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FINAL EVALUATION REPORT

Summative Evaluation

TAACCCT Round 3

*Prompt Employment through CUSJ's Accelerated
Blended Certificate Programs Project*



October 2013 – October 2017

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Executive Summary

Project summary

The Colegio Univeritario de San Juan (CUSJ) proposed its *Prompt Employment through the CUSJ's Accelerated Blended Certificate Programs* (PEABC) Project after been designated to receive the TAACCCT Round 3 Award on October 2013. The PEABC Project addressed Option 3 for the Single Institution State Designated Grants part of the TAACCCT Grant Program (developing or enhancing innovative technology and multimedia strategies). The PEABC Project Statement of Work (SoW) was approved in April 2014.

Within its proposed activities, it included the development and offering of nine Certificate programs in fields of high labor demand in Puerto Rico and the United State of America. The Certificate offerings would incorporate innovative technology to provide accelerated blended alternatives for displaced workers and other adults. The PEABC Project would allow the CUSJ to increase and update the Institutions previous academic offerings, by adding new nine Certificate programs of short duration in fields of high demand, which included Criminal Justice, Science and Technology, Health Related Sciences and Information Systems. The purpose is to enable accelerated training of a year or less duration, utilizing blended delivery, technology-enabled learning strategies.

A continuous feedback improvement component (with elements taken from the Carnegie Mellon Open Learning Initiative model) would improve the programs' retention and completion rates, and an aggressive and thorough placement component would facilitate prompt employment upon graduation. On August 2014, the first Certificate program developed with TAACCCT Round 3 funds (Surgical Technologist) was offered, and the Placement Office was created.

These strategies would enable participants to obtain stackable and latticed credentials that allow for a seamless transition into the job market.

The Project's objectives were the following:

- **Objective 1:** Develop nine Certificate programs to train displaced workers and others in careers of high employment demand in the health, IT and security industries.

- **Objective 2:** Develop a continuous feedback improvement component (with elements taken from the Carnegie Mellon Open Learning Initiative model) which also includes online technical services for project participants to improve retention and graduation rates.
- **Objective 3:** Develop an aggressive and thorough placement component for this project, including building partnerships with employers in the health, security and other industries consonant with the short career programs to be developed through this project.
- **Objective 4:** Improve existing underused and/or deteriorated physical structures and related infrastructure to enable provision of the blended, online delivery of courses, teleconferencing and technology-enabled learning strategies such as interactive simulations, virtual instruction and others, as necessary to attain this project's objectives.

Its target population included displaced workers and other adults, as well as recent high school graduates. Outreach efforts to attract participants – displaced workers and other adults – encompassed all the geographical area of the archipelago of Puerto Rico. To achieve its goals, the CUSJ contacted potential employers to discuss the manufacturing industries' current and future skills needs. This allowed the institution to create a curriculum that aligns to the current job market to better prepare its students. Also, agreements for internships and practicum for students were also achieved.

Evaluation model and activities

To evaluate project activities, outcomes and impact, a mixed methods approach was used (qualitative and quantitative analyses). The evaluation adopted the CIPP evaluation model developed by Dr. Daniel L Stufflebeam. A logic model was developed to show project inputs, activities, resources, and short, mid and long-term outcomes. Each evaluation question was placed within its corresponding evaluation part of the model.

Enrollment, program retention, and graduation rates were analyzed and compared to the expected outcomes establish in the Project's statement of work. Additionally, an impact analysis on academic achievement was performed, by comparing participants

(students enrolled in eligible academic programs on August 2014 and forward) from different cohorts. This analysis allowed to evaluate modified courses effectiveness in improving approval rates in those courses. Due to project particularities (small population, no control group, inability to perform a randomized controlled trial due to enrollment processes) a non-experimental design was adopted.

Project's and Evaluation Limitations

Within Project Activities, Activity 1 encounter challenges due to the lack of financial aid for five out of the nice Certificate programs developed by the TAACCCT Round 3 Project. This situation limited the certificate programs offering during project implementation. On January 2018, the Certificate programs at the CUSJ finally received notification from the Department of Education of the United States of America for financial aid eligibility. It is expected that, on August 2018, the CUSJ will be able to offer the last five Certificate programs funded with TAACCCT Round 3 Project.

Related to the Project evaluation, the following limitations affected data collection and analyses:

1. Inability to adapt an experimental or quasi experimental design.
2. Small sample size for statistical analyses.
3. Limited partners' involvement.
4. Challenges related to students and graduates' follow-up.
5. Lack of proper activities documentation and availab

Results

The Project's first activity addressed the development and offering of nine Certificate programs to train displaced workers and other adults in careers of high employment demand.

The Certificate programs developed with TAACCCT Round 3 funds were the following:

- Surgical Technologist
- Office Systems with Electronic Medical Billing and Legal Documents

- Gerontology Technician
- Undergraduate Professional Certificate in Forensic Nursing
- Crime Scene Technician
- Criminology
- Criminal Investigation Technician
- Information Systems Networks Technician
- Security Guard

Even though all Certificate programs were developed during PEABC Project operations, many were delayed and only the first four were offered. The other five could not be offer because of lack of financial aid available for students interested in enrolling in those programs. It is expected that those five Certificate Programs will be offer on August 2018.

The second activity included the development of a continuous feedback improvement component to improve retention and graduation rates. During Project implementation, the Educational Platform Administrator created a database for Project participants, and the Educational Coordinator performed students' monthly follow-up. After Project completion, feedback is performed by faculty members, through assessment activities in the educational platforms (*Blackboard, Moodle, CAMS*).

The Activity 3 was to develop a placement component, which included building partnerships with employers from different fields (consonant with the Certificate programs). During Project's operations, a Job Placement Officer was hire and a Placement Office was created. Unfortunately, current budget constrains prevent the CUSJ from institutionalizing the position. For the time been, the Placement Officer is working under a yearly contract, only a few hours a week. There is no sufficient evidence that support this position will be allocated more hours. In this matter, it seems the CUSJ has not been successful in continuing employment efforts for its graduates.

The fourth and last priority addressed by the Project was to improve the CUSJ infrastructure, by improving and updating underused infrastructure and equipping classrooms with technology such as *Smartboard* and computers to enrich the educational experiences. It also allowed for the installation of a much needed second elevator in the main building. This Activity was successfully completed.

