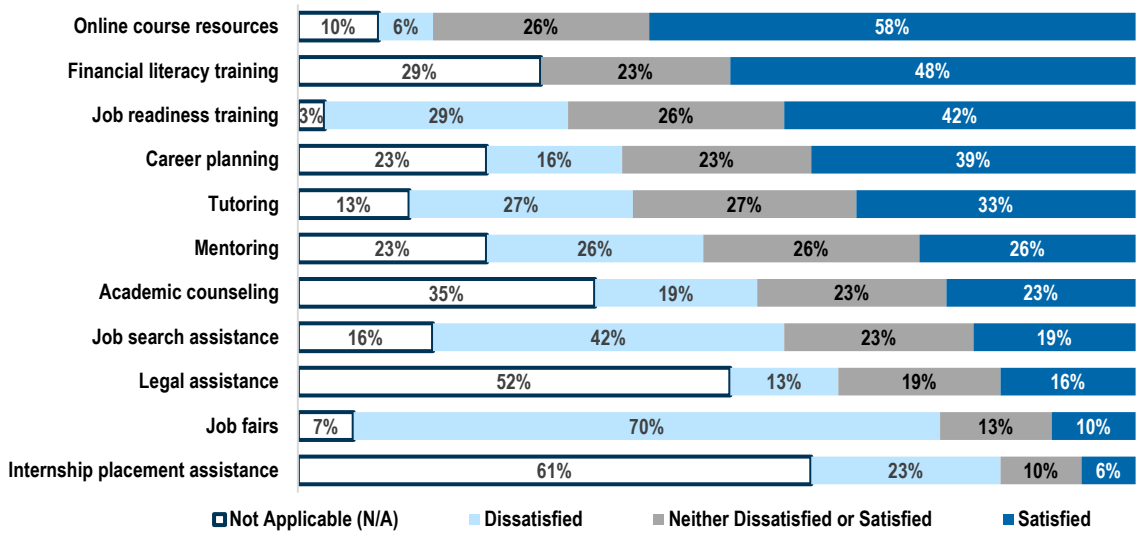


Source: Six month post-program completion participant Surveys

Exhibits 14 and 15 show how satisfied INsTEP participants and the comparison group were with the support services they used, respectively. Participant satisfaction in this area varies considerable across the services offered but are fairly consistent between the INsTEP and comparison groups. Both the INsTEP participants and the comparison group were most satisfied with the online course resources, financial literacy and job reediness training, while they were least satisfied with the job search assistance and the job fairs. One area where there is contrast between the INsTEP participants and the comparison group is tutoring; 27% of the INsTEP respondents reported that they were dissatisfied with the tutoring services while none of the comparison group respondents reported being dissatisfied with this service.

Another interesting observation that came out of the focus groups in regards to support services is that all INsTEP participants spoke positively about the network and support system they created in their cohorts, stating that it motivated them to complete the program, help them overcome challenges, and that they hoped it would ultimately help them find employment through networking.

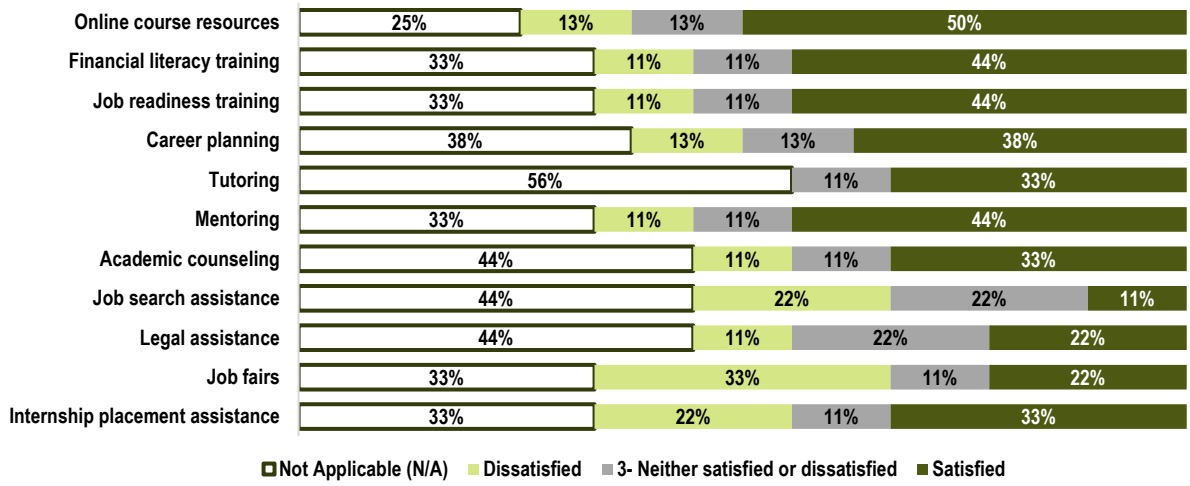
Exhibit 14: INsTEP students were most satisfied with the online course resources, followed by the financial literacy training they received, and were most dissatisfied with the job fairs (n = 31)



Mentoring and tutoring were not offered formally to cohort 1 participants. Tutoring was not offered to cohort 3 participants

Source: Six month post-program completion participant Surveys

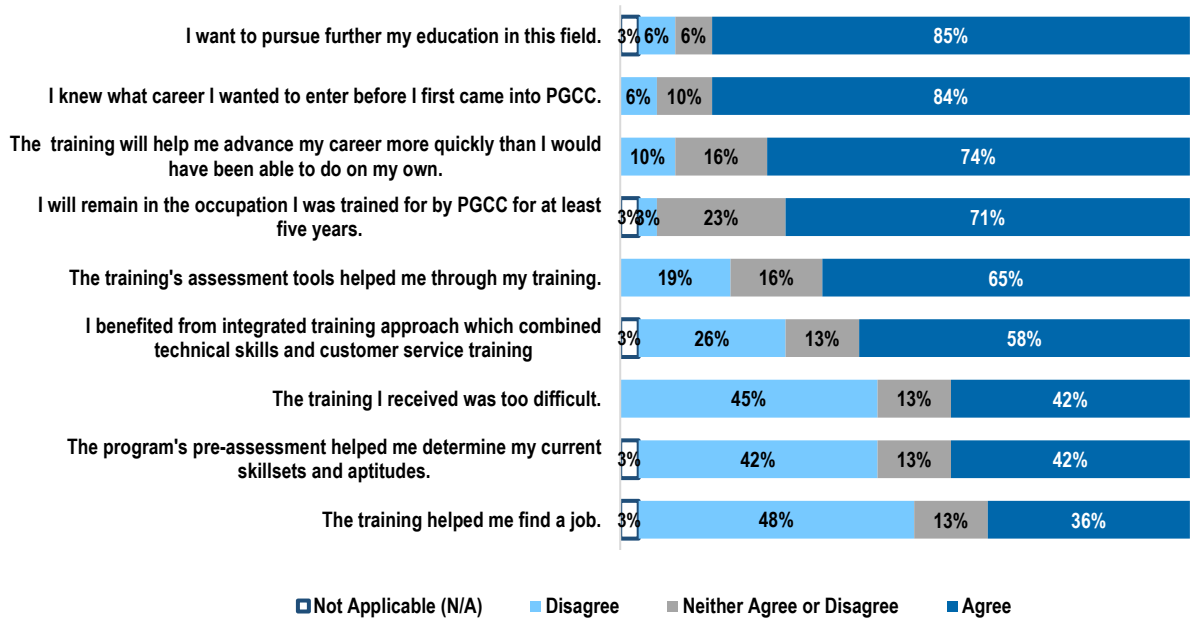
Exhibit 15: Comparison Group students were moderately satisfied with most of the services provided (n = 9)



Source: Six month post-program completion participant Surveys

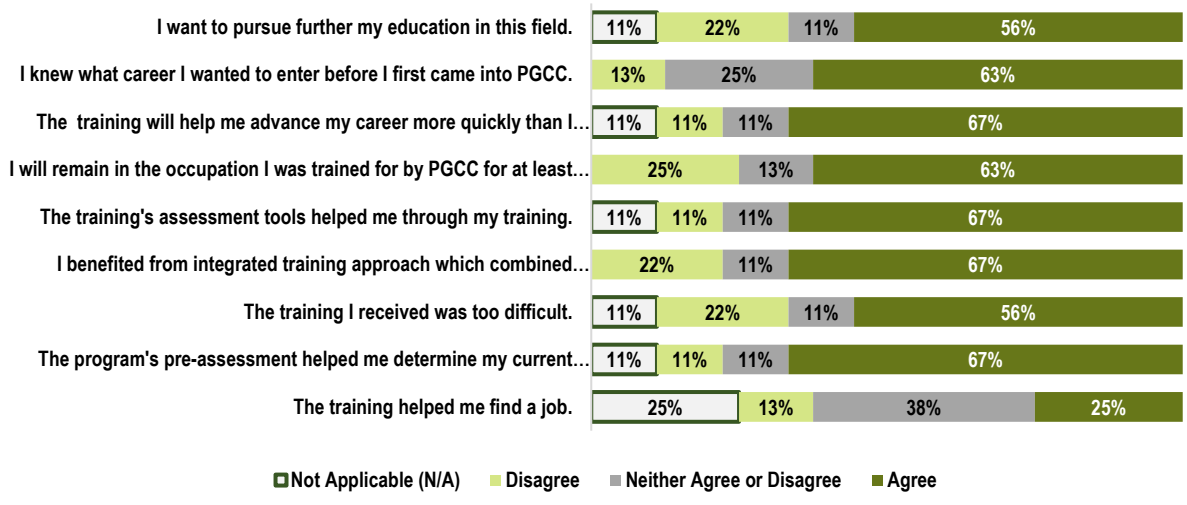
Exhibits 16 and 17 show the agreement level of INsTEP respondents and the comparison group, respectively, for a number of career and training related situations. During the six month follow up survey, both INsTEP and comparison group respondents were unsure about how the training they received would help them get jobs. However, most of them did report they would further their education in the IT field; 85% of INsTEP students noted that they want to pursue further education in the IT field, compared to 55% of the comparison group. As noted earlier, continuing education in IT is a primary goal of the INsTEP program.

Exhibit 16: At six months post-program completion, INsTEP respondents were confident about their career goals, they were less confident about how the training would help them find jobs. (n= 31)



Source: Six month post-program completion participant Surveys

Exhibit 17: The Comparison Group were generally confident that they want to pursue further education in this field, however were less confident about how the training will help them find jobs. (n= 9)



Source: Six month post-program completion participant Surveys

Employer Interaction

Although some students expressed concerns and frustrations that they had little interaction with employers early in the program, opportunities for employer interactions were available at the end of each program through a job fair that PGCC held for students. PGCC held job fairs for all three cohorts at the end of each semester, a full list of the

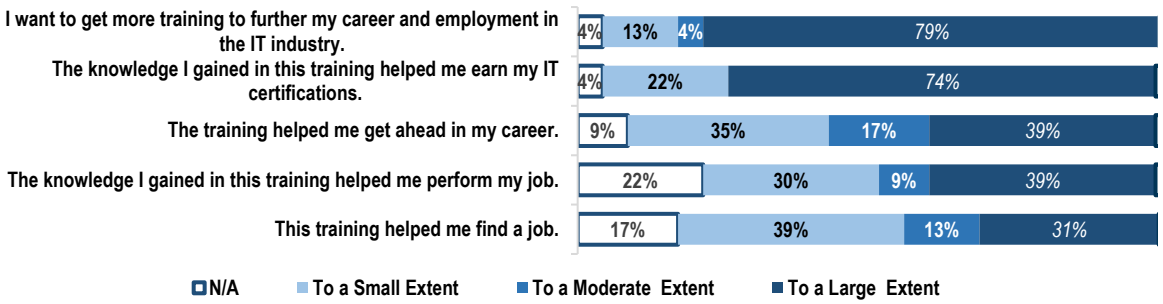
employers that participated in the job fairs is available in Appendix C. Program staff also designed the program to include local employers as instructors, particularly for the professional development components.

The disconnect between the students' perception of the employer component of the professional development services and the manner in which the program staff describe them suggests a need for a communication plan to accompany the program that is integrated into student recruitment, orientation, and curriculum delivery to ensure that students are fully aware of the nature of the resources available and ways to engage employers.

Overall training satisfaction and knowledge gain

Exhibit 18 show respondent answers to questions regarding the knowledge gain and desire to pursue further education 12 months after program completion for the INsTEP participants (there were no responses from the comparison group to this question). At the twelve month follow up, 31% of INsTEP respondents reported that they believe that, to a large extent, the training they received helped them with a job and an additional 52% responded that to a small or moderate extent, the training helped them find a job. A total of 79% indicated they want to further their education in the IT field to develop their careers. Job attainment and furthering education were the two primary goals of the INsTEP program.

Exhibit 18: At twelve months post-program completion, INsTEP respondents still report pursuing further education (n = 23)

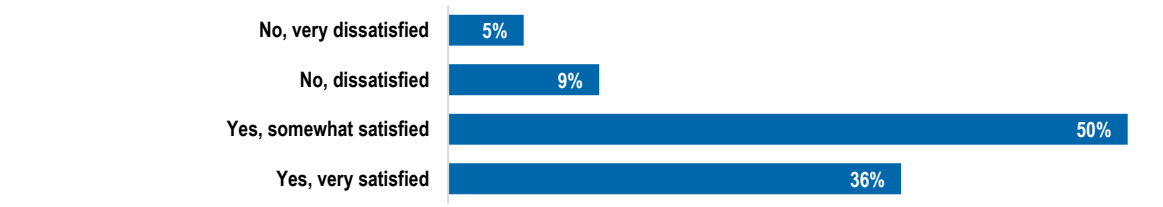


Data reflects responses from cohorts 2 and 3

Source: Twelve month post-program completion participant Surveys

Overall for cohorts two and three, 86% of INsTEP respondents indicated they were somewhat to very satisfied with the training they received, shown in Exhibit 19.

Exhibit 19: Almost all INsTEP respondents were satisfied with the training their received. (n=22)



This graph reflects responses to the question "Were you satisfied with the training you completed at PGCC?" only posed to students in Cohorts 2 and 3. There were no responses from the Comparison group.

Source: Six month post-program completion participant Surveys

Outcome Study Findings

ICF used respondent data collected through the six month and twelve month follow up surveys and PGCC administrative data to examine participant outcomes. Participant outcomes collected by survey include educational attainment; employment status, industry of employment, and wages. ICF used PGCC administrative data to collect information on number of participants served, completions, and certificates earned. Appendix J presents the surveys administered to both INsTEP participants and the comparison group for the baseline, six month post-program completion, and twelve month post-program completion periods.

Participants Served and Certificates Earned

The first set of outcomes measure how successful the INsTEP program was in serving participants and in participant completion, credential attainment, and employability. Exhibit 20 displays enrollment and completions data for the INsTEP program, as articulated in the SGA. A total of 65 participants enrolled in the INsTEP program (only 58 of those consented to participate in the evaluation) and 52 completed the program and earned credit hours (80% of enrollment). Of the 65 INsTEP enrollees, 56 earned credentials (86%), and 3 participants enrolled in further education after completing the program (4 students completed at least one certification but didn't complete the program). Among INsTEP enrollees, 20 were also employed at after completing the program and an additional 11 who were employed at the start of the program retained their employment.