Relating to outcomes and impact analysis, the results can be summarized as follow:

Outcomes	Expected	Achieved	Achievement rate
1. Total Unique Participants Served	140	218	155.71%
2. Total Number of Participants Completing a TAACCCT-Funded Program of Study	45	117	260.00%
3. Total Number of Participants Still Retained in Their Program of Study or other TAACCCT-Funded Program	126	159	129.19%
4. Total Number of Participants Completing Credit Hours	126	185	146.83%
5. Total Number of Participants Earning Credentials	45	117	260.00%
6. Total Number of Participants Enrolled in Further Education After TAACCCT-funded Program of Study Completion	10	40	400.00%
7. Total Number of Participants Employed After TAACCCT-funded Program of Study Completion	35	7*	20.00%*
8. Total Number of Participants Retained in Employment After Program of Study Completion	35	7*	20.00%*
9. Total Number of Those Participants Employed at Enrollment Who Received a Wage Increase Post-Enrollment	5	2*	40.00%*

Five out of the nine outcome performance indicators were achieved or excelled (Outcomes 1, 2, 3, 4, 5 and 6). A total of 218 students enrolled in four eligible Certificate programs, between the academic terms of August 2014 and May 2017, most were female (69.27%). No TAA-eligible participant enrolled at the CUSJ during project implementation. Results suggest that strategies implemented for improving retention and graduation rates were successful.

Employment rates could not be validated, because information on employment during certificate enrollment was not available at the time of this report, and proper follow – up could not be performed.

The impact analysis on courses approval rate, related to control groups (traditional courses) vs treatment groups (courses with technology – enable modules) showed that, in most cases, the technology – assisted courses were as effective as traditional courses.

As professors and students get used to adapting the educational practices to include technology, higher retention and approval rates are expected. Most courses showed an approval rate higher than 60.00% (only one course had an approval rate lower than 60.00%).

The CUSJ TAACCCT Round 3 Project was successful in implementing most of its proposed activities. It even exceeded many of its intended activities (number of students served, courses modified, and classrooms equipped). Still, time constrains limited Project outcomes and follow-up activities.

Implications and recommendations for future projects

Projects achievement, as well as challenges, provides an opportunity to consider some implications for future programs, as well as recommendations for program improvement:

- More emphasis in proper activity documentation should be given in all projects. The DoL may provide more assistance in this matter. The DoL website on project activities and evaluation was a great contribution to project success, but additional resources on internal documentation (activities report templates for project implementation and follow-up) could help Project staff to better evidence activities and results.
- The diversity of the served population represents a challenge. TAA eligible prospectus have different needs and priorities than traditional students (recently graduated from high school). Providing more information and additional incentives may motivate eligible older adults to complete academic programs.
- In future programs, it should be considered the possibility of allowing part of Project's funding to be used for scholarships and for work-study opportunities, which could enrich the academic experiences as well as provide real-life work experience on fields related to students' academic programs of choosing.
- Projects that aim to achieve long-term impact should consider awarding grants for more years (at least, for follow-up activities and evaluation).

Introduction

As some manufacturing companies in Puerto Rico have seized operations in the island, many workers have lost their jobs. To improve their opportunities and possibilities for better job placement, the US Department of Labor (US DOL) announced funds under the Trade Adjustment Assistance Community College Career Training (TAACCCT) grant. TAACCCT grants were available to community colleges and consortiums willing to create or adapt their academic offer to provide formal education formation to laid-off employees and those at risk of losing their jobs because of their companies leaving U.S. Territory to relocate in other countries.

The Colegio Universitario de San Juan (CUSJ), as the only public, mostly associate degree granting institution of higher education in Puerto Rico, took on the task of developing and adapting its academic offering to better assist the TAA eligible population in Puerto Rico.

The Prompt Employment through the CUSJ's Accelerated Blended Certificate Programs: A TAACCCT Round 3 Project for displaced workers and other adults focuses on Option 3 for the Technological Enhancements that Support Program Acceleration. Through TAACCCT Round 2 funding, the CUSJ, for the first time in its history, was able to develop the capacity to offer a blended program using appropriate technology infrastructure to provide courses with online technological assistance that accelerate participant's completion of requirements for graduation and credential attainment. The current Round 3 project helped expand the CUSJ academic offerings by developing nine certificate programs of one year or less duration in the fields of Criminal Justice, Science and Technology Health Related Science and Information Systems. The PEABC Project

would enable accelerated training programs, using blended delivery and technology-enabled learning strategies. Outreach efforts to attract participants – displaced workers and other adults – encompass all the geographical area of the archipelago of Puerto Rico. The program would work toward high retention and graduation rates among participants and high employment rates after program completion.

Improving existing infrastructure and creating new academic offerings were not the only strategies adopted by PEABC Project to improve the educational and professional experiences of students. The CUSJ also used the PEABC Project to create a Placement Office (within the newly renovated offices by TAACCCT Round 2 Project), to provide assistance in employment efforts and to achieve high employment rates after program completion.

All those circumstances required the project to include a comprehensive and rigorous evaluation approach that would evaluate:

- (a) The implementation of the project (What actions and activities were proposed? Which were performed? Which not, and why?)
- (b) The proper use of project resources.
- (c) The achievement of the project goals on retention and completion rates, and employment and wages increase.
- (d) The project's impact on the CUSJ capacity building.

This Evaluation focused on providing evidence of change and impact of the project (summative evaluation). The summative evaluation provides proof of the extent to which mid and long-term outcomes have been obtained, including lasting impact on participants and the institution's capacity to continue providing access, retention and graduation to

displaced workers and other adults to accelerated, blended, quality education that results in stackable and latticed credentials in the students' chosen career paths.

Evaluation questions

The formative evaluations conducted addressed the following research questions:

- F1. How was the particular curriculum selected, used, and / or created?
- F2. Was an in-depth assessment of participants' abilities, skills, and interests conducted to select participants into the grant program?
- (a) What assessment tools and processes were used?
 - (b) Who conducted the assessment?
 - (c) How were the assessment results used?
 - (d) Were the assessment results useful in determining the appropriate program and course sequence for participants?
 - (e) Was career guidance provided, and if so, through what methods?
- F3. 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:
- Program design
 - Curriculum development
 - Recruitment
 - Training
 - Placement
 - Program management
 - Leveraging resources
 - Commitment to program sustainability
- (a) What factors contributed to partners' involvement or lack of involvement in the program?