Exhibit 20: Outcome Measures Articulated in the SGA

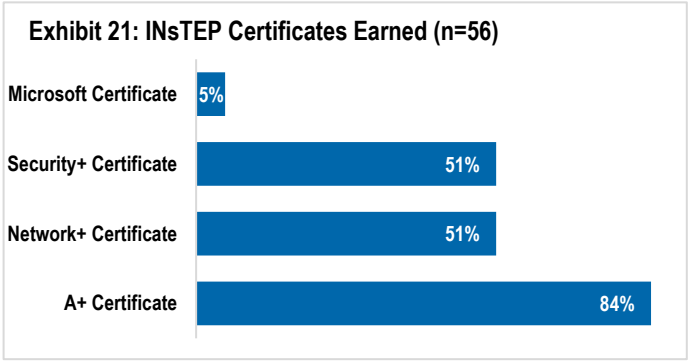
Total unique participants served	65
Total number of participants who completed a TAACCCT-funded program	52
Total number of participants still retained in their program of study or another;	0
Total number of participants completing credit hours	52
Total number of participants earning credentials	56
Total number of participants enrolled in further education after grant-funded program of study completion;	3
Total number of participants employed after grant-funded program of study completion;	20
Total number of participants retained in employment after program of study completion;	11
Total number of those participants employed at enrollment (for purposes of this reporting, "incumbent workers") who receive a wage increase post-enrollment (6 months post-program completion)	15 (n=17)
Total number of those participants employed at enrollment (for purposes of this reporting, "incumbent workers") who receive a wage increase post-enrollment (12 months post-program completion)	12 (n=12)

Source: PGCC Administrative records and six and twelve month post-program completion participant surveys

Certificates Earned

A primary measure of success for the INsTEP program is the number of participants earning certificates. The certificates are the participants' catalyst to employment, the ultimate goal of the INsTEP program. As noted above, of the 65 participants that enrolled in INsTEP, 56 earned one or more certificates. Exhibit 21 shows the four certificates that were awarded in the INsTEP program and the percentage of total participants that earned each certificate, as reported in PGCC administrative records. Many individual INsTEP completers earned multiple certificates. Many individual INsTEP completers earned multiple certificates. A total of 47 participants earned the The COMPTIA A+ certification, 84% of all individuals who attained a certificate. The COMPTIA Network+ and COMPTIA Security+ certificates were earned by 31 individuals (51%). Only 3 completers

Exhibit 21: INsTEP Certificates Earned (n=56)



Source: PGCC Administrative records

earned a Microsoft certificate. The COMPTIA A+ certification is the first certification that the program completers earn in the course, followed by COMPTIA Network+, COMPTIA Security+, and then the Microsoft certificate. The full course schedule for each cohort is available in Appendix D.

Enrollment in Further Education

Enrollment in further education was prevalent for both the INsTEP participants and the comparison group. Consistent with the respondent data to program satisfaction questions asked during the six month follow up survey, gauging whether respondents planned to pursue further education, 58% of INsTEP respondents indicated in the twelve month survey they had participated in additional trainings while 65% of the comparison group had (Exhibit 22). As noted earlier, enrollment in further education and training is one of the primary goals of the INsTEP program.

Exhibit 22: Both INsTEP and the comparison group have pursued further education at similar rates. (n= 36)

Source: Six month post-program completion participant survey

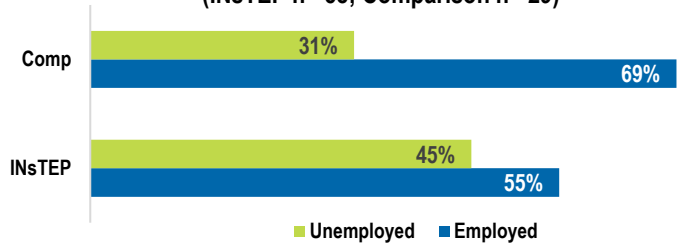
Employment & Wage Outcomes

Employment

Here we examine the employment outcomes of INsTEP participants, using pre and post-program data for the INsTEP group and comparison group. We answer the following questions: 1) the number of participants employed pre-program and at 6 and 12 months post program; and 2) the industry sectors of employment for INsTEP participants pre and post program.

Exhibit 23 and 24 shows the employment status and sector of employment for the INsTEP participants and the comparison group at the time they began instruction. At baseline, comparison group participants were employed at far greater levels then INsTEP participants. At program start, only 55% of INsTEP participants reported being employed, while 69% of the comparison group reported being employed. This is consistent with other data provided above showing that PGCC enrolled a population intended for TAACCCT funding, unemployed, underemployed and low income individuals.

Exhibit 23: INsTEP and Comparison group baseline employment (INsTEP n= 58; Comparison n= 29)



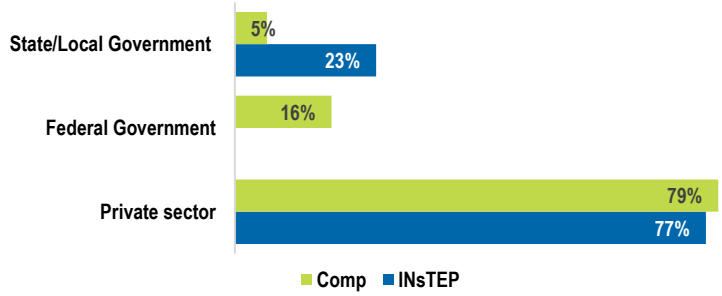
Source: Baseline participant survey

The most prevalent sector of employment for both the INsTEP participants and comparison group was the private sector, where 77% and 79% of employed individuals worked. A total of 16% of comparison group respondents worked for the federal government while none of the INsTEP participants reported working in this sector.

Exhibit 25 and 26 show employment status and sector of employment 6 months after the completion of the INsTEP program. Among INsTEP respondents, 83% reported being employed (54% full-time and 29% part-time); this is an increase of 28 percentage points from program start when only 55% of INsTEP participants were employed. It should

be noted that 24 of the 58 INsTEP participants reported their employment status six months post-program (41% response rate) while all 58 participants reported their status at baseline. Among the comparison group, where the level of reliability is low since only 4 participants reported employment status, 50% were employed six months after program completion. The greatest change in sector of employment between baseline and six months post program for the INsTEP participants is a movement from private sector employment to the federal government sector. Six months after program completion 24% of INsTEP workers were employed in the federal government and 59% were in the private sector, while at baseline none of the INsTEP participants that were employed reported working for the federal government and 77% worked in the private sector. This could be a good indication of the demand in the federal government for IT workers.

Exhibit 24: Employment type at baseline among employed participants (INsTEP n = 13, Comparison n = 19)

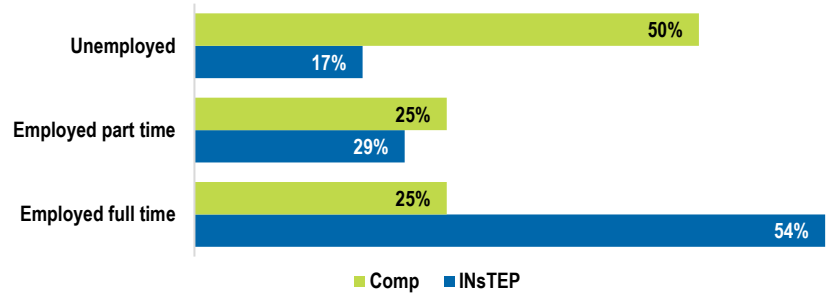


Source: Baseline participant survey

The change in employment status between baseline and six months post-program indicate that the INsTEP program was successful at employing participants in a short period of time.

Exhibits 26 and 27 show employment status and sector of employment 12 months after the completion of the INsTEP and comparison group programs. Among INsTEP respondents, 80% reported being employed (73% full-time and 7% part-time). Although the rate of employment at 12 months is roughly the same as at 6 months for the INsTEP participants, at 12 months a significantly greater proportion had moved on to full-time jobs. It should also be noted here that only 15 of the 58 INsTEP participants reported their employment status 12 months post-program (26%

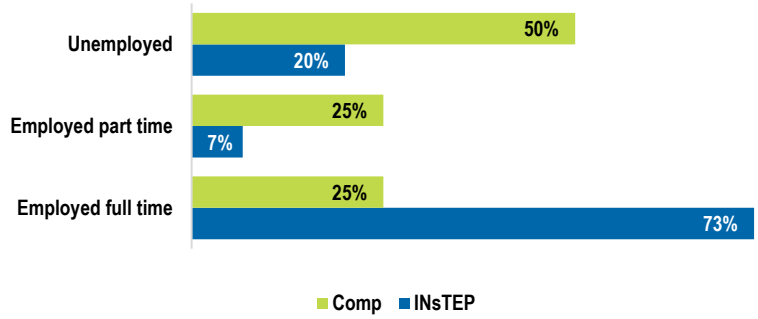
Exhibit 25: 6 months post program employment status (INsTEP n=24, Comparison n = 4)



Source: Six month post-program completion

response rate) while all 58 participants reported their status at baseline; the reliance on self-reported survey data for follow-up employment data is noted as one of the limitations of this study in the limitation section.

Exhibit 27: 12 months post program employment data (INsTEP n = 15, Comp n = 4)



Source: Twelve month post-program completion participant surveys

Among the comparison group, whereas with the 6 month data the level of reliability is low since only 4 participants reported employment status, 50% were employed 12 months after program completion, the same as 6 months post-program completion.

Interestingly, in regards to the data on sector of employment 12 month post-program completion, there has been a shift back to the private sector. This could indicate that the federal government sector was more willing to hire newly graduated INsTEP participants then the private sector, but once some experience was gained participants were able to move to jobs in the private sector.

The significant move from part-time to full-time jobs between the 6 month and 12 month post-program completion period, further indicates INsTEP success in employing participants in higher paying more secure jobs.

Exhibit 28: INsTEP employment type 12 months post program (n=15)

There was only one survey response from the comparison group thus we chose to reflect the INsTEP data.

Source: Twelve month post-program completion participant surveys

Finally, to measure how successful INsTEP was in not only employment attainment but also employment in the industry of the training, we included in the twelve month survey a question that asked the participants if they were employed in an IT related sector. As shown in Exhibit 29, the vast majority (80%) of INsTEP respondents noted that their sector of employment is IT related.

Exhibit 29: INsTEP responses to the question "Is your current occupation related to IT industry?" (n = 15)

There was only one survey response from the comparison group thus we do not include it.

Source: Twelve month post-program completion participant surveys

Wages

Here we examine the wage outcomes of INsTEP participants, using pre and post-program data for the INsTEP participants. The comparison group is excluded from the wage analysis due to a small number of responses for the 6 month and 12 month post-program period. It is noted in the Participant Characteristics section that the comparison group had significantly higher wages then the INsTEP participants at the time of program start. However, given the limited number of responses from the comparison group on their wages at 6 and 12 months post-program it does not provide a reliable comparison for changes in wages post-program. As also noted above, a limitation of this

study is the lack of UI data availability and thus the reliance on self-reported wage data for post-program completion. The reliability of this data is dependent on adequate response rates and the accuracy of self-reporting. Further, although PGCC collected data from all INsTEP participants on their employment status, wages were not collected at that time. The wages shown here were collected by survey roughly one week into the start of each program and only include those that responded to that survey question.

Exhibit 30 and 31 show the average, median and dispersion of wages for INsTEP participants that were incumbent workers and for all workers in the INsTEP group. Incumbent workers are considered to be those that reported being employed when they enrolled in the INsTEP program. All workers include those that were employed and unemployed when they enrolled. As noted above, at the start of the INsTEP program, 29% of the 58 INsTEP participants reported being employed, or 17 individuals.

The data on wages, although representing about 21% to 33% of all INsTEP participants, shows that the program likely had a significant positive impact on wages. The average wage for all participants that reported wages, those that had jobs at program start and those that did not, increased from $16,368 at program start to $39,614 six months after program completion and $50,373 twelve months after program completion, a 142% and 208% increase, respectively. Among incumbent workers that reported, wages increased from an average of $18,156 at program start to $37,510 six months after program completion and $46,852 twelve months after program completion, a 107% and 158% increase, respectively.

At baseline, or program start, respondents reported a minimum wage of $0 (representing unemployed individuals) and a maximum salary of $39,000 for an incumbent worker. At six months post-program completion the lowest salary reported was $8,788 (an incumbent worker who perhaps was still working in the job they held pre-program) and the highest salary reported was $90,000. At 12 months post-program completion, the lowest salary reported was $14,703 (an incumbent worker who perhaps was also still working in the job they held pre-program) and the highest salary reported was $100,000.

As with the outcomes data discussed above, the data on wages clearly indicate that INsTEP may have been very successful in moving participants from unemployment and underemployment to employment in higher wage sustainable jobs.

Exhibit 30: INsTEP Yearly Wages All Workers
(Includes participants that were unemployed at baseline)

	Base Line (n=18)	6 Months Post-Program (n=19)	12 months Post-Program (n=14)
Average	$17,200	$39,614	$50,373
Median	$16,380	$39,000	$42,300
Maximum	$39,000	$90,000	$100,000
Minimum	$0	$8,788	$14,703

Source: Baseline participant survey, six month and 12 month post program-completion participant survey

Exhibit 31: INsTEP Yearly Wages Incumbent Workers
(Includes only participants that were employed at baseline)

	Baseline (n=18)	6 Months Post-Program (n=13)	12 Months Post-Program (n=12)
Average	$18,156	$37,510	$46,852
Median	$16,770	$36,000	$40,352
Maximum	$39,000	$90,000	$90,000
Minimum	$1,000	$8,788	$14,703

Source: Baseline participant survey, six month and 12 month post program-completion participant survey

Conclusion

This section summarizes the major findings and key lessons learned from the evaluation of the INsTEP program and provides suggestions and implications for further workforce and education research and recommended next steps to rigorously studying the types of approaches and strategies tested under INsTEP.

Major Findings and Key Lessons from the Evaluation of INsTEP

- INsTEP prepares students for further education. Analysis of student's satisfaction data from the six month survey suggests that the training program is providing students with relevant content that motivates them to pursue further education in the field. This finding was confirmed by survey data from the 12 month survey which indicated that INsTEP students had furthered their education by participating in other trainings since completing the program. Thus, the data suggests that PGCC was able to achieve its second goal of preparing students to pursue further education as described in the INsTEP program model section. This finding also reinforces that the stacked and latticed IT training model can produce graduates that pursue further education.