(b) Which contributions from partners were most critical to the success of the grant program?

(c) Which contributions from partners had less of an impact?

F4. How were the programs and programs designs improved or expanded using grant funds?

(b) What delivery methods were offered?

(c) What was the program administrative structure?

(d) What support services and other services were offered?

Research questions for the summative evaluation aimed to provide supporting evidence of change in participants and impact both on participants after graduation and in the institution's capacity building that enables the CUSJ to continue, beyond project completion, increasing the number of displaced workers and other adults whose lives are transformed through education and credential attainment in career paths that are stackable and latticed. These questions are:

S1. Were the nine proposed Certificate programs ready by the expected date?

S2. Was the intended audience served?

(a) How many participants were TAA eligible?

(b) How many were displaced workers?

S3. How effective was the project in achieving its goals in terms of the total number of participants (headcount) who...?

- ...were served?
- ...completed any number of credit hours?
- ...graduated / obtained at least one credential?

- ...continued their education to a higher or complimentary level?
- ...obtained additional credentials after graduation?
- ...were employed within three months after graduation?
- ...retained their employment four to nine months after graduation?
- ...were promoted or received a wage increase?

S4. What partnerships were created that will benefit future participants?

- a. What did partners considered to be their contributions to project success?

S5. What is the impact of the project in the institution's capacity to improve and expand its academic offering through continued partnerships with businesses and industries beyond project completion?

S6. What is the impact of the project in the institution's capacity beyond project completion to increase the number of Hispanic displaced workers, underemployed workers or other adults and young adults in obtaining stackable and latticed credentials in areas of high demand in the world of employment?

Evaluation Methods

A mixed-methods approach was used to assess the project's implementation and outcomes. With mixed-methods, qualitative and quantitative data are blended to analyze both outcomes and process. According to Stufflebeam (2001), mixed-methods studies result in greater validity, generalizability, and usefulness than qualitative or quantitative methods alone (in Ruhe and Zumbo, 2009, p. 30).

For the implementation analysis (formative evaluation), document and educational materials reviews, interviews with project's staff, and focus groups with participants was performed. This allowed assessing what was accomplished, when it was accomplished,

what needed to be done or improved, and how those activities or process would contribute to achieve the Project's goals. For example, results of staff's monitoring of student involvement to quickly identify potential at risk students (retention) was compared with actual course withdrawal or failure as part of the evaluation process to ascertain if changes needed to be made to courses design or project's processes.

The summative evaluation (outcomes and impact) methodology concentrates on the comparison between the expected and the actual projects results of the outcomes variables established by TAACCCT for the project. Also, it focuses on providing evidence of the causal relationship between project's activities and goal's attainment. Further details will be addressed in the respective implementation and outcomes sections of this document.

Evaluation Model

The third-party evaluator used a Management-oriented (decision-oriented) Evaluation approach. It provides project managers and stakeholders with the information needed for good decision making, and focuses on diverse aspects for a program, such as inputs, processes, and outputs (Fitzpatrick, Sanders and Worthen, 2004). The evaluation model used was the *Context – Input – Process – Product* (CIPP) developed by Dr. Daniel Stufflebeam. This model provides a framework to serve managers and administrators in four aspects for a project's decision-making. It is consistent with a wide range of program evaluations, including educational settings, such as school improvement, professional development schools, and transition to work, training and personnel development) and technology (Stufflebeam, 2007).

Each letter of the acronym represents an evaluation type, as follow:

1. *Context Evaluation* assesses needs, assets, and problems within a defined environment.
2. *Input Evaluation* assesses competing strategies and the work plans and budgets of the selected approach.
3. *Process Evaluation* monitor, document, and assess program activities.
4. *Product Evaluation* determines whether the goals were met, and to what degree. It is sub-divided into:
 - *Impact Evaluation* assesses a program's reach to the target audience.
 - *Effectiveness Evaluation*, which documents and assesses the quality and significance of outcomes.
 - *Sustainability Evaluation*, which assesses the extent to which a program's contributions are institutionalized successfully and continued over time.
 - *Transportability Evaluation*, which assesses the extent to which a program has (or could be) successfully adapted and applied elsewhere. (This component was not used, as it is optional and dependent to program's objectives and goals).

Intervention

The Prompt Employment through CUSJ's Accelerated Blended Certificate Programs objective is to serve the educational and training needs of TAA-eligible workers in Puerto Rico. In order to achieve it, the PEABC Project stated that it would implement four activities:

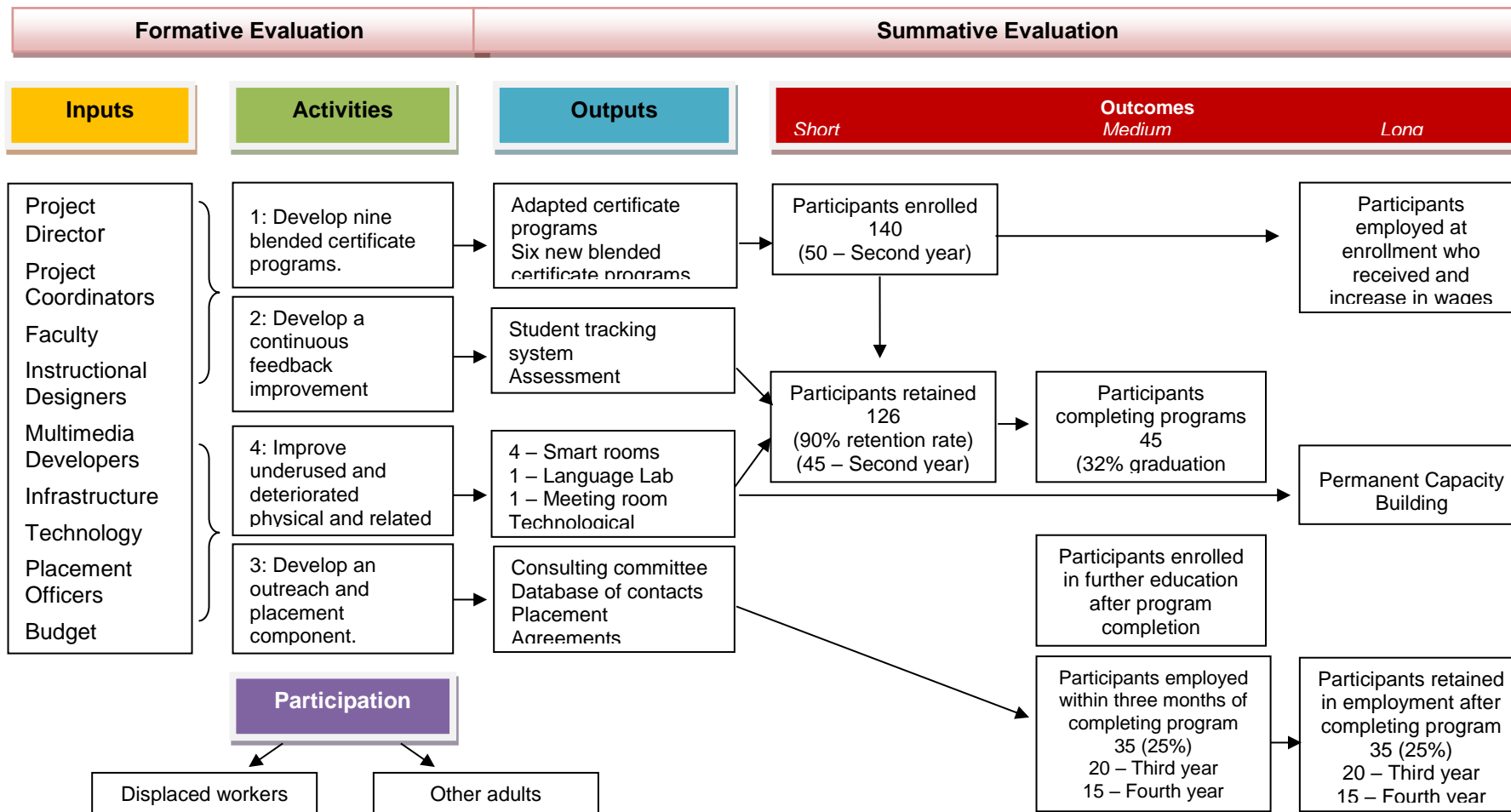
Activity 1	Develop nine Certificate programs to train or retrain TAA-eligible displaced workers and others in careers of high employment demand in health, IT and security industries.
Activity 2	Develop a continuous feedback improvement component (with elements taken from the Carnegie Mellon Open Learning Initiative model) which also includes online technical services for project participants to improve retention and graduation rates.
Activity 3	Develop an aggressive and thorough placement component for this project, including building partnerships with employers in the health, security and other industries consonant with the short career programs to be develop through this project.
Activity 4	Improve existing underused and/or deteriorated physical structures and related infrastructure to enable provision of the blended, online delivery of courses, teleconferencing and technology-enabled learning strategies such as interactive simulations, virtual instruction and others, as necessary to attain this project's objectives.

All project activities were designed around the following assumptions:

Assumption	Intervention
Participants in this project are presumed to bring a wide variety of educational, technological and employment backgrounds.	<ul style="list-style-type: none"> • Challenge courses and credit for previous education can accelerate even more program completion. • Courses with embedded application and self-assessment activities allow students to put concepts into practice and develop learning metacognitive skills. • Courses will be designed so students can search and review topics as much as they need.
Participants have a broad range of age distribution and come from many parts of the Puerto Rican archipelago	<ul style="list-style-type: none"> • Blended modality will provide both face to face interactions and online flexibility. • Outreach will include all geographical areas of Puerto Rico.
Displaced workers have financial responsibilities which make quick re-employment and advancement priorities.	<ul style="list-style-type: none"> • An aggressive and thorough placement component will facilitate prompt employment upon graduation. • All Certificate programs will be designed to be in parenting with Associate and Bachelor's Degree programs, thus they include courses that can be credited for courses at the associate degree academic programs at CUSJ or at other accredited universities.
Retention and graduation rates improve when obstacles are quickly identified and dealt with.	<ul style="list-style-type: none"> • Weekly monitoring of student engagement in the course will be part of the ongoing assessment of progress, both for students and the project.

In order to illustrate the project's input, priorities, outputs and outcomes, their relationships and evaluation moments, a Logic Model was developed.

Logic Model



- Assumptions:**
- Participants bring a wide variety of educational, technological and employment backgrounds.
 - Participants have a broad range of age distribution and come from many parts of the Puerto Rican archipelago.
 - Displaced workers have financial responsibilities which make quick re-employment and advancement priorities.
 - Retention and graduation rates improve when obstacles are quickly identified and dealt with.

- External Factors:**
- Employment projections
 - Economic crisis
 - Licensing and Programs Accreditation

Implementation Research Questions and Analysis Design

All activities and processes were compared to the ones proposed in the Project's Logic Model. All data (document reviews, interviews with key personnel, timelines, purchase orders, etc.) was analyzed to determine to what extent each priority was addressed as intended, which was/were not, and why, and what other courses of action were taken to improve the project's implementation. Implementation findings were used to continuously update stakeholders and to improve program.

Context Evaluation

Data Source	Evaluation Methods
<i>F1. How was the particular curriculum selected, used, and / or created?</i>	
<ul style="list-style-type: none"> Interview faculty, Academic Program Director, Coordinators, Partners (if involved) 	<ul style="list-style-type: none"> Evidence of curriculum selection through interview with professors, Departmental Curriculum Committee reports, CUSJ program curriculum analysis, analysis of evidence of partnerships involvement.
<i>F2. Was an in-depth assessment of participants' abilities, skills, and interests conducted to select participants into the grant program?</i>	
<ul style="list-style-type: none"> <i>a. What assessment tools and processes were used?</i> <i>b. Who conducted the assessment?</i> <i>c. How were the assessment results used?</i> <i>d. Were the assessment results useful in determining the appropriate program and course sequence for participants?</i> <i>e. Was career guidance provided, and if so, through what methods?</i> 	
<ul style="list-style-type: none"> Review Assessment results in participants' files to ascertain criteria used to select participants into the grant program through initial interview with Project personnel, and evidence of: (a) assessment tools and processes used, (b) coordination with TAA, (c) rubrics, guided interviews, (d) signature of authorized TAA and TAACCCT project staff, (e) meeting minutes, (f) career guidance provided, (e) data used for recruitment purposes, etc. 	<ul style="list-style-type: none"> Interviews with TAA and Project staff. Document analysis, including recruitment documents, participant files, enrollment documents, and others.