- INsTEP may have been very successful in employing participants in higher paying sustainable jobs in the IT sector. At the time of enrollment, only 55% of INsTEP participants reported having a job. At the 12 month post-program completion period, 80% of INsTEP respondents reported having a job and 80% of those jobs were reported to be in an IT related field. The average wage for all participants that reported wages, those that had jobs at program start and those that did not, increased from $16,368 at program start to $39,614 six months after program completion and $50,373 twelve months after program completion, a 142% and 208% increase, respectively. Among incumbent workers (those that were employed at the start of the program) that reported, wages increased from an average of $18,156 at program start to $37,510 six months after program completion and $46,852 twelve months after program completion, a 107% and 158% increase, respectively.

- Creating IT training courses that prepare students for one or two certifications in a semester might be an ideal course design. Data on certificates earned suggests that most students were able to earn three certifications, but unable to earn all four over the course of a 16 week semester that is implemented five days a week eight hours a day. As discussed in the program implementation findings section, the majority of students reported that the pace of the program was too intense or fast given the amount of material they had to cover in accordance with the certification testing schedule of the 16 week course.

    - IT training program curriculum developers should consider the content to be covered relative to the complexity of the certifications, student's background with the subject area, and pace or length of study when designing courses.

- Trainings for low-income individuals that require students attend classes eight hours a day, five days a week should consider providing students with additional supports where feasible such as food, housing, or childcare assistance to help mitigate the stresses of the time commitment. Several students reported that they struggled to meet their basic needs and could have benefitted from additional resources such as a stipend or child care assistance. A number of students also reported that they worked part time while participating in the program as they had no other supports for their basic needs.

    - Program funders and post-secondary education institutions designing courses targeted at low-income adult learners should consider building in supports for basic life needs, such as food, housing, transportation or child care assistance.

- Including a comprehensive communication plan is more likely to increase student use of services and resources, and course satisfaction. The disconnect between how program staff describe the employer engagement aspects of the professional development training and services offered to students contrasts with the students' reports of those services. This suggests the need for better communication throughout the course. Additionally, while program staff were able to be responsive to student needs from cohort to cohort; student responses suggest that they could streamline and strengthen communication within the course of the semester. Developing a comprehensive communication plan to accompany the program that spans student recruitment, orientation, curriculum delivery and course close out could serve to better ensure that students are fully aware of the resources and services available to them.

    - IT training program developers should consider the way in which they build in information sharing and communication between administrative staff, instructors, and students to allow flow of communication that ensures students' needs are met in a timely manner and that staff can make adjustments as needed.

Implications for Future Workforce and Education Research

The goals of the TAACCCT Grant Program are to make it possible for community colleges and other eligible institutions of higher education to build their capacity and acquire the resources to expand and improve their ability to deliver education and career training programs to workers who are eligible for training under the TAA for Workers program, and to prepare them for employment in high-wage, high-skill occupations. Delivery of training programs like INsTEP allowed participants to access a high quality program that met the needs of employers looking for individuals trained for today's jobs. One of the biggest challenges was the pace of the program and the complications the accelerated program had on the lives of some of the participants. Future studies of interest would be to examine the pace of program delivery, to ensure that it meets the needs of the participants and employers. Further exploration of different timeframes for program completion and the impact on participant outcomes and overall satisfaction would be useful for the next phase of training programs. Most community colleges are equipped to offer associate degree programs, many offered over a two year period that can be completed on a part-time basis allowing for the student to stay employed while they take coursework. Other TAACCCT models offer stackable, short-term certificates which allows for students to have multiple exit and re-entry points so that they can gradually expand their skillsets over a longer period of time. Future evaluation of workforce programs would benefit from exploring differences in outcomes for these different delivery models.

Another area of exploration would be to examine the connections between the level of employer involvement and the success of programs and their participants. Does the involvement of employers at key stages of program and curriculum development lead to greater success for students, faster employment and longer retention? Having employers deeply committed to helping design a program that delivers a pipeline of well-trained applicants, having the institution as a partner to design courses that can assist in upskilling their workers when there are changes in technology or skillsets, and serving as a resource to community colleges to assist them in developing courses that will meet the future needs of the industry is a role for employers in some TAACCCT models that is worth further investigation. Additionally, assessing the strength of that relationship and the extent that it leads to greater outcomes for participants, as well as explain the supportive environment that each of these programs operate under, is also an area for further study.

Appendix A: Logic Model 2014

INPUTS

PROGRAM DEVELOPMENT & CURRICULUM DESIGN:

Design Partners:

- TATA Interactive- platform design
- TestOut: netlab/ virtual lectures & student assessment
- Agemo Technology Inc.- cybersecurity training
- BroadBlast- notification training system
- Strategic Management Services- mobile app
- Remedy- Software training
- Vets 1st- DOD 8570 training
- Aitheras Consulting- quality control

- **Program Recruitment:**
  - MD DLLR & MD WIBs
  - Employer partners
  - PGCC INsTEP staff
  - PGCC Marketing
- **Placement:**
  - Will to Win: pre-assessment
  - Program staff

TRAINING & SERVICES

- **Technical:** Online platform and instructors
- **Soft Skills:** instructors from Vets 1st and Alethes

STUDENT ASSESSMENT

TestOUT: ongoing assessment

Will to Win: pre and post program assessment

STRATEGIES

Capacity building for faculty & staff:

- Orientation to evidence based decision-making using assessment tools

Technical Skills Training:

- Hybrid training
- Class training
- Netlab: TestOut, Broadblast, and Remedy provide virtual lectures and assessments
- Tools: mobile app with field experts

Customer Service Skills Training:

- Class Lectures
- Virtual lectures & assessments
- Live assessments

Professional Development:

- Interview preparation
- Resume & cover letter guidance
- Career guidance and planning via employer partners
- Personality assessments

OUTPUTS

Students:

- # of students that complete the course
- # of students that gain certification(s)
  -COMPTIA
  -MCSA Server 2012
- # of students gain jobs in local IT sector
- # of students gain an IT skillset to prepare them for the job market
- # of students that pursue additional certifications, or further education.

INsTEP Program:

- # of referrals from partners
- # employer partnerships

Employers:

- # of new hires
- # of new hires with employer partnerships
- Repeated recruitment of INsTEP graduates

SHORT TERM OUTCOMES (6 MONTHS)

Students:

- Increase in students that gain certification(s)
  - COMPTIA
  - MCSA Server 2012
- Increasingly students pass certification exams on the first try
- Increase in graduates that feel competitive in the job market
- Increase in graduates that gain jobs in the local IT sector
- Increased career opportunities

INsTEP Program:

- Faculty receive any necessary resources or support.
- Refined curriculum
- Stronger partnerships to implement program
- Faculty and staff build evidence-based decision-making tools and practices

Employers:

- New applicant pool with relevant skills

INTERMEDIATE OUTCOMES (12 MONTHS)

Students:

- Graduates pursue additional education/training
- Graduate increase their skills, knowledge and experience in the IT sector
- Graduates gain increased wages and benefits
- Graduates advance in their career
- Increased retention rates

INsTEP Program:

- Faculty feel supported and have necessary resources
- Faculty and staff use evidence-based decision-making processes and practices
- Refined curriculum
- Increased funding

Employers:

- Increased satisfaction with available workforce pool

IMPACTS

Students:

- Graduates have increased financial stability and self-sufficiency
- Graduates have improved quality of life

INsTEP Program:

- INsTEP has built a culture of evidence-based decision-making amongst faculty, staff
- INsTEP receives more funding
- Enhanced reputation
- INsTEP is replicated

Employers:

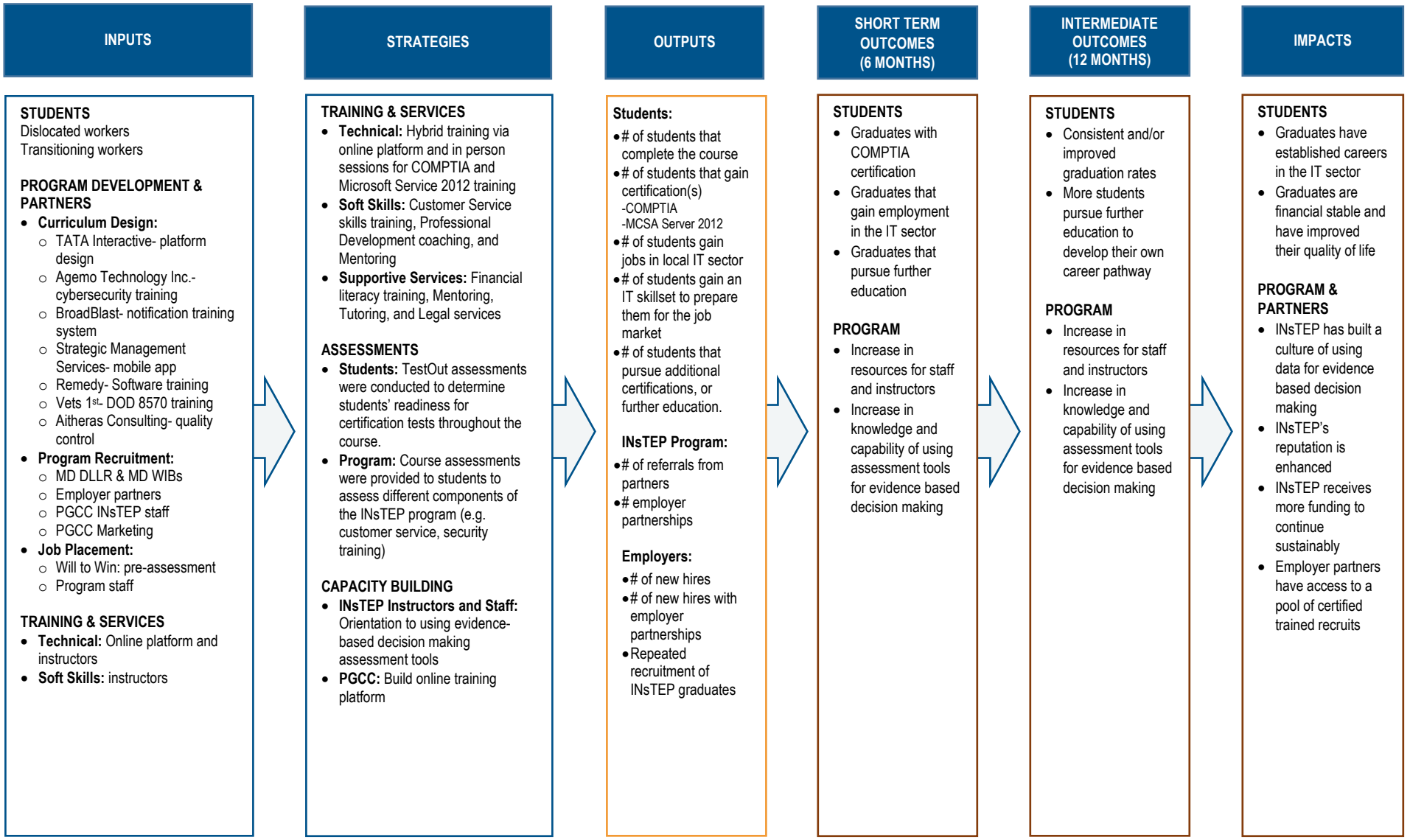
- Increased retention of INsTEP graduates
- Employers recognize INsTEP as a credible source of recruits

ASSUMPTIONS & SITUATION

Strategies: The project assumes that students placed in the program have certain competencies that qualify them for the program, as they take an assessment to be placed into the program. The evaluation criteria used to admit students to cohort 2 were relaxed. The evaluation criteria used for cohort 1 was repeated for cohort 3.

Outputs: The evaluation team assumes that the strategies implemented will change and have varied effects on the outputs and outcomes, as the curriculum will be refined between each cohort. The evaluators will monitor those changes as a result of strategies implemented with each cohort.

Appendix B: Logic Model 2016



ASSUMPTIONS & SITUATION

Recruitment: The project assumes that students placed in the program have certain competencies that qualify them for the program, as they take an assessment to be placed into the program. The evaluation criteria used to admit students to cohort 2 were relaxed. The evaluation criteria used for cohort 1 was repeated for cohort 3.

Strategies: The evaluation team assumes that the strategies implemented will change and have varied effects on the outputs and outcomes, as the curriculum will be refined between each cohort. The evaluators will monitor those changes as a result of strategies implemented with each cohort. The instructor was changed for the technical section from cohort 1 to 2 to 3. The timing of delivering soft skill training were altered from cohort 1 to 2 to 3. Students in cohort 2 and 3 received mentoring and tutoring services.

Appendix C: Job Fair Employer List

Agemo Technology
B & D Consulting Inc.
U.S. Department of Agriculture, Food and Drug Administration, Office of Regulatory Affairs
Intern Staff
McKenzie Christopher Associates
Prince Georges Community College IT
Strategies First LLC
The Nolan Group
United States Mint
Christ Tube
Crosby
Intern Staff
E-Trice
U.S. Department of Agriculture, Farm Service Agency
Washington Headquarters Services
Bankers Life
Coastal International Security
Democracy Federal Credit Union
U.S. Department of Defense
Exit Real Estate
U.S. Department of Housing and Urban Development
Right Direction Tech Solutions
Scentsy
Stillwater Human Capital
AU & Associates Inc.
United Credit Education

Appendix D: PGCC INsTEP Training Schedule

INsTEP Course Schedule for Cohort 1

	Dates / Days	Blackboard Course	Course Titles
	Tuesday, September 02, 2014	1. HTT Introduction	Student Orientation
		7. HTT Professionalization	Business Etiquette
	Wednesday, September 03, 2014	7. HTT Professionalization	Social Media
		9. HTT Security Awareness	Security Awareness / Cyber Security
	Thursday, September 04, 2014	9. HTT Security Awareness	Fundamentals of Information Technology
		8. IT Industry	A Guide to Certification
	Friday, September 05, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Monday, September 08, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Tuesday, September 09, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Wednesday, September 10, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Thursday, September 11, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Friday, September 12, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Monday, September 15, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Tuesday, September 16, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Wednesday, September 17, 2014	6. HTT Customer Service	Customer Service (Part 1)
		Practice Exam: CompTIA A+ Essentials (Exam 220-801)	Practice Exam: CompTIA A+ Essentials (Exam 220-801)
	Thursday, September 18, 2014	Practice Exam: CompTIA A+ Essentials (Exam 220-801)	Practice Exam: CompTIA A+ Essentials (Exam 220-801)
	Friday, September 19, 2014	7. HTT Professionalization	Financial Literary
		Certification Exam: CompTIA A+ Essentials (Exam 220-801)	Certification Exam: CompTIA A+ Essentials (Exam 220-801)
	Monday, September 22, 2014	2. HTT A+ Essentials & Practical	A+ Essentials (review)
	Tuesday, September 23, 2014	2. HTT A+ Essentials & Practical	A+ Essentials (review)
	Wednesday, September 24, 2014	2. HTT A+ Essentials & Practical	A+ Essentials (review)
	Thursday, September 25, 2014	2. HTT A+ Essentials & Practical	A+ Practical
	Friday, September 26, 2014	2. HTT A+ Essentials & Practical	A+ Practical
	Monday, September 29, 2014	6. HTT Customer Service	Customer Service (Part 2)
		2. HTT A+ Essentials & Practical	A+ Practical
	Tuesday, September 30, 2014	6. HTT Customer Service	Customer Service (Part 3)
		8. IT Industry	It's About Certification (Part 1)
	Wednesday, October 01, 2014	6. HTT Customer Service	Customer Service (Part 4)
		2. HTT A+ Essentials & Practical	A+ Practical
	Thursday, October 02, 2014	2. HTT A+ Essentials & Practical	A+ Practical