Input Evaluation

Data Source	Evaluation Methods
<p><i>F3. 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:</i></p> <ul style="list-style-type: none"> • <i>Program design</i> • <i>Curriculum development</i> • <i>Recruitment</i> • <i>Training</i> • <i>Placement</i> • <i>Program management</i> • <i>Leveraging resources</i> • <i>Commitment to program sustainability</i> <ul style="list-style-type: none"> a. <i>What factors contributed to partners' involvement or lack of involvement in the program?</i> b. <i>Which contributions from partners were most critical to the success of the grant program?</i> c. <i>Which contributions from partners had less of an impact?</i> 	
<ul style="list-style-type: none"> • Evidence of contributions made by various partners, as applicable, in terms of program design, curriculum development, recruitment, training, placement, program management, leveraging of resources and commitment to the program sustainability through TAACCCT Consulting Committee minutes, programs revisions, embedded assessment data, graduating student profile revisions, employer and student internships evaluation results, employer surveys and others. 	<ul style="list-style-type: none"> • Student and employer evaluation of their respective experience in the Program internship • Document review of signed agreements • Analysis of student reflexive diaries, forum entries, peer and self-evaluation results, discussion boards, blogs wikis, journals and any such entries as established in the Program's courses • Follow-up to employers of employed project graduates • Evidence of enrollment at the next higher educational level at CUSJ or other according to results of the Graduate Student Exit Interview with the Placement Officer • Surveys on partners on their experience with the project

Process Evaluation

Data Source	Evaluation Methods
<p><i>F4. How was the program design improved or expanded using grant funds?</i> <i>a. What delivery methods were offered?</i> <i>b. What was the program administrative structure?</i> <i>c. What support services and other services were offered?</i></p>	
<ul style="list-style-type: none"> • Prior Departments' Academic offerings and current offerings with the project Certificate programs • Prior and current methods of delivery, administrative structure, and support services and other services provided. 	<ul style="list-style-type: none"> • Document analysis of official academic documents, CUSJ website, CUSJ Catalog, course syllabi and others to compare Academic Programs offered before and after the project (overall enrollment, previous curricular structure, curricular sequences, delivery strategies used, etc.)

Limitations

Any evaluation, as a process inserted within a constricted context – influenced by internal and external factors – may encounter numerous and diverse challenges that could interfere with the evaluation plan proposed. As with research, the methodology proposed is based on the expected circumstances and known variables and must identify limitations that the given methodology presents to results, conclusions and interpretation.

Some of the limitations were:

6. Inability to adapt an experimental or quasi experimental design:

- Causality relationships are limited since the Project could not perform a random assignment for students to control and experimental groups. Every student who enrolled in any eligible academic program received the same services and treatment as any TAA eligible participant.
- Inability to control or moderate external variables that prevented eligible TAA participants to enroll in the Certificate programs (disposition, motivation, distance, personal circumstances, etc.).
- Diversity in the participants' profile (TAA eligible participants not necessarily have the same experiences and background than other participants, especially participants who are not TAA eligible) which limited the possibility of matching, needed for a quasi-experimental approach.

7. Small sample size:

- The CUSJ's current capacity limits the number of participants that can enroll at the Institution. Each cohort enrolled in any eligible academic program had a small

size, for some programs as small as less than 10 students enrolled in each academic term.

- Evaluation results cannot be generalized to other populations or educational settings.

8. Limited partners' involvement:

- Most people who constitute the different Institutional and Project Committees perform many tasks that limited their availability for meetings.

9. Challenges related to students and graduates' follow-up:

- The impact of two hurricanes during 2017 affected all Puerto Rican habitants. These situations affected all educational institutions, causing many students withdrawal from college. Many others, relocated to other states and territories. Telecommunications were interrupted, landlines, wireless phones and Internet services became unstable, and postal services were delayed. Contacting students, both active and graduates was difficult.
- The institution is unable to control external factors that may prevent contact efforts with participants once they leave or complete their certificate programs (E.g. changes in phone numbers, postal and email addresses). Even though many efforts using different communication means were made, student participation in follow – up surveys were limited (only 17 participants completed the questionnaires – 7.80% participation rate).

10. Evidence availability:

- TAACCCT Round 3 Project staff and Director worked hard for project implementation, but little information was documented in forms of memorandum,

minutes, agreements, agendas, working plans, which made difficult data collection and analysis.

- Official data was provided by the Project Coordinator (through monthly reports) and by the IT Administrator.
- Most of the information used on this evaluation report was collected through informal conversations with project staff and CUSJ personnel.

Findings

Context Evaluation

F1. How was the particular curriculum selected, used, and / or created?

As explained by CUSJ and TAACCCT Round 3 personnel, an analysis on employment opportunities in the fields of Health, Security and Justice, Information Technology, and Office Systems was made. Documents, such as *Projections for Fields and Occupations* by the Department of Labor and Human Resources of Puerto Rico, were analyzed by CUSJ staff, to better address qualifications expected by employers on those fields. Consulting Committees were established, made up by Faculty and Professionals in the fields of Health, Information Technology, Security.

Recommendations made by employers, in consultation with the Committee and faculty members who teach Science and Technology, Office Systems, Health and other courses at CUSJ, provided information on the competencies to be achieved by students in each of the nine Certificate programs, and contributed to develop an updated curriculum all Certificates.

F2. Was an in-depth assessment of participants' abilities, skills, and interests conducted to select participants into the grant program?

As a Higher Education Institution, the CUSJ has an enrollment process that applies to all potential students. Participants are selected based on their enrollment application. All the students who enrolled in the funded Certificate programs (Surgical Technologist, Office Systems with Electronic Medical Billing, Gerontology, and Forensic Nursing) on

August 2014 until May 2017. No in-depth assessment of participants' abilities, skills, and interests were conducted to select participants into the grant programs.

a. What assessment tools and processes were used?

No assessment tools or processes were used to assess participants' abilities, skills, and interests. Nonetheless, all students must complete the enrollment process (available at <http://www.cunisanjuan.edu/>):

For first year students:

1. Complete the enrollment form.
2. Pay the admission fee (\$15.00).
3. Complete a medical form.
4. Provide evidence of vaccination (Form P – Vac 3) (for students with 21 or less years old).
5. Provide an official high school credits transcript (or GED evidence) with a GPA of, at least, 2.00,
6. Provide the *College Entrance Exam Bureau* (CEEB) test results (for students 21 or less years old).
7. Provide a copy of the birth certificate.