	Dates / Days	Blackboard Course	Course Titles
	Friday, October 03, 2014	2. HTT A+ Essentials & Practical	A+ Practical
		Certification Exam: CompTIA A+ Practicials (Exam 220-802)	Certification Exam: CompTIA A+ Practicials (Exam 220-802)
	Monday, October 06, 2014	2. HTT A+ Essentials & Practical	A+ Practical
	Tuesday, October 07, 2014	2. HTT A+ Essentials & Practical	A+ Practical
	Wednesday, October 08, 2014	2. HTT A+ Essentials & Practical	A+ Practical
	Thursday, October 09, 2014	2. HTT A+ Essentials & Practical	A+ Practical
	Friday, October 10, 2014	2. HTT A+ Essentials & Practical	A+ Practical
	Monday, October 13, 2014	3. HTT Network +	Network +
	Tuesday, October 14, 2014	3. HTT Network +	Network +
	Wednesday, October 15, 2014	8. IT Industry	Information Technology Sustainability (Part 2)
		3. HTT Network +	Network +
	Thursday, October 16, 2014	Certification Exam: Study Time CompTIA A+ Practicals (Exam 220-802)	A+ (802) Review / Study Time
	Friday, October 17, 2014	Certification Exam: CompTIA A+ Practicals (Exam 220-802)	Certification Exam: CompTIA A+ Practicials (Exam 220-802)
	Monday, October 20, 2014	3. HTT Network +	Network +
	Tuesday, October 21, 2014	3. HTT Network +	Network +
	Wednesday, October 22, 2014	3. HTT Network +	Network +
	Thursday, October 23, 2014	3. HTT Network +	Network +
	Friday, October 24, 2014		Study Day Network+
	Monday, October 27, 2014	Certification Exam: CompTIA Network+ (Exam N10-005)	Certification Exam: Network+ Practicials (Exam N10-005)
	10/28/2014 College Closed - Student option to attend class CAT 315	4. HTT Security +	Security +
	Wednesday, October 29, 2014	4. HTT Security +	Security +
			ICF Focus Group
		4. HTT Security +	Security +
	Thursday, October 30, 2014	4. HTT Security +	Security +
	Friday, October 31, 2014	4. HTT Security +	Security +
	Monday, November 03, 2014	4. HTT Security +	Security +
	Tuesday, November 04, 2014		Study Day Security +

	Dates / Days	Blackboard Course	Course Titles
	Wednesday, November 05, 2014	**Certification Exam: CompTIA Security+ (Exam N10-005)**	**Certification Exam: Security+ Practicials (Exam N10-005)**
	Thursday, November 06, 2014	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
	Friday, November 07, 2014	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
	Monday, November 10, 2014	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
	Tuesday, November 11, 2014	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
	Wednesday, November 12, 2014	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
	Thursday, November 13, 2014		**Study Day MCSA Administering Windows 2012 (70-410)**
	Friday, November 14, 2014	**Certification Exam: MCSA Administering Windows 2012 (70-410)**	**Certification Exam: MCSA Administering Windows 2012 (70-410)**
	Monday, November 17, 2014	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
	Tuesday, November 18, 2014	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
	Wednesday, November 19, 2014	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
	Thursday, November 20, 2014	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
	Friday, November 21, 2014	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
	Monday, November 24, 2014		**Study Day MCSA Administering Windows 2012 (70-411)**
	Tuesday, November 25, 2014	**Certification Exam: MCSA Administering Windows 2012 (70-411)**	**Certification Exam: MCSA Administering Windows 2012 (70-411)**
	Wednesday, November 26, 2014	**7. HTT Professionalization**	**Resume Writing**
		8. IT Industry	**IT Sustainability**
		8. IT Industry	**A Student Guide: IT Professionals**
		7. HTT Professionalization	**Business Networking**
		9. HTT Security Awareness	**Security Clearance**
		6. HTT Customer Service	**Customer Service (Part 5 & 6)**
	Thursday, November 27, 2014		**College Closed**
	Friday, November 28, 2014		**College Closed**

	Dates / Days	Blackboard Course	Course Titles
	Monday, December 01, 2014	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
	Tuesday, December 02, 2014	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
	Wednesday, December 03, 2014	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
	Thursday, December 04, 2014	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
	Friday, December 05, 2014		**Assessment Testing**
		7. HTT Professionalization	**Interviewing Techniques**
			Hiring Fair
		5. Microsoft Server 2012 (412)	**MCSA Advanced Window Server 2012 Service (70-412)**
	Monday, December 08, 2014		**Study for MCSA (Microsoft Test 70-412)**
		Classroom attendance optional Certification Exam: MCSA (Microsoft Test 70-412)	**Certification Exam: MCSA (Microsoft Test 70-412)**
	Tuesday, December 09, 2014		
	Wednesday, December 10, 2014		**HOLD for Student Closed-Out**
	Thursday, December 11, 2014		**HOLD for Student Closed-Out**
	Friday, December 12, 2014		**HOLD for Student Closed-Out**
	Monday, December 15, 2014		**HOLD for Student Closed-Out**
	Tuesday, December 16, 2014		**HOLD for Student Closed-Out**
	Wednesday, December 17, 2014		**HOLD for Student Closed-Out**
	Thursday, December 18, 2014		**HOLD for Student Closed-Out**
	Friday, December 19, 2014		**HOLD for Student Closed-Out**

	Dates / Days	Blackboard Course	Course Titles
	Tuesday, September 02, 2014	1. HTT Introduction	Student Orientation
		7. HTT Professionalization	Business Etiquette
	Wednesday, September 03, 2014	7. HTT Professionalization	Social Media
		9. HTT Security Awareness	Security Awareness / Cyber Security
	Thursday, September 04, 2014	9. HTT Security Awareness	Fundamentals of Information Technology
		8. IT Industry	A Guide to Certification
	Friday, September 05, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Monday, September 08, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Tuesday, September 09, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Wednesday, September 10, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Thursday, September 11, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Friday, September 12, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Monday, September 15, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Tuesday, September 16, 2014	2. HTT A+ Essentials & Practical	A+ Essentials
	Wednesday, September 17, 2014	6. HTT Customer Service	Customer Service (Part 1)
		Practice Exam: CompTIA A+ Essentials (Exam 220-801)	Practice Exam: CompTIA A+ Essentials (Exam 220-801)
	Thursday, September 18, 2014	Practice Exam: CompTIA A+ Essentials (Exam 220-801)	Practice Exam: CompTIA A+ Essentials (Exam 220-801)
	Friday, September 19, 2014	7. HTT Professionalization	Financial Literary
		Certification Exam: CompTIA A+ Essentials (Exam 220-801)	Certification Exam: CompTIA A+ Essentials (Exam 220-801)
	Monday, September 22, 2014	2. HTT A+ Essentials & Practical	A+ Essentials (review)
	Tuesday, September 23, 2014	2. HTT A+ Essentials & Practical	A+ Essentials (review)
	Wednesday, September 24, 2014	2. HTT A+ Essentials & Practical	A+ Essentials (review)
	Thursday, September 25, 2014	2. HTT A+ Essentials & Practical	A+ Practical
	Friday, September 26, 2014	2. HTT A+ Essentials & Practical	A+ Practical
	Monday, September 29, 2014	6. HTT Customer Service	Customer Service (Part 2)
		2. HTT A+ Essentials & Practical	A+ Practical
	Tuesday, September 30, 2014	6. HTT Customer Service	Customer Service (Part 3)
		8. IT Industry	It's About Certification (Part 1)
	Wednesday, October 01, 2014	6. HTT Customer Service	Customer Service (Part 4)
		2. HTT A+ Essentials & Practical	A+ Practical
	Thursday, October 02, 2014	2. HTT A+ Essentials & Practical	A+ Practical
	Friday, October 03, 2014	2. HTT A+ Essentials & Practical	A+ Practical
		Certification Exam: CompTIA A+ Practicals (Exam 220-802)	Certification Exam: CompTIA A+ Practicals (Exam 220-802)

	Dates / Days	Blackboard Course	Course Titles
	Monday, October 06, 2014	**2. HTT A+ Essentials & Practical**	**A+ Practical**
	Tuesday, October 07, 2014	**2. HTT A+ Essentials & Practical**	**A+ Practical**
	Wednesday, October 08, 2014	**2. HTT A+ Essentials & Practical**	**A+ Practical**
	Thursday, October 09, 2014	**2. HTT A+ Essentials & Practical**	**A+ Practical**
	Friday, October 10, 2014	**2. HTT A+ Essentials & Practical**	**A+ Practical**
	Monday, October 13, 2014	**3. HTT Network +**	**Network +**
	Tuesday, October 14, 2014	**3. HTT Network +**	**Network +**
	Wednesday, October 15, 2014	**8. IT Industry**	**Information Technology Sustainability (Part 2)**
		3. HTT Network +	**Network +**
	Thursday, October 16, 2014	**Certification Exam: Study Time CompTIA A+ Practicals (Exam 220-802)**	**A+ (802) Review / Study Time**
	Friday, October 17, 2014	**Certification Exam: CompTIA A+ Practicals (Exam 220-802)**	**Certification Exam: CompTIA A+ Practicials (Exam 220-802)**
	Monday, October 20, 2014	**3. HTT Network +**	**Network +**
	Tuesday, October 21, 2014	**3. HTT Network +**	**Network +**
	Wednesday, October 22, 2014	**3. HTT Network +**	**Network +**
	Thursday, October 23, 2014	**3. HTT Network +**	**Network +**
	Friday, October 24, 2014		**Study Day Network+**
	Monday, October 27, 2014	**Certification Exam: CompTIA Network+ (Exam N10-005)**	**Certification Exam: Network+ Practicials (Exam N10-005)**
	10/28/2014 College Closed - Student option to attend class CAT 315	**4. HTT Security +**	**Security +**
	Wednesday, October 29, 2014	**4. HTT Security +**	**Security +**
			ICF Focus Group
		4. HTT Security +	**Security +**
	Thursday, October 30, 2014	**4. HTT Security +**	**Security +**
	Friday, October 31, 2014	**4. HTT Security +**	**Security +**
	Monday, November 03, 2014	**4. HTT Security +**	**Security +**
	Tuesday, November 04, 2014		**Study Day Security +**
	Wednesday, November 05, 2014	**Certification Exam: CompTIA Security+ (Exam N10-005)**	**Certification Exam: Security+ Practicials (Exam N10-005)**
	Thursday, November 06, 2014	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**

	Dates / Days	Blackboard Course	Course Titles
	Friday, November 07, 2014	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
	Monday, November 10, 2014	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
	Tuesday, November 11, 2014	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
	Wednesday, November 12, 2014	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
	Thursday, November 13, 2014		**Study Day MCSA Administering Windows 2012 (70-410)**
	Friday, November 14, 2014	**Certification Exam: MCSA Administering Windows 2012 (70-410)**	**Certification Exam: MCSA Administering Windows 2012 (70-410)**
	Monday, November 17, 2014	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
	Tuesday, November 18, 2014	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
	Wednesday, November 19, 2014	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
	Thursday, November 20, 2014	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
	Friday, November 21, 2014	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
	Monday, November 24, 2014		**Study Day MCSA Administering Windows 2012 (70-411)**
	Tuesday, November 25, 2014	**Certification Exam: MCSA Administering Windows 2012 (70-411)**	**Certification Exam: MCSA Administering Windows 2012 (70-411)**
	Wednesday, November 26, 2014	**7. HTT Professionalization**	**Resume Writing**
		8. IT Industry	**IT Sustainability**
		8. IT Industry	**A Student Guide: IT Professionals**
		7. HTT Professionalization	**Business Networking**
		9. HTT Security Awareness	**Security Clearance**
		6. HTT Customer Service	**Customer Service (Part 5 & 6)**
	Thursday, November 27, 2014		**College Closed**
	Friday, November 28, 2014		**College Closed**
	Monday, December 01, 2014	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
	Tuesday, December 02, 2014	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
	Wednesday, December 03, 2014	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**

	Dates / Days	Blackboard Course	Course Titles
	Thursday, December 04, 2014	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
	Friday, December 05, 2014		**Assessment Testing**
		7. HTT Professionalization	**Interviewing Techniques**
			Hiring Fair
		5. Microsoft Server 2012 (412)	**MCSA Advanced Window Server 2012 Service (70-412)**
	Monday, December 08, 2014		**Study for MCSA (Microsoft Test 70-412)**
		Classroom attendance optional Certification Exam: MCSA (Microsoft Test 70-412)	**Certification Exam: MCSA (Microsoft Test 70-412)**
	Tuesday, December 09, 2014		
	Wednesday, December 10, 2014		**HOLD for Student Closed-Out**
	Thursday, December 11, 2014		**HOLD for Student Closed-Out**
	Friday, December 12, 2014		**HOLD for Student Closed-Out**
	Monday, December 15, 2014		**HOLD for Student Closed-Out**
	Tuesday, December 16, 2014		**HOLD for Student Closed-Out**
	Wednesday, December 17, 2014		**HOLD for Student Closed-Out**
	Thursday, December 18, 2014		**HOLD for Student Closed-Out**
	Friday, December 19, 2014		**HOLD for Student Closed-Out**

INsTEP Course Schedule for Cohorts 2 and 3

	Dates / Days	Blackboard Course	Course Titles
	Monday, January 12, 2015	**1. HTT Introduction**	**Student Orientation**
	Tuesday, January 13, 2015	**7. HTT Professionalization**	**Business Etiquette**
		8. IT Industry	**A Guide to Certification**
	Wednesday, January 14, 2015	**9. HTT Security Awareness**	**Security Awareness / Cyber Security**
	Thursday, January 15, 2015	**7. HTT Professionalization**	**Social Media**
	Friday, January 16, 2015	**9. HTT Security Awareness**	**Fundamentals of Information Technology**
	Monday, January 19, 2015	**Martin Luther King Day**	**No School**
Day 1	Tuesday, January 20, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials**
Day 2	Wednesday, January 21, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials**
Day 3	Thursday, January 22, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials**
Day 4	Friday, January 23, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials**
Day 5	Monday, January 26, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials**
Day 6	Tuesday, January 27, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials**
Day 7	Wednesday, January 28, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials**
Day 8	Thursday, January 29, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials**
Day 9	Friday, January 30, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials**