For transfer students:

1. Complete the enrollment form.
2. Pay the admission fee (\$25.00).

3. Complete a medical form.
4. Provide evidence of vaccination (Form P – Vac 3) (for students with 21 years old or less).
5. Provide an official credit transcript from the preceding Higher Education Institution (HEI) with 12 or more credits approved.
6. Provide a copy of the birth certificate.

To be accepted into the CUSJ, students must comply with all documentation within the established deadline. Documents are reviewed by the Registrar's Office and admittance is granted.

b. Who conducted the assessment?

All student admittance into de CUSJ is performed by the Registrar's Office. After the review of student documentation (Enrollment application, High school transcript, *College Entrance Exam Bureau* (CEEB) test results), student is contacted to be informed of his/her enrollment status. Afterwards, the student must enroll in the corresponding courses, based on his/her chosen academic program.

c. How were the assessment results used?

The only assessment performed by CUSJ to select participants is the enrollment process. If a student complies with all requirements (documentations, deadlines, etc.) he/she is accepted into the academic program of his/her choosing. There is no conditional admittance to any of the participating academic programs.

d. Were the assessment results useful in determining the appropriate program and course sequence for participants?

Course sequence is established by the curricular sequence, which determines the appropriate course sequence based on the academic program selected by the student (in case of this Project, the following Certificate programs: Surgical Technologist, Office Systems with Electronic Medical Billing, Gerontology, and Forensic Nursing). For transfer students, a transcript from the preceding Higher Education Institution (HEI) is requested and evaluated to determine courses validation.

e. Was career guidance provided, and if so, through what methods?

The Department Directors oversees the academic counseling. Each Director coordinates with the faculty members the orientation to be given to each student. It is a voluntary process for students. The process includes:

1. Students are assigned to a professor. Student lists are announced, and the available schedule of each professor is informed to the student community.
2. Students who are interested in academic counseling visit his/her assigned counselor (professor).
3. The professor reviews the student academic transcript and evaluates his/her academic achievement, in accordance to the Institutional academic progress norm and the student's academic program.
4. The professor recommends courses based on the student's academic program and professional interests. The student selects the courses he/she wished to take on the next academic term.

Input Evaluation

F3. 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:

- ***Program design***

- The CUSJ personnel were responsible of the TAACCCT Round 3 program design and implementation. The following staff positions were hired to run the TAACCCT Round 3 Project:

- Project Director
- Academic Coordinator
- Placement Officer
- Two Instructional Designers
- Blackboard platform Administrator
- Three Multimedia Developers

- Courses were created by professors from the CUSJ, while instructional modules were developed by contracted personnel (29 professors for the corresponding fields). When appropriate, current faculty members from the CUSJ developed the instructional modules to be incorporated into the online educational materials available through the Blackboard / CAMS / or Moodle platforms. For new courses, additional personnel was hired when needed (professionals with credentials and experience in the different fields, as appropriate).

- **Curriculum development**

- The curricula for the certificate programs were developed through the Continuing Education Department, which works under the supervision of the CUSJ Dean of Academic Affairs Office, in conjunction with CUSJ faculty members, and collaboration from each certificate programs Consulting Committee. CUSJ faculty members developed the curricular maps for all certificate programs to ensure the appropriate course alignment.
- The Consulting Committee played an important role in identifying the professional competencies needed in all nine certificate programs, to make sure all certificate programs work towards preparing capable professionals with better employment possibilities and opportunities.

- **Recruitment**

- The CUSJ announces its academic offerings through different means:
 - Social media (*Facebook, Instagram*)
 - Institutional webpage (www.cunisanjuan.edu)
 - San Juan City newspapers
 - Open houses
 - College days at different high schools
 - Email messaging to potential candidates
 - Job fairs
 - Intramural tournaments for high school students
 - Visitation of prospected
 - Flyer distribution at different events

- The Local US Department of Labor's Trade Adjustment Assistance collaborated with the CUSJ with participant recruitment by:
 - Providing lists of potential TAA participants to the CUSJ, which allows the institution to contact, through phone calls, emails, and letters, during years 2013 - 2015.
 - Inviting the CUSJ to participate in job fairs offered in different municipalities (Aguadilla – West, Aibonito – Center, Luquillo and Las Piedras - East) during year 2014.
 - Providing opportunities to the CUSJ to provide orientations to TAA eligible participants.
- **Training**
 - Faculty training was provided by the CUSJ and by the Polytechnic University of Puerto Rico (PUPR)

Title	Date	Place where the training took place
Smartboards	8/11/2014	Colegio Universitario de San Juan
Smartboards	8/13/2014	Colegio Universitario de San Juan
Smartboards	8/14/2014	Colegio Universitario de San Juan
Smartboards	8/23/2014	Colegio Universitario de San Juan
How to create educational modules	11/6/2014	Colegio Universitario de San Juan
Blackboard	11/9/2015	Colegio Universitario de San Juan
Blackboard I	12/1/2016	Colegio Universitario de San Juan

- As part of the Certificate programs curricula, students in the Health field (Undergraduate Forensic Nursing and Surgical Technologist) must enroll in a practice experience. The companies that provided those experiences are included in the following table.

Companies and agencies	Terms in which the practice was completed
San Juan City Hospital	FA-15
Puerto Rico Medical Center at Río Piedras	WI-16, WI-17, and WI-18
Doctor's Hospital at Santurce	WI-16 and WI-17

- **Job Placement**

- The Job Placement Officer hired as part of the CUSJ TAACCCT Round 3 staff provided services to Certificate programs students and to students from other academic programs. Among the services provided were: to identify potential employers, help prepare resumes, and provide assistance in job search.

- **Program management**

- The Polytechnic University of Puerto Rico (PUPR) invited the TAACCCT Round 3 Project staff (Project Director, Academic Coordinator, Faculty members) to different trainings, which provided the CUSJ staff with educational tools to better serve TAACCCT Round 3 students.
- The Municipality of San Juan (MSJ) provided assistance with budget management and purchases.