	Dates / Days	Blackboard Course	Course Titles
Day 10	Monday, February 02, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials**
Day 11	Tuesday, February 03, 2015	**2. HTT A+ Essentials & Practical**	**A+ Practical**
Day 12	Wednesday, February 04, 2015	**2. HTT A+ Essentials & Practical**	**A+ Practical**
Day 13	Thursday, February 05, 2015	**2. HTT A+ Essentials & Practical**	**A+ Practical**
Day 14	Friday, February 06, 2015	**2. HTT A+ Essentials & Practical**	**A+ Practical**
Day 15	Monday, February 09, 2015	**2. HTT A+ Essentials & Practical**	**A+ Practical**
	Tuesday, February 10, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials (Study Day)**
	Wednesday, February 11, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials (Exam 220-801)**
	Thursday, February 12, 2015	**2. HTT A+ Essentials & Practical**	**A+ Practical (Study Day)**
	Friday, February 13, 2015	**2. HTT A+ Essentials & Practical**	**A+ Essentials (Exam 220-802)**
	Monday, February 16, 2015	**President's Day**	**No School**
	Tuesday, February 17, 2015	**8. IT Industry**	**IT Sustainability**
		8. IT Industry	**It's About Certification**
	Wednesday, February 18, 2015	**6. HTT Customer Service**	**Customer Service (Part 1 & 2)**
	Thursday, February 19, 2015	**6. HTT Customer Service**	**Customer Service (Part 3 & 4)**
	Friday, February 20, 2015	**6. HTT Customer Service**	**Customer Service (Part 5 & 6)**
Day 1	Monday, February 23, 2015	**3. HTT Network +**	**Network +**
Day 2	Tuesday, February 24, 2015	**3. HTT Network +**	**Network +**
Day 3	Wednesday, February 25, 2015	**3. HTT Network +**	**Network +**
Day 4	Thursday, February 26, 2015	**3. HTT Network +**	**Network +**
Day 5	Friday, February 27, 2015	**3. HTT Network +**	**Network +**
Day 6	Monday, March 02, 2015	**3. HTT Network +**	**Network +**
	Tuesday, March 03, 2015	**3. HTT Network +**	**Network+ (Study Day)**
	Wednesday, March 04, 2015	**3. HTT Network +**	**Certification Exam: Network+ (Exam N10-005)**
	Thursday, March 05, 2015	**7. HTT Professionalization**	**Resume Writing**
			ICF Focus Group
		7. HTT Professionalization	**Financial Literary**
Day 1	Friday, March 06, 2015	**4. HTT Security +**	**Security +**
Day 2	Monday, March 09, 2015	**4. HTT Security +**	**Security +**
Day 3	Tuesday, March 10, 2015	**4. HTT Security +**	**Security +**
Day 4	Wednesday, March 11, 2015	**4. HTT Security +**	**Security +**
Day 5	Thursday, March 12, 2015	**4. HTT Security +**	**Security +**
Day 6	Friday, March 13, 2015	**4. HTT Security +**	**Security +**

	Dates / Days	Blackboard Course	Course Titles
Day 7	Monday, March 16, 2015	**4. HTT Security +**	**Security +**
	Tuesday, March 17, 2015	**4. HTT Security +**	**Security + (Study Day)**
	Wednesday, March 18, 2015	**4. HTT Security +**	**Security + (Exam 301)**
	Thursday, March 19, 2015	**8. IT Industry**	**A Student Guide: IT Professionals**
		7. HTT Professionalization	**Business Networking**
	Friday, March 20, 2015	**7. HTT Professionalization**	**Interviewing Techniques**
		9. HTT Security Awareness	**Security Clearance**
Day 1	Monday, March 23, 2015	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
Day 2	Tuesday, March 24, 2015	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
Day 3	Wednesday, March 25, 2015	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
Day 4	Thursday, March 26, 2015	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
Day 5	Friday, March 27, 2015	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
	Monday, March 30, 2015	**Spring Break**	**No School**
	Tuesday, March 31, 2015	**Spring Break**	**No School**
	Wednesday, April 01, 2015	**Spring Break**	**No School**
	Thursday, April 02, 2015	**Spring Break**	**No School**
	Friday, April 03, 2015	**Spring Break**	**No School**
Day 6	Monday, April 06, 2015	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
Day 7	Tuesday, April 07, 2015	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
Day 8	Wednesday, April 08, 2015	**5. Microsoft Server 2012 (410)**	**MCSA Installing and Configuring Windows 2012 (70-410)**
Day 1	Thursday, April 09, 2015	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
Day 2	Friday, April 10, 2015	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
Day 3	Monday, April 13, 2015	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
Day 4	Tuesday, April 14, 2015	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**

	Dates / Days	Blackboard Course	Course Titles
Day 5	Wednesday, April 15, 2015	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
Day 6	Thursday, April 16, 2015	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
Day 7	Friday, April 17, 2015	**5. Microsoft Server 2012 (411)**	**MCSA Administering Windows 2012 (70-411)**
	Monday, April 20, 2015		**Study Day MCSA Administering Windows 2012 (70-410)**
	Tuesday, April 21, 2015		**Certification Exam: MCSA Administering Windows 2012 (70-410)**
	Wednesday, April 22, 2015		**Study Day MCSA Administering Windows 2012 (70-411)**
	Thursday, April 23, 2015		**Study Day MCSA Administering Windows 2012 (70-411)**
	Friday, April 24, 2015		**Certification Exam: MCSA Administering Windows 2012 (70-411)**
Day 1	Monday, April 27, 2015	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
Day 2	Tuesday, April 28, 2015	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
Day 3	Wednesday, April 29, 2015	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
Day 4	Thursday, April 30, 2015	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
Day 5	Friday, May 01, 2015	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
Day 7	Monday, May 04, 2015	**5. Microsoft Server 2012 (412)**	**MCSA Advanced Window Server 2012 Service (70-412)**
	Tuesday, May 05, 2015	**5. Microsoft Server 2012 (412)**	**Assessment Testing**
	Wednesday, April 29, 2015	**5. Microsoft Server 2012 (412)**	**MCSA (Study Day)**
	Thursday, April 30, 2015	**5. Microsoft Server 2012 (412)**	**Certification Exam: MCSA (Microsoft Test 70-412)**
	Friday, May 01, 2015		**Hiring Fair**

	Dates / Days	Blackboard Course	Course Titles
	Monday, May 04, 2015	**TAA INsTEP Administrative Day**	**Turn in Laptops and Books**
	Tuesday, May 05, 2015	**TAA INsTEP Administrative Day**	
	Wednesday, May 06, 2015	**TAA INsTEP Administrative Day**	
	Thursday, May 07, 2015	**TAA INsTEP Administrative Day**	
	Friday, May 08, 2015		**Graduation**

Appendix E: Data Gathered by Survey

Data collection tool	Data gathered	Dates
Baseline survey conducted in person separately with the INsTEP and comparison classes	Demographics, education history, employment and wage history, unemployment challenges, healthcare benefits and public assistance	Cohort 1 - INsTEP: September 2 2014 Cohort 1 - Comparison: September 3 2014 Cohort 2 - INsTEP: January 12, 2015 Cohort 2 - Comparison: February 2, 2015 Cohort 3 - INsTEP: April 17, 2015 Cohort 3 - Comparison: July 9, 2015
Six Month Follow up conducted via web based survey to both INsTEP and Comparison	Program experience, job readiness, employment and wages, unemployment challenges, healthcare benefits and public assistance	Cohort 1: March to April 2015 Cohort 2: November to January 2015 Cohort 3: January to February 2016
Twelve Month Follow up conducted via web based survey to both INsTEP and Comparison	Employment and wages, unemployment challenges, healthcare benefits and public assistance	Cohort 1: January to February 2016 Cohort 2: April to May 2015 Cohort 3: June to July 2015
Program data via file transfer	Credential earnings, Program completion and grades, participant demographics	Cohorts 1, 2, and 3: August 2015
Unemployment Insurance data via file transfer	Unemployment Insurance wage data for participants to consented to share their data	Cohorts1, 2, and 3: TBD

Appendix F: Formative Study Data Collection

Program Stage	Data collection actions
Program Development	Collected documents on program design and attended program presentations as follows: • Attended partner kick off meeting, March 27 2014 • Shared initial program logic model that reflected the projected program design and implementation, April 8 2014
Program Implementation	Collected qualitative data from students as follows: • Cohort 1 focus group October 29 2014 • Cohort 1 classroom observation October 29 2014 • Cohort 2 focus group on March 17 • Cohort 3 focus group on April 20 Collected qualitative data from instructors and INsTEP program staff • Interviewed instructors and staff during cohort 1 between October 28 to November 13 • Interviewed faculty and staff during cohorts 2 and 3 between March 18 to May 14

Appendix G: Regional IT Training Courses

COMPTIA A+		
Course Title	**Course Description**	**Class Time**
DPR 697 – COMPTIA A+ Cert Prep PT 1[1] **PGCC Course**	This course is the first of a two part series designed to train those who want to become computer support technicians. CompTIA A+ certification is the industry standard for computer support technicians. The international, vendor neutral certification proves competence in areas such as installation, preventive maintenance, networking, security and troubleshooting. Topics covered include hardware, operating systems, networking and security. Suggested experience: IT professional with the equivalent of at least 12 months of hands-on experience in the lab or field. Required Text: Mike Meyers' CompTIA A+ Guide to Managing and Troubleshooting PCs, (4th edition) (Exams 220-801 & 220-802) (paperback).	6.5 CEU[2]s, 6 weeks
DPR 698 – COMPTIA A+ Cert Prep PT 2[3] **PGCC Course**	This course is the second of a two part series designed to train those who want to become CompTIA A+ certified computer support technicians. The practical applications of hardware, operating systems, networking and security will be covered in this course. Prerequisite: successful completion of CompTIA A+ Certification Preparation Part 1. Suggested experience: IT professional with the equivalent of at least 12 months of hands-on experience in the lab or field. Text required: Mike Meyers' CompTIA A+ Guide to Managing and Troubleshooting PCs, (4th edition) (Exams 220-801 & 220-802) (paperback).	6.5 CEUs, 7 weeks
ITS-8080 A+ IT Technician Certification Prep **College of Southern Maryland**	Be an A+ certified computer technician! A+ certification is an industry recognized credential that certifies the competency of entry-level PC service specialists in the computer industry. Certification candidates in this course will have the unique opportunity to practice and study for the certification exams from a single, integrated source. Familiarity of operating systems up to Windows 7 required. ITS 7710 or equivalent education/work experience required. This course will help students prepare for the CompTIA A+ certification.	4.8 CEUs, 9 weeks
Online CompTIA A+ Certification Training Class **www.cybrary.it**	Our free online A+ training class educates on the maintenance of operating systems, PCs, mobile devices, laptops and printers—crucial skills that every IT professional needs in order to work within the industry. Even if you aren't interested in working in IT, the skills taught in our training course can help you save a lot of money in electronic device repairs…a definite plus! Specifically, the course covers the fundamentals of computer technology, basic networking, installation and configuration of PCs, laptops and related hardware, as well as configuring common features for mobile operation systems Android and Apple iOS. https://www.cybrary.it/course/comptia-aplus/	Total Clock Hours: 43 hrs

[1] Timing allows one to take parts 1 & 2 during the course of 1 semester
[2] CEU stands for Continuing Education Unit
[3] Timing allows one to take parts 1 & 2 during the course of 1 semester

COMPTIA Security+		
Course Title	**Course Description**	**Class Time**
DPR 702 – Computer Security/ Security+ **PGCC Course**	Topics include general security, communication security, infrastructure security, basics of cryptography, and operations/organizational security. Upon completion of the class students should be prepared to take the CompTIA vendor neutral Security+ exam. Successful completion of this exam is generally globally recognized as equivalent to an entry-level security specialist position. Prerequisites: intermediate computer/pc skills with experience in the DOS, Windows, Unix and Linux operating systems and familiarity with the A+ operating systems technologies and GUI and Command Language Interface commands. This class meets concurrently with credit course INT-1620.	4.2 CEUs, 1 semester
Security + Certification Exam Prep, ITI-240[4] **Montgomery College**	The demand for IT professionals with security skills and knowledge has never been greater. And one of the most widely sought after certifications for those seeking to either enter or advance in the security field is the CompTIA Security+ (SY0-401). In this course, students will learn the key concepts and skills required to obtain this industry significant certification. The course will cover the Security+ exam's six testing domains: Network Security, Compliance and Operational Security, Threats and Vulnerabilities, Application, Data and Host Security, Access Control and Identity Management and Cryptography. Upon completion of the course, students will be able to sit for the Security+ certification exam. Prerequisites: Network+; Security Fundamentals or equivalent experience.	6.5 weeks
ITS-7910 CompTIA Security+ **College of Southern Maryland**	CompTIA Security+ is for you if your job responsibilities include securing network services, network devices, and network traffic. Prepare for the CompTIA Security+ Certification examination by building on your knowledge and professional experience with computer hardware, operating systems, and networks. Topics include communication security, infrastructure security, cryptography, authentication, access control, external attack, and operational and organizational security. Successful students have networking and administrative skills in Windows-based Transmission Control Protocol/Internet Protocol (TCP/IP) networks and familiarity with other operating systems. This course will help students prepare for the CompTIA Security+ certification. *Prerequisite: Two years of technical networking experience with an emphasis on security and Network+ certification recommended.*	4 CEUs, 4 weeks[5]
Online CompTIA Security+ Training Class **www.cybrary.it**	The Security+ curriculum covers many areas of network security, including cloud security, encryption, security protocols, system security and network infrastructure. Our free online CompTIA Security+ training is ideal for network administrators, security consultants, security engineers, security analysts and people looking to enter into cyber security. Learn about general security concepts, basics of cryptography, communications security and operational and organizational security. With the increase of major security breaches that are occurring, security experts are needed now more than ever. https://www.cybrary.it/course/comptia-security-plus/	Total Clock Hours: 9 hrs, 35 mins

[4] Timing allows one to take Security+ and Network+ during the course of 1 semester

[5] Two years of technical networking experience with an emphasis on security and Network+ certification recommended.

COMPTIA Network+		
Course Title	**Course Description**	**Class Time**
DPR 735 – COMPTIA Network+ Cert Prep **PGCC Course**	This course will cover the installation and operation of computer networks from the hardware, rather than the administrative standpoint. Students will build and test working networks and associated wiring. Helps prepare students for the CompTIA Network+ certification exam. Meets concurrently with credit course INT-1550.	5 CEUs, 1 semester
Network + Certification Training and Exam Prep, ITI-241[6] **Montgomery College**	Over time, the CompTIA Network+ certification has proven to be a must have certification for IT professionals new to networking, as well as seasoned professionals. Its profile has risen to the point where it is often recommended (or required) by major corporations and government agencies and is a condition of employment. In this course, you will be exposed to the five domains tested in the Network+ exam: network concepts, network installation and configuration, network media and topologies, network management, and network security. Upon completion of this course, you will be prepared to take the Network+ Certification exam. Prerequisites: Networking Fundamentals, knowledge of operating systems and hardware, or equivalent experience.	5.5 weeks
ITS-7900 CompTIA Network+ **College of Southern Maryland**	Increase your knowledge and understanding of networking concepts and acquire the required skills to prepare for a career in network support or administration. ***Prerequisite:*** *Nine months of networking experience and A+ certification recommended.*	4 CEUs, 4 weeks
Online CompTIA Network+ Certification Training Class **www.cybrary.it**	The CompTIA Network+ curriculum covers network technologies, installation and configuration, media and topologies, management and security. After taking this free online self-paced course, you'll be able to distinguish between different types of networks, identify features of VPN and VLAN, differentiate and implement appropriate wiring standards, categorize WAN and LAN technology types and properties, implement a basic wireless network and recognize basic network attack types. It's a wide variety of knowledge that can be used for job roles such as a network administrator, network technician, network installer, help desk technician and IT cable installer. This online Network+ course is recommended for individuals who work in, or are looking to get into networking, cabling and systems administration, prior experience is not required. In addition to building one's networking skill set, this course is also designed to prepare an individual for the Network+ certification exam, a distinction that can open a myriad of job opportunities from major companies. https://www.cybrary.it/course/comptia-network-plus/	Total Clock Hours: 31 hrs, 52 mins

[6] Timing allows one to take Security+ and Network+ during the course of 1 semester

Microsoft Certified Technology Specialist Certification (MCTS Windows 7 Configuration)		
Course Title	**Course Description**	**Class Time**
ITI302: Microsoft Certified Specialist in Windows 10 **Montgomery College**	Get trained for entry-level jobs in Information Technology! This course will prepare you for the Microsoft certification exam 70-697: Configuring Windows Devices - Certified Microsoft Specialist in Windows 10. Obtain the knowledge and skills required to install and configure Windows 10 desktops and devices in a Windows Server domain corporate environment. Learn how to install and customize Windows 10 operating systems and apps, configure local and remote network connectivity and storage, and to configure data security, device security, and network security. This course is also intended to provide skills for Enterprise Desktop/Device Support Technicians (EDSTs) who provide Tier 2 support to users who run Windows 10 desktops and devices within a Windows domain environment in medium to large enterprise organizations. Prerequisites: Networking Fundamentals or equivalent experience, and knowledge of and experience with the Windows operating system.	7 weeks

Appendix H: Student Consent for Program Evaluation

The ICF International team is conducting an evaluation of the PGCC INsTEP program. The goal of the INsTEP program is to develop and strengthen career pathways in the Information Technology (IT) sector. We will be studying how the program is meeting that goal, whether this training program is helping students get jobs and higher pay, as well as the process of implementing the course. ICF International would like your consent to be in a study of the INsTEP.

Data We Will Get About You

By agreeing to be in the study, you are giving us permission to get some data about you. For the evaluation, PGCC will provide ICF with information about you, such as your contact information, your education and work history, your skills test results, and whether you completed the INsTEP course and attained credentials. PGCC will also provide the Jacob Francis Institute with your name and social security number. We will not share data about you with anyone else, including PGCC faculty and staff.

What You Would Need to Do

If you agree to be in the study, we ask that you take part in a series of 45-minute online surveys. The first survey will be before you begin your course, and the second survey will be after your course is complete. There will also be surveys once per year for two years after you have completed your course. You will receive a $10 gift card each time you complete a survey or participate in a focus group. We will also ask you to provide contact information so we can get in touch with you for surveys later this year, in 2015 and, 2016. Your response to this consent form is one time only. We will request your consent before your participation in any follow up surveys, interviews, or focus groups.

INsTEP students may also be asked to be in a 1-hour focus group. In this focus group, you will be asked to share what you think about the INsTEP program. A focus group is a discussion that involves asking people, at the same time, their opinions about a program. It is almost like an interview except that it happens with a group. Your answers will not affect your grades, or your ability to participate in the INsTEP program, or receive PGCC services. The PGCC program staff will not see your direct responses to any surveys, or be present during any focus groups that you participate in. The survey responses will come directly to ICF International staff and will not be linked to any of your personal identifiers. We would just like to hear about your experiences with the INsTEP program. Here is a summary of what we are asking for:

Please Initial	What we ask you to do	What we ask about	How long it will take	How often	What you will get
	Allow PGCC to share your student registration information	Your name, address, phone number, ethnicity, race, email address, and student ID number	5 minutes	Once at start the program	N/A
	Take a Survey	Past and current jobs Career interests Salary Legal issues Benefits	45 minutes per survey	Up to four surveys, at the end of each semester	$10 gift card for each time a survey is completed
	Be in a Focus Group (for INsTEP students, if selected)	Opinions and feelings about INsTEP program	1 hour	One focus group, if selected, in the middle of the semester	$10 gift card

I understand that I can review the questions that will be asked of me by contacting Ed Trumbull, Evaluation Director, at 703-225-2299, or by e-mail at William.Trumbull@icfi.com.

I understand that I can contact Dr. Allen Richman, Interim Dean of Planning, Assessment and Institutional Research, with Prince George's Community College with any questions or concerns about the college's role in the study at 301-336-6000 ext.0723 or by e-mail at richmawa@pgcc.edu.

Privacy
All information we collect from or about you will be protected to the extent allowed by law. We will not identify you or your family in any reports. However, if we find out that you are being hurt, planning to hurt yourself or someone else, the law requires that we share this information with someone who can help. The information we would share in this situation is your name and contact information, such as home address and telephone numbers.

Benefits and Risks
The results of our study will help us understand if INsTEP is successful. The long term benefits from your participation will help inform and improve the curriculum and instruction of the INsTEP program and future students. In the short term, you will indirectly benefit from any changes to the curriculum and program during your course of study.

Personal risks of participating in this study are minimal. Students participating in the study will not be forced to answer any questions that they do not wish to share and reports will not identify individuals by name. Three potential risks include the following:

- *There will be a risk of breach of confidentiality.* We cannot guarantee that focus group participants will adhere to their agreement to maintain confidentiality: We will explicitly state in our introductory protocol that participants should "Be respectful of other participants and the facilitators. This includes being respectful about not sharing outside of this room without the participant's permission." However, we cannot guarantee that participants will follow our guidance.

- *The collection of Social Security Numbers (SSNs) to use in aligning Unemployment Insurance data.* SSNs will be collected from the Community College and provided to the Jacob France Institute. Only one staff member at the Jacob France Institute will have access to participants' SSNs, and the file will not be able to be linked to other study information without significant effort. ICF will not have access to SSN's. In that place will be other unique identifiers that do not include any PII's.

- *The collection of sensitive information such as criminal history and drug testing history.* This information will be collected through the online surveys that the students complete, which do not ask for the students' names, thus this information will not be linked to individual participants.

If You Decide to Stop Being in the Study…
*You are free to stop participation in this stu*dy at any time. You can skip any questions or stop completing any of the surveys, or stop participating in the focus groups at any time. Your answers will not affect your grades, or your ability to participate in the INsTEP program, or receive PGCC services. The PGCC program staff will not see your direct responses to any surveys, or be present during any focus groups that you participate in. The survey responses will come directly to ICF International staff and will not be linked to any of your personal identifiers.

Please check one of the boxes below; fill in name information and sign the consent form.

I hereby:

- ❑ ***agree to participate in the evaluation of INsTEP.***
- ❑ ***<u>do not</u> agree to participate in the evaluation of INsTEP.***

Student Name (Please print): _____

Student Signature: _____ Date: _____

(signature must be in ink)

FOR EVALUATION USE ONLY

Evaluation Consent: ____YES ____No

Appendix I: Student Baseline Survey

Prince George's Community College has been awarded a grant to improve its Information Technology program and to increase student success while enrolled in the program, expand opportunities for program graduates, and better meet the needs of information technology employers. Your responses to this survey will help us achieve these goals by helping us learn more about students who are participating in information technology related training.

☐ By checking this box, I agree to complete the survey and understand that my participation is voluntary and the risks and benefits are described in the Consent Form that I have signed.

DEMOGRAPHICS

1. What is your marital status?
   - ○ Now married
   - ○ Widowed
   - ○ Divorced
   - ○ Separate
   - ○ Never married

2. Where were you born?
   In the United States, what state: _____ (**GO TO Q.5**)
   - ○ Outside the United States, what country:_____

3. When did you come to live in the United States? Year:_____

4. What was your job in the country you lived in before coming to the United States?
   - ○ N/A, I am from the U.S.
   - ○ I did not work before moving to the U.S.
   - ○ Yes, I worked before moving to the U.S.

   If yes, please describe your job before moving to the U.S.:_____
   _____

5. Do you speak other language(s) other than English at home?
   - ○ Yes
   - ○ No
   - ○ What is that language(s)? _____

6. In your opinion, how well do you speak English? (**PLEASE CHECK ONLY ONE**)
   - ○ Very well
   - ○ Well
   - ○ Not well
   - ○ Not at all

EMPLOYMENT HISTORY

7. In what industry do you have the most experience through either work or volunteering? (**PLEASE SELECT ONE**)

- ○ Agriculture, Food and Natural Resources
- ○ Architecture and Construction
- ○ Arts, Audio/Video Technology and Communications
- ○ Education and Training
- ○ Finance
- ○ Government and Public Administration
- ○ Health Science
- ○ Hospitality and Tourism
- ○ Human Services
- ○ Information Technology
- ○ Law, Public Safety, Corrections, and Security
- ○ Manufacturing
- ○ Marketing
- ○ Science, Technology, Engineering, and Mathematics
- ○ Transportation, Distribution, and Logistics

Other (please specify): _____

Years of experience: _____

8. Please select the response which best describes your employment status:

- ○ Employed for wages (**GO TO Q.9**)
- ○ Self-employed (**GO TO Q.10**)
- ○ A homemaker (**SKIP TO Q. 12**)
- ○ Out of work and looking for work (**SKIP TO Q. 12**)
- ○ Out of work but not currently looking for work (**SKIP TO Q. 12**)
- ○ A student and employed (**SKIP TO Q. 12**)
- ○ A student and unemployed (**SKIP TO Q. 12**)
- ○ Retired (**SKIP TO Q. 12**)
- ○ Unable to work (**SKIP TO Q. 12**)

9. Who do you work for? _____

10. Please describe your work.

- ○ **Employee of a for-profit company** or business or of an individual, for wages, salary, or Commissions
- ○ **Employee of a not-for-profit**, tax-exempt, or charitable organization
- ○ **Local government employee** (city, county, etc.)
- ○ **State government employee**
- ○ **Federal government employee**
- ○ **Self-employed** in own not-incorporated business, professional practice, or farm
- ○ **Self-employed in own incorporated business,** professional practice, or farm
- ○ **Working without pay in family business** or farm
- ○ **Other,** please specify:_____

11. How much do you currently make? Enter how much you make either per year or per hour.

- ○ Hourly age:_____
- ○ Hours per week:_____

12. Are you **CURRENTLY** covered by any of the following types of health insurance or other coverage plans? **(MARK THE SOURCE FOR EACH TYPE OF COVERAGE**)

Type	Source						
	No	**Yes—Current Employer**	**Yes—COBRA or former employer**	**Yes—Family Member's Employer**	**Yes—Direct Purchase**	**Yes--Other**	**Don't Know**
Health Insurance	❍	❍	❍	❍	❍	❍	❍
Dental Insurance	❍	❍	❍	❍	❍	❍	❍
Vision Insurance	❍	❍	❍	❍	❍	❍	❍
Life Insurance	❍	❍	❍	❍	❍	❍	❍
Health Care Flexible Spending Accounts	❍	❍	❍	❍	❍	❍	❍
Short-term Disability Insurance	❍	❍	❍	❍	❍	❍	❍
Long-term Disability Insurance	❍	❍	❍	❍	❍	❍	❍
Medicaid, Medical Assistance, or any kind of government-assistance plan for those with low incomes or a disability	❍	❍	❍	❍	❍	❍	❍
Medicare, for people 65 and older, or people with certain Disabilities	❍	❍	❍	❍	❍	❍	❍
VA (including those who have ever used or enrolled for VA health care)	❍	❍	❍	❍	❍	❍	❍
TRICARE or other military health care	❍	❍	❍	❍	❍	❍	❍
Indian Health Service Retirement Plan (e.g., 401k)	❍	❍	❍	❍	❍	❍	❍
Retirement Plan (e.g. 401k)	❍	❍	❍	❍	❍	❍	❍
Life Insurance	❍	❍	❍	❍	❍	❍	❍
Any other type of health insurance or health coverage plan Specify:							

13. If you are currently employed, is your job meeting all of your needs?
    - ○ N/A ○ Yes ○ No

    Why or why not? _____

14. Are you collecting any public assistance, if yes, which of the following?
    - ○ Yes ○ No
    - ○ What type of assistance? _____

15. If previously employed before coming to PGCC, how long were you employed at your previous job?
    - ○ N/A
    - ○ 6 months
    - ○ 6 months – 1 year
    - ○ 1– 3 years
    - ○ 3 – 5 years
    - ○ 5 – 10 years
    - ○ 10 years or more

Other, please specify:_____

RECENT EMPLOYMENT

16. What were wages at your previous job? Enter how much you made either per year or per hour.
    - ○ Hourly wage:_____ ○ Hours worked per week: _____

17. Why do you think your last job ended? (**PLEASE CHECK ALL THAT APPLY**).

Employer Initiated	❍ N/A	❍ Laid off due to company downsizing or poor job performance	❍ Did not pass drug test	❍ Criminal record
Job Opportunity	❍ N/A	❍ Quit	❍ No jobs available	
Satisfaction / Motivation	❍ N/A	❍ Did not like the work involved ❍ Too busy to work	❍ Do not want to work	❍ Schedule/shift issue
Compensation	❍ N/A	❍ Low wages/hours	❍ No benefits	❍ Poor benefits
Worksite Behavior	❍ N/A	❍ Unruly	❍ Interpersonal conflicts	❍ Tardiness/Absence
Experience / Skills	❍ N/A	❍ Inadequate education, experience, or skills	❍ Language barrier	❍ Returned to school
Health	❍ N/A	❍ Physical health ❍ Alcohol/drugs	❍ Mental health/stress	❍ Pregnancy
Household	❍ N/A	❍ Issue with child	❍ Issue with household member	❍ Need to work close to home
Childcare	❍ N/A	❍ Cannot find childcare	❍ Location of available child care	❍ Cannot afford

Housing / Transportation	❍ N/A	❍ No transportation	❍ Vehicle needs repair	❍ No permanent housing
Wages or Taxes	❍ N/A	❍ Wage garnishment (taking money from your check for money that you owe)		❍ Lien
Other	❍ N/A	Specify:		
No reason	❍			

EMPLOYMENT BARRIERS

Employers consider a variety of aspects when hiring, We would like you to answer a few questions about the barriers to employment you currently face, to help evaluate the impact the INsTEP program has on you. **As a reminder, all of your answers will be confidential, as outlined in the consent form you signed**. We will not share any information we collect about you with PGCC staff or employers. Student data will only be presented as generalized information in our final evaluation reports, and will NOT be linked to your personal identifiers.