- ***Leveraging resources***

- The Municipality of San Juan (MSJ) managed the financial component of the TAACCCT Round 3 Project, and contributed by maintaining the financial records, purchase orders, payment history and budget. Personnel from the MSJ prepared the quarterly financial reports for the TAACCCT Round 3 Project.
- The Polytechnic University of Puerto Rico (PUPR) provided training to the CUSJ Faculty on the use of *Blackboard*, Smartboards, and other technology to improve the educational experience at the CUSJ.

- ***Commitment to program sustainability***

- a. What factors contributed to partners' involvement or lack of involvement in the program?***

Proper written agreements (memoranda, meeting agendas, follow-up emails) were needed for accountability. Documentation was not readily available and information on project achievements and challenges were not properly communicated to the educational community nor the partners. This situation contributed to a lesser involvement on part of partners.

- b. Which contributions from partners were most critical to the success of the grant program?***

The PUPR long-term commitment with the CUSJ was important for project success. Their contributions in curriculum revision, credit transfers

and personnel training were important for proper project development and implementation.

c. Which contributions from partners had less of an impact?

Local TAA office collaboration for TAA eligible participants had the least impact in project success due to the low enrollment rate of TAA eligible participants at the CUSJ. Even though the TAA provided contact information on TAA eligible industries and organized many job fairs and orientations in which the CUSJ participates, those efforts were ineffective.

Process Evaluation

F4. How was the program designed, improved or expanded using grant funds?

The CUSJ used the TAACCCT Round 3 Grant to improve its infrastructure (improve existing and underused classrooms, install a second elevator to the main building, to develop four Certificate programs, to develop online educational modules of its existing academic offering (general courses), and to improve the educational experience of all students at the CUSJ. Also, provided much needed training on technology and educational strategies for faculty members and project personnel.

a. What delivery methods were offered?

Courses were offered with technological assistance, initially using *Blackboard*, later with *CAMS* and *Moodle*. Complementary and Supplementary materials were included in the platform. Seven courses were developed for accelerated delivery (8 weeks sessions). Some courses were offered in a mixed methods approach, where

students took classes on campus with one professor. Later, students would log in into the Blackboard / CAMS platform and complete complementary materials assigned by a collaborating professor. Student comments on different aspects of the project are included.

Comments on how students feel courses with technology assistance enriched their educational experience at the CUSJ

“Gracias a la asistencia del Moodle, los documentos de la clase fueron encontrado fácilmente.”

“Sí, fue para mí fue una experiencia maravillosa. Podía estudiar hasta de mi celular. Me encantó ese sistema de Blackboard. Las maestras excelentes. Me ayudó esta certificación a crecer profesionalmente y a mi ascenso en mi trabajo. Estoy agradecida por haber participado de este curso.”

“Moodle fue muy eficiente ya que al momento de entregar trabajos comunicarnos con los profesores era simple utilizar esta herramienta.”

“Sí es una buena herramienta, así se está preparado para trabajos educativos en el futuro”

“Sí, hoy día todo es más tecnológico y eso ayuda a entender mejor estas plataformas.”

“Excelente.”

“Sí, son excelentes.”

“Sí.”

“Es más fácil de hacer las tareas y trabajos”

“Deben incluir la práctica y que los créditos cuenten como 3 para poder continuar con el grado asociado en lo mismo”

“No se utiliza.”

“No.”

“Fue una excelente experiencia! Me Encantó! Gracias!”

“Todo estuvo excelente, excepto, No tuve progreso académico de los profesores X y Y.”

“Sí, ya anteriormente había usado Blackboard en la universidad anterior que asistía.”

“Sí.”

“Sí.”

Most students indicated that courses with technology assistance did enriched their academic experience (14 – 82.35%).

What students liked the most from the TAACCCT Round 3 eligible programs

“El como nosotros podemos cambiar vidas.”

“Haber aprendido sobre cómo tratar en lo que se refiere a salud con el envejeciente.”

“La clase de facturación médica.”

“La práctica y los maestros.”

“Las profesoras.”

“Lo más que me gustó fue, los profesores excelentes que tenía además del compañerismo y Gracias al personal administrativo. Es un curso excelente por demás.”

“Solo la clase de algunos profesores.”

“La práctica.”

“Maestros excelentes.”

“El trato & Las enseñanzas de los Profesores!”

“La práctica clínica, en las teorías tienen que buscar profesores calificados en la materia.”

“Me gustó todo, en especial mi práctica de técnica quirúrgica.”

“Lo que estudié muy interesante.”

“Los laboratorios.”

Some participants highlighted their practice experience as what they liked the most of their programs. Others liked the most the faculty and the Certificate programs courses content.

What students disliked from the TAACCCT Round 3 eligible programs

“No he tenido problema.”

“No tengo ninguna queja.”

“Que había que estar todos los días en la universidad. No me gusto que una de las profesoras diera tareas el sábado o el domingo (a través de Whatsapp) para entregar en la semana, ya que entiendo que si no dio la tarea de lunes - viernes fue su responsabilidad y debería coordinar tareas sólo en días de clases.”

“Es muy rápido la práctica de este certificado.”

“Nada.”

“Poco tiempo de práctica.”

“La falta de laboratorio en la universidad.”

“Que no brindaron práctica.”

“En específico, una profesora que no ayuda al estudiante. Pueden verificar las bajas calificaciones de esa profesora. Cuando hay tantas malas calificaciones creo que el problema no es el estudiante por eso no pude completar el curso.”

“Que fui el primer grupo que inaguró el certificado y no teníamos laboratorio, ni instrumentos, etc. Yo no me siento preparada con lo que recibí para ejercer la profesión.”

“Me gusto todo.”

“Cuando fuimos a hacer una simulación de uno de los casos la profesora X no explicó bien las instrucciones y los únicos 4 estudiantes que quedamos en el curso estábamos bien perdidos. Ella no aceptó que había fallado en ese detalle adicional, nunca nos dio el progreso académico, nunca.”

“Nada, todo me gusto.”

“Al final no fueron buenos facilitadores.”

“Algunos profesores.”

Five of the participants stated that they liked everything about their programs. Some students disliked the amount of time for the practice (they felt more hours were needed). Others disliked some faculty members, which they felt were not good facilitators. Two students highlighted that, since they were part of the first cohort, the laboratories were not available, which represented a disadvantage for this group.