18. What barriers currently limit your ability to secure employment? **(PLEASE CHECK ALL THAT APPLY)**

Legal	❍ N/A	❍ Immigration status	❍ Criminal record (other than misdemeanors)	❍ Currently on probation
Job Opportunity	❍ N/A	❍ Limited opportunities	❍ No jobs available	
Experience / Skills	❍ N/A	❍ Inadequate education, experience, or skills	❍ Language barrier	
Health	❍ N/A	❍ Physical health ❍ Alcohol/drugs	❍ Mental health/stress	❍ Pregnancy
Household	❍ N/A	❍ Issue with child	❍ Issue with household member	❍ Need to work close to home
Childcare	❍ N/A	❍ Cannot find childcare	❍ Location of available child care	❍ Cannot afford
Housing / Transportation	❍ N/A	❍ No transportation	❍ Vehicle needs repair	❍ No permanent housing
Wages or Taxes	❍ N/A	❍ Wage garnishment (taking money from your check for money that you owe)		❍ Lien
Other	❍ N/A	Specify:		
No reason	❍			

EDUCATIONAL EXPERIENCE

19. Please list any vocational, technical or professional certificates or licenses that you hold:
    - ○ N/A **(SKIP to Q. 22)**

20. Vocational, Technical, or Trade School Diploma/Certificate
    - ○ Specify type: _____
    - ○ Institution:_____
    - ○ Location (city, state, or country): _____
    - ○ License Expiration Date: _____

    Professional License
    - ○ Specify type: _____
    - ○ Institution:_____
    - ○ Location (city, state, or country): _____

21. Are you enrolled in any other training or education programs?
    - ○ Yes
    - ○ No **(SKIP to Q. 26)**

22. Please name the school, degree or training program you are currently enrolled in.
    - ○ School:_____
    - ○ Program: _____

23. Indicate total number of years you have been enrolled and your estimated graduation year for the training or education program.
    - ○ Number of months enrolled:_____
    - ○ Estimated graduation year:_____ What do you want to do, in terms of your career goals, once you complete this training?

      _____
      _____
      _____

EMPLOYMENT PROSPECTS

24. If currently employed, is your job related to the information technology field?
    - ○ N/A
    - ○ Yes
    - ○ No

25. Do you have a new job lined up for after graduation?
    - ○ N/A
    - ○ Yes
    - ○ No

26. Please describe your current or new job:_____

    _____

27. What is MOST LIKELY to be your PRIMARY activity upon graduation or program completion? (Select only one answer)
    - ○ Employment, full-time paid
    - ○ Employment, part-time paid
    - ○ Further undergraduate or graduate education, full-time
    - ○ Further undergraduate or graduate education, part-time
    - ○ Military service
    - ○ Volunteer activity (E.g. AmeriCorps, Job Corps, Peace Corps)
    - ○ Other, please specify:_____

28. Which of the following BEST describes the field of work you will enter upon graduation or program completion?
    - ○ Computer Support Specialist
    - ○ Computer System Analyst
    - ○ Network and Computer Systems Administrator
    - ○ Other information technology, please specify:_____
    - ○ Other non-information technology, please specify: _____

29. What do you want to do, in terms of your career goals, once you complete this training?
    _____
    _____

The survey is now complete. Thank you for your participation. Your thoughts and answers will help to improve the INsTEP program. You will receive your $10 gift certificate for you

Appendix J: Student Six-Month Survey

This follow-up survey, provided to students enrolled in the INsTEP and DPR-697 CompTIA A+ courses, and is part of the grant requirements and will enable the DOL to understand how and if PGCC's IT Training Programs achieved their goals. Your responses to this survey are confidential will help us learn more about students who participated in both programs.

☐ ***By checking this box, I agree to complete the survey and understand that my participation is voluntary and the risks and benefits are described in the Consent Form that I have signed.***

CONSENT

1. Please indicate if you agree to complete this survey today. (response required)
   - ○ Yes
   - ○ No

2. If you agree to complete the survey please provide us with your full name:

3. What course were you enrolled in at PGCC?
   - ○ DPR-697 CompTIA A+
   - ○ INsTEP

TRAINING COMPLETION

4. Did you complete the training?
   - ○ Yes **[skip to 5]**
   - ○ No **[skip to 14]**
   - ○ Other:

TRAINING EXPERIENCE

5. Did you receive any of these services?

	Received service directly from program	Received service through another party	Did not receive service
Job readiness training	❍	❍	❍
Individual coaching	❍	❍	❍
Academic counseling	❍	❍	❍
Tutoring	❍	❍	❍
Career planning	❍	❍	❍
Job search assistance	❍	❍	❍

	Received service directly from program	Received service through another party	Did not receive service
Job fairs	❍	❍	❍
Internship placement	❍	❍	❍
assistance	❍	❍	❍
Online course resources	❍	❍	❍
Financial literacy training	❍	❍	❍
Legal assistance	❍	❍	❍
Other (please specify)			

6. Did you receive these services and if so how frequently did you use them?

	Not Applicable (N/A)	0 times	1 – 3 times	4 or more times
Job readiness training	❍	❍	❍	❍
Individual coaching	❍	❍	❍	❍
Academic counseling	❍	❍	❍	❍
Tutoring	❍	❍	❍	❍
Career planning	❍	❍	❍	❍
Job search assistance	❍	❍	❍	❍
Job fairs	❍	❍	❍	❍
Internship placement assistance	❍	❍	❍	❍
Online course resources	❍	❍	❍	❍
Financial literacy training	❍	❍	❍	❍
Legal assistance	❍	❍	❍	❍
Other (please specify):				

Cohort 1 responses that were "0 times or N/A" were re categorized/ treated as "Service not offered or N/A"

7. Please indicate your satisfaction with any of the following services on the scale below:

	Not Applicable (N/A)	1- Very Dissatisfied	2- Dissatisfied	3- Neither satisfied or dissatisfied	4- Satisfied	5- Very Satisfied
Job readiness training	❍	❍	❍	❍	❍	❍
Individual coaching	❍	❍	❍	❍	❍	❍
Academic counseling	❍	❍	❍	❍	❍	❍
Tutoring	❍	❍	❍	❍	❍	❍
Career planning	❍	❍	❍	❍	❍	❍
Job search assistance	❍	❍	❍	❍	❍	❍
Job fairs	❍	❍	❍	❍	❍	❍
Internship placement	❍	❍	❍	❍	❍	❍
assistance	❍	❍	❍	❍	❍	❍
Online course resources	❍	❍	❍	❍	❍	❍
Financial literacy training	❍	❍	❍	❍	❍	❍
Legal assistance	❍	❍	❍	❍	❍	❍
Other (please specify):						

Responses that were "0 times or N/A" were re categorized/ treated as "Service not offered or N/A"
ICF combined responses Very Dissatisfied with Dissatisfied and Satisfied with Very Satisfied

8. Please indicate how strongly you agree or disagree with the following statements about your training program on the scale below:

	Not Applicable (N/A)	1- Strongly Disagree	2- Disagree	3- Neither agree or disagree	4- Agree	5- Strongly Agree
The program's pre-assessment helped me determine my current skillsets and aptitudes.	❍	❍	❍	❍	❍	❍
The training's assessment tools helped me through my training.	❍	❍	❍	❍	❍	❍
The training helped me find a job.	❍	❍	❍	❍	❍	❍
The training will help me advance my career more quickly than I would have been able to do on my own.	❍	❍	❍	❍	❍	❍
The training I received was too difficult.	❍	❍	❍	❍	❍	❍
I benefited from integrated training approach which **combined technical skills and customer service training**	❍	❍	❍	❍	❍	❍
I knew what career I wanted to enter before I first came into PGCC.	❍	❍	❍	❍	❍	❍
I want to pursue further my education in this field.	❍	❍	❍	❍	❍	❍
I will remain in the occupation I was trained for by PGCC for at least five years.	❍	❍	❍	❍	❍	❍
Other (please specify):						

9. Please with each of the following statements about the training program you enrolled in at PGCC on the scale below.

	Not Applicable (N/A)	1- Strongly Disagree	2- Disagree	3- Neither agree or disagree	4- Agree	5- Strongly Agree
I was satisfied with the program I was enrolled in.	❍	❍	❍	❍	❍	❍
I would recommend the program to others.	❍	❍	❍	❍	❍	❍
Other (please specify):						

10. Please indicate your knowledge of the your program's concepts on the scale below:

	Not Applicable (N/A)	1- Very Weak	2- Weak	3- Neither agree or disagree	4- Strong	5- Very Strong
My understanding of the subject of my training.	❍	❍	❍	❍	❍	❍
My ability to demonstrate my comprehension of the subject of my training.	❍	❍	❍	❍	❍	❍
My ability to apply the concepts of my training to a real world problem or situation.	❍	❍	❍	❍	❍	❍
Other (please specify):						

11. Are you currently enrolled in any other IT trainings or educational programs?
    - ○ Yes
    - ○ No

12. Are you currently enrolled in any other trainings or educational programs in a different sector to the IT industry?
    - ○ Yes
    - ○ No

CURRENT EMPLOYMENT

13. Are you currently employed?
    - ○ Employed full-time for wages, for yourself or an employer (for 30 hours or more) **[skip to Q. 15]**
    - ○ Employed part-time for wages for yourself or an employer (for less than 30 hours) **[skip to Q. 15]**
    - ○ Unemployed and looking for work **[skip to Q. 21]**
    - ○ Unemployed but not currently looking for work **[skip to Q. 21]**
    - ○ Retired **[skip to Q. 21]**
    - ○ Unable to work **[skip to Q. 21]**

CURRENT EMPLOYMENT Continued

14. What is your current occupation?

15. Which of the following best describes your occupation?
    - ○ Employee of a for-profit company or business or of an individual, for wages, salary, or commission
    - ○ Employee of a not-for-profit, tax-exempt, or charitable organization
    - ○ Local government employee (city, county, etc.)
    - ○ State government employee
    - ○ Federal government employee
    - ○ Self-employed in own not-incorporated business or professional practice

16. How much do you currently earn?

Hourly wage:
Number of hours worked per week:
Annual salary:

17. When did you start your job?

Month:
Year:

18. On a scale of 1 - 5, (where 1 means not well and 5 means very well), how well do you think the PGCC program prepared you for your current job?
    - ○ 1- not well
    - ○ 2- inadequately
    - ○ 3- didn't affect my preparedness for my current job
    - ○ 4- adequately
    - ○ 5- very well

19. Is your current occupation related to the training you received from PGCC?
    - ○ Yes
    - ○ No
    - ○ Other (please specify)

UNEMPLOYMENT CHALLENGES

20. Please indicate on the scale to what extent did any of the following circumstances affected your ability to secure and maintain employment.

	Not Applicable (N/A)	To No Extent	To a Little Extent	To a Moderate Extent	To a Large Extent
Difficult job market (e.g. few job opportunities with livable wages)	❍	❍	❍	❍	❍
Poor health (e.g. physical health, mental health/stress)	❍	❍	❍	❍	❍
Inadequate childcare	❍	❍	❍	❍	❍
Inadequate resources to care for a sick or elder family member	❍	❍	❍	❍	❍
Inadequate housing	❍	❍	❍	❍	❍
Lack of transportation (personal vehicle or no accessible public transportation)	❍	❍	❍	❍	❍
Layoff or employer terminated	❍	❍	❍	❍	❍
Criminal history	❍	❍	❍	❍	❍
Lack of technical skills	❍	❍	❍	❍	❍
Lack of relevant work experience	❍	❍	❍	❍	❍

BENEFITS & ASSISTANCE

21. Were you receiving any of the following benefits when you signed up for this class?
    - ○ Health insurance, including dental and vision through a current or former employer or through a union
    - ○ Health insurance, including dental and vision through a family coverage
    - ○ Health insurance purchased directly from an insurance company
    - ○ Medicare, medical assistance, or any kind of government assistance plan for those with low incomes or disabilities TRICARE or other military health care
    - ○ Indian Health Services
    - ○ Any other type of health insurance or health coverage plan, please specify:

22. Were you collecting any of the following public assistance services when you signed up for this class? (Please select all that apply).
    - ○ Temporary Assistance for Needy Families (TANF)
    - ○ Supplemental Nutrition Assistance Program (SNAP) or Food stamps
    - ○ Workforce Innovation and Opportunity Act (WIOA) services and funding
    - ○ Supplemental Security Income
    - ○ Transportation Assistance
    - ○ Unemployment Insurance
    - ○ Other (please specify):

THANK YOU-CAN WE CONTACT YOU AGAIN?

The survey is now complete. Thank you for your participation. Your thoughts and answers will help to improve the PGCC IT training programs. You will receive a $10 gift card for your participation.

In order for us to collect additional meaningful data that will help us achieve the goals of this evaluation, we would like to be able to follow-up with you in the future. At that time, we will provide you with another consent form, where you can indicate your decision to continue participating in the evaluation and complete another survey.

If you agree to be re-contacted, please provide your contact information below so that we can follow up with you in a few months' time.

Home address:

Email address:

Please provide us with either your email address or home address so we may send you the $10 gift card for completing this survey today!

23. Do you agree to be contacted for future surveys? If so, please provide us with your contact information

Home address:

Phone number:

Email address:

Thank you for your time today and for helping us with the PGCC IT program evaluation.

Appendix K: Student Twelve-Month Survey

This survey, provided to students in the Prince George's Community College, and DPR-697 CompTIA A+ courses, is part of the requirements of a grant PGCC received from the U.S. Department of Labor (DOL). The survey is being conducted by ICF International, we will use it to understand how and if PGCC's IT related training programs achieved their goals, and the share those lessons learned with DOL. Your responses to this survey are confidential will help us learn more about students who participated in both programs. You will receive a $10 gift card for completing the survey and it should only take about 10 minutes to complete.

☐ ***By checking this box, I agree to complete the survey and understand that my participation is voluntary and the risks and benefits are described in the Consent Form that I have signed.***

CONSENT TO COMPLETE SURVEY

1. Please indicate if you agree to complete this survey today. (response required)
   - ○ Yes
   - ○ No

2. If you agree to complete the survey please provide us with your full name:

PROGRAM ENROLLEMENT

3. What course were you enrolled in at PGCC?
   - ○ DPR-735 CompTIA Network+
   - ○ INsTEP

4. Did you complete the training?
   - ○ Yes
   - ○ No

TRAINING EXPERIENCE

5. Please indicate how the PGCC's IT training changed your knowledge, skills, abilities, and career direction, using the scale below:

	To a very small extent	To a moderate extent	To a small extent	To a very large extent	To a large extent	Not Applicable (N/A)
The knowledge I gained in the training helped me earn my IT certifications.	❍	❍	❍	❍	❍	❍
This training helped me find a job	❍	❍	❍	❍	❍	❍
The knowledge I gained in this training helped me perform my job	❍	❍	❍	❍	❍	❍
The training helped me go ahead in my career	❍	❍	❍	❍	❍	❍
I want to get more training to further my career and employment in the IT industry	❍	❍	❍	❍	❍	❍

ICF combined responses Very Small with Small extent and Large with Very Large extent

6. Have you taken any other trainings or enrolled on any other educational programs since completing your training with PGCC?
   - ○ Yes
   - ○ No

7. Do you plan to pursue additional education at PGCC or any other institutions?
   - ○ Yes
   - ○ No

CURRENT EMPLOYMENT

8. What is your current employment status?
   - ○ Employed full-time for wages, for yourself or an employer (for 30 hours or more) Employed part-time for wages for yourself or an employer (for less than 30 hours)
   - ○ Unemployed and looking for work
   - ○ Unemployed but not currently looking for work
   - ○ Retired
   - ○ Unable to work

CURRENT EMPLOYMENT Continued

9. What is your current occupation?

10. Which of the following best describes your occupation?
    - ○ Employee of a for-profit company or business or of an individual, for wages, salary, or commission
    - ○ Employee of a not-for-profit, tax-exempt, or charitable organization
    - ○ Local government employee (city, county, etc.)
    - ○ State government employee
    - ○ Federal government employee
    - ○ Self-employed in own not-incorporated business or professional practice
    - ○ Other (please specify):

11. How long have you worked for your employer (in months)?

12. How much do you currently earn?
Hourly wage:
Number of hours worked per week:
Annual salary:

13. Is your current occupation related to the training you received from PGCC?
    - ○ Yes
    - ○ No
    - ○ Other (please specify)

14. Since you completed your training with PGCC, have you done any of the following? (Please select all that apply)
    - ○ Changed jobs and now have different responsibilities
    - ○ Received a promotion at your current job to have different responsibilities
    - ○ Changed positions to have different responsibilities at your current job

15. Since you completed your training with PGCC, have you done any of the following? (Please select all that apply)
    - ○ Changed fields to IT industry
    - ○ Perform different tasks and functions
    - ○ Increased managerial or supervisory responsibilities
    - ○ Other (please specify)

UNEMPLOYMENT CHALLENGES

16. Please indicate on the scale to what extent did any of the following circumstances affected your ability to secure and maintain employment.

	Not Applicable (N/A)	To No Extent	To a Little Extent	To a Moderate Extent	To a Large Extent
Difficult job market (e.g. few job opportunities with livable wages)	❍	❍	❍	❍	❍
Poor health (e.g. physical health, mental health/stress)	❍	❍	❍	❍	❍
Inadequate childcare	❍	❍	❍	❍	❍
Inadequate resources to care for a sick or elder family member	❍	❍	❍	❍	❍
Inadequate housing	❍	❍	❍	❍	❍
Lack of transportation (personal vehicle or no accessible public transportation)	❍	❍	❍	❍	❍
Layoff or employer terminated	❍	❍	❍	❍	❍
Criminal history	❍	❍	❍	❍	❍
Lack of technical skills	❍	❍	❍	❍	❍
Lack of relevant work experience	❍	❍	❍	❍	❍

BENEFITS & ASSISTANCE

17. Were you receiving any of the following benefits when you signed up for this class?
    - ○ Health insurance, including dental and vision through a current or former employer or through a union
    - ○ Health insurance, including dental and vision through a family coverage
    - ○ Health insurance purchased directly from an insurance company
    - ○ Medicare, medical assistance, or any kind of government assistance plan for those with low incomes or disabilities TRICARE or other military health care
    - ○ Indian Health Services
    - ○ Any other type of health insurance or health coverage plan, please specify:

18. Were you collecting any of the following public assistance services when you signed up for this class? (Please select all that apply).
    - ○ Temporary Assistance for Needy Families (TANF)
    - ○ Supplemental Nutrition Assistance Program (SNAP) or Food stamps
    - ○ Workforce Innovation and Opportunity Act (WIOA) services and funding
    - ○ Supplemental Security Income
    - ○ Transportation Assistance
    - ○ Unemployment Insurance
    - ○ Other (please specify):

THANK YOU!

The survey is now complete. Thank you for your participation. Your thoughts and answers will help to improve the PGCC IT training programs. You will receive a $10 gift card for your participation.

Please provide us with either your email address or home address so we may send you the $10 gift card for completing this survey today!

19. Do you agree to be contacted for future surveys? If so, please provide us with your contact information
Home address:

Phone number:

Email address:

Thank you for your time today and for helping us with the PGCC IT program evaluation.

Appendix L: Survey Respondent Data Count Table

Survey Respondent Samples for both INsTEP and the comparison group across all three cohorts

Cohort 1			
	Baseline	**Six month**	**Twelve month**
INSTEP	13	10	9
Comparison	11	4	2
Total	**24**	**14**	**11**
Cohort 2			
	Baseline	6 month	12 month
INSTEP	22	14	7
Comparison	11	3	1
Total	**33**	**17**	**8**
Cohort 3			
	Baseline	6 month	12 month
INSTEP	21	10	4
Comparison	7	0	0
Total	**28**	**10**	**5**

INsTEP Focus Group Participants

Cohort 1	Cohort 2	Cohort 3
13	10	10

Program staff and Instructor interviews

Cohort 1	Cohorts 2 & 3
10	10

Appendix M: Student Focus Group Protocol

Cohort 2 & 3 INsTEP Student Focus Group Protocol

All students participating in focus groups will simply sign consent forms upon arrival to the room – before the focus group starts. No one from PGCC will be at the focus group. Only the students and ICF staff will be at the focus group.

My name is [*introduce self and note-taker*]. We are the part of the INsTEP Evaluation team. I'll be asking you questions and *{note taker name}* is here to take notes on our conversation. To help us with our notes, we would like to record our session today,

- Would the group agree to us recording today's session?

Thank you for agreeing to participate in today's focus group regarding the INsTEP program at PGCC. At the end of the focus group, we will give you the $10 gift card, as indicated in the consent form. A focus group is a discussion that involves us asking you for your opinions about a program. It is almost like an interview except that it happens with a group. The focus group will last one hour. We appreciate you taking time to assist with this evaluation because your input on how this program works is important. This focus group gives us the opportunity to learn from you. We want to hear about whether you think INsTEP works and if so, how it works so we inform PGCC so they can make the program better and also share lessons learned with others around the country who are in workforce development.

Before we begin, we want to remind you that your participation in this focus group is voluntary and the information you share with us will be kept confidential. Specifically, this means that (1) you can decline to answer any questions, or leave at any time; (2) we will not connect your name with what was said any written reports; and (3) only evaluation staff will have access to the interview data. There will be no penalty or repercussions for what you or others share in this focus group. In our report on the evaluation of the INsTEP program we will provide overviews of what was learned during the site visits and will connect anecdotes to other data we have collected. However, we will not report or present the information you share with us in any way that will identify a specific person.

What we discuss today is private. We ask that you don't talk about what was said here today outside of this room. That includes not sharing information about what you said, or what others said.
To help the focus group work, we would like to ask each of you to:

1. During the focus group, use your first names only when necessary
2. Be respectful of other participants and the facilitators. This includes being respectful about not sharing outside of this room without the participant's permission.
3. Fully participate to the best of your abilities by sharing your expertise and experiences with your peers.
4. Ask questions and make suggestions that will help everyone.
5. Turn off cell phones and/or pagers or place them on vibrate.

QUESTIONS

1) What first attracted you to INsTEP training?
   a) How did you learn about INsTEP?
      i) E.g. flyer/ word of mouth/ add

2) What was the recruitment process like?
   a) What did you think about the recruitment steps
      i) application process
      ii) placement test
      iii) essay
      iv) interview
   b) What did you like? What didn't you like? (for each stage)

3) How do you like your training classes?
   a) Are the classes too hard?
      i) Which ones?
   b) Are the classes too easy?
   c) Why or Why not?
      i) What makes these classes valuable to you and getting a job?

4) Do you think the information you are learning in these classes will help you get a job? Which ones do you think are most valuable?
   a) If yes, why?
   b) If no, why not? Are there any other things you should be learning?

5) What types of supports, like childcare or transportation, do you need the most?
   a) What other supports do you think you need?

6) What services/ classes/ resources have you received that have exposed you to the job market or IT field?
   a) Employer partners
   b) TestOut
   c) Technical skill classes (Security+ Network+ etc.)
   d) Soft skills (e.g. customer service)

7) Have you found them to be helpful so far?
      i) Why or why not?
   b) What other job related services might you find helpful?
      i) Why or why not?

8) Overall, have you been satisfied with the INsTEP program thus far?
   a) How do you think it will help you?

9) To what extent the INsTEP program will allow you to be successful in the Cyber Security job market (e.g., helping you get a job, advance your career, etc.)?

Appendix N: Faculty & Staff Interview Protocol

Cohort 2: INsTEP Instructor Interview Protocol

My name is [*introduce self and note-taker*]. We are from ICF International, a team that is evaluating the INsTEP program. The goal of the INsTEP program is develop and strengthen career pathways in the Information Technology (IT) sector. We will be studying how the program is meeting that goal, whether this training program is helping students get jobs and higher pay and the process of implementing the course. I'll be asking you questions and *{note taker name}* is here to take notes on our conversation. To help us take notes today, we would like to record our interview,

- would that be ok with you? (yes or no)

Before we begin, we want to remind you that your participation in this interview is voluntary and the information you share with us will be kept confidential. Specifically, this means that (1) you can decline to answer any questions, or leave at any time; (2) we will not connect your name with what was said any written reports; and (3) only evaluation staff will have access to the interview data. In our report on the evaluation of the INsTEP program we will provide overviews of what was learned during the site visits and will connect anecdotes to other data we have collected. However, we will not report or present the information you share with us in any way that will identify you specifically.

INTERVIEW QUESTIONS

1. Did you teach last semester? (yes or no)
    a. If yes, has anything about your role changed?
    b. If no, tell us about what you do as an Instructor for the INsTEP Program?
        i. How many students do you work with?
        ii. What are your duties? What is your role?
        iii. Can you describe your schedule to us?

2. To what extent prepared to teach your courses this semester?
    a. (if they taught last semester) Do you feel more/less prepared or the same as compared to last semester?
    b. What might help you feel better prepared?

3. Did you see any of the Will to Win assessment results? (Yes or No)
    a. If yes, were they helpful as a predictor of students' strengths and weaknesses?

4. Do you use the TestOut assessment tool? (Yes or No)
    a. If no, do you use any other assessments to monitor student progress? (e.g. quizzes)
    b. If yes, can you describe how you use TestOut?
        i. Do you find that it helps you monitor student learning and progress?

5. How are you feeling about INsTEP right now?
    a. With which areas are you most pleased?
    b. What are your biggest concerns?

6. Knowing what you know now, if you could go back to day one, what should the program do differently?
    a. Is there anything still needs additional attention, or anything missing from the program?

If time, ask these [responses likely to be speculative and anticipatory instead of factual]

7. To what extent have employer partners been involved this semester?
    a. (yes, no, somewhat)

8. Given the changes this semester, to what extent do you feel INsTEP is helping students succeed in their coursework and prepare them for the workforce.
    a. [probe for logical process and suggestive evidence, reservations about the extent to which this will occur]

Appendix O: Program Director Protocol

Cohort 2: INsTEP Program Director Interview Protocol

My name is [*introduce self and note-taker*]. We are from ICF International, a team that is evaluating the INsTEP program. The goal of the INsTEP program is develop and strengthen career pathways in the Information Technology (IT) sector. We will be studying how the program is meeting that goal, whether this training program is helping students get jobs and higher pay and the process of implementing the course. I'll be asking you questions and *{note taker name}* is here to take notes on our conversation. To help us take notes today, we would like to record our interview,

- would that be ok with you? (yes or no)

Before we begin, we want to remind you that your participation in this interview is voluntary and the information you share with us will be kept confidential. Specifically, this means that (1) you can decline to answer any questions, or leave at any time; (2) we will not connect your name with what was said any written reports; and (3) only evaluation staff will have access to the interview data. In our report on the evaluation of the INsTEP program we will provide overviews of what was learned during the site visits and will connect anecdotes to other data we have collected. However, we will not report or present the information you share with us in any way that will identify you specifically.

INTERVIEW QUESTIONS

1. What changes did you incorporate into the second cohort?
    a. Were the changes major, an average amount, or minor?

2. Can you describe the program components for this semester?
    a. Are they still the following:
        i. Employer partners
        ii. TestOut
        iii. Technical skill classes (Security+ Network+ etc.)
        iv. Soft skills (e.g. customer service)

3. Tell me about the process used to monitor the program and make any necessary mid-course corrections?
    a. Tell me about the relationship between INsTEP activities so far and continuous improvement.

4. How are you feeling about the grant right now?
    a. With which areas are you most pleased?
    b. What are your biggest concerns?
        i. [probe each of the responses separately after list is complete]

5. To what extent are you using the Will to Win data with second cohort?
    a. Did it greatly affect the cohort selection?
    b. Did it have a minimal effect on the selection of the second cohort?
        i. Why or why not?

6. To what extent are you using the Test Out data to track student success?
    a. (a lot, somewhat, not at all)
        i. Why?

7. Given the changes this semester, to what extent do you feel INsTEP is helping students succeed in their coursework and prepare them for the workforce?
    a. [probe for logical process and suggestive evidence, reservations about the extent to which this will occur]

8. Are there any other changes you think need to be made to the program?
    a. Are there any areas of the program that need additional attention for the next cohort?

9. What do you think has been a successful aspect of the program during this cohort?
    a. Do you have any success stories to share?

Appendix P: Data Collection Timelines

Implementation Study Data Collection

Program Stage	Data collection actions
Program Development	Collected documents on program design and attended program presentations as follows: • Attended partner kick off meeting, March 27 2014 • Shared initial program logic model that reflected the projected program design and implementation, April 8 2014
Program Implementation	Collected qualitative data from students as follows: • Cohort 1 focus group October 29 2014 • Cohort 1 classroom observation October 29 2014 • Cohort 2 focus group on March 17 • Cohort 3 focus group on April 20 Collected qualitative data from instructors and INsTEP program staff • Interviewed instructors and staff during cohort 1 between October 28 to November 13 • Interviewed faculty and staff during cohorts 2 and 3 between March 18 to May 14

Outcomes/Impact Study Data Collection

Data collection tool	Data gathered	Dates
Baseline survey conducted in person separately with the INsTEP and comparison classes	Demographics, education history, employment and wage history, unemployment challenges, healthcare benefits and public assistance	Cohort 1 - INsTEP: September 2 2014 Cohort 1 - Comparison: September 3 2014 Cohort 2 - INsTEP: January 12, 2015 Cohort 2 - Comparison: February 2, 2015 Cohort 3 - INsTEP: April 17, 2015 Cohort 3 - Comparison: July 9, 2015
Six Month Follow up conducted via web based survey to both INsTEP and Comparison	Program experience, job readiness, employment and wages, unemployment challenges, healthcare benefits and public assistance	Cohort 1: March to April 2015 Cohort 2: November to January 2015 Cohort 3: January to February 2016
Twelve Month Follow up conducted via web based survey to both INsTEP and Comparison	Employment and wages, unemployment challenges, healthcare benefits and public assistance	Cohort 1: January to February 2016 Cohort 2: April to May 2015 Cohort 3: June to July 2015
Program data via file transfer	Credential earnings, Program completion and grades, participant demographics	Cohorts 1, 2, and 3: August 2015