Services that the CUSJ could offered to improve its academic programs

“No hay problema.”

“Para mí todos estaba excelente.”

“Ofrecería cursos que no fueran presenciales en su totalidad. Es decir, lunes, miércoles y viernes fueran presenciales y martes y jueves online, o sea entrega de trabajos del día anterior.”

“Un poco más de tiempo en el área de práctica.”

“Dar más práctica en la práctica de facturación.”

“Reconocer mejor a los profesores y brindar más oportunidad de práctica, de lo demás excelente.”

“Algunos cambios de profesores.”

“Ser más organizado.”

“Si uno desea continuar le cuente los créditos para el asociado.”

“Ninguno en específico.”

“Hacer el laboratorio, pero tengo entendido que ya está completado. Pero antes de abrir el curso debieron tener todo preparado. Los estudiantes que están ahora obviamente se preparan mejor que los que empezaron.”

“Que hayan más prácticas en los cursos. Que no todo sea teoría.”

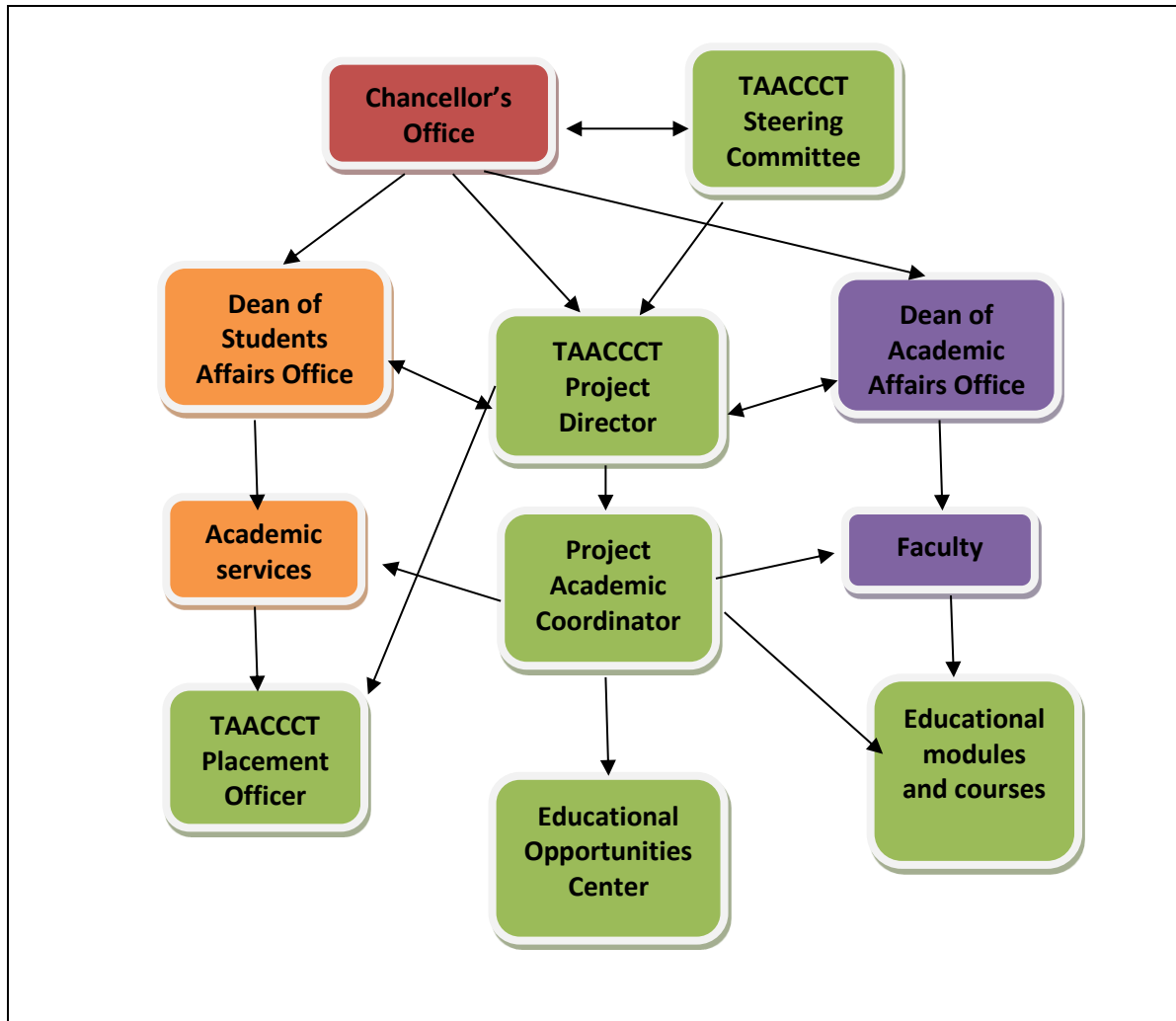
“Mucha más coordinación.”

“Evaluar a los profesores, no es normal que casi todo el estudiantado fracasé en la misma clase. Creo que deberían evaluar a esos profesores.”

Among the services participants recommend should be made available by the CUSJ to improve its academic programs, one mentioned to provided courses with more online time (hybrids) which would allow students to complete part of their academic load without having to visit the institution every day.

b. What was the program administrative structure?

The TAACCCT Round 3 Project adopted the administrative structure used by the Continuing Education at the CUSJ. The following organizational chart shows project personnel, and how the project was inserted within the CUSJ administrative structure.



c. What support services and other services were offered?

Among the support services provided by the TAACCCT Round 3 Project were:

Technology assistance

Trainings on how to use the *Blackboard Platform* were given to students, and students who needed additional assistance would attend the *Educational Opportunities Center* (EOC) to receive the service.

Job fair

In October 2015, TAACCCT Round 3 Project Job Placement Coordinator, in collaboration with the TAACCCT Round 2 Academic Coordinator organized a job fair in which the following companies and agencies participated. A total of 505 participants assisted to the event.

Companies and agencies	Employment fields
All ways 99	Administration / Sales
AON	Administration
Clasificados Online	All fields
Connect Road Assist	Administration
CTS (Caribbean Temporary Services)	All fields
Encantos Corp.	Sales / Administration
Hospital Doctor's Center (Bayamón)	Health
Open Mobile	Sales / Administration
Pepsi Co.	Administration
Solaris Energy Solution	Engineering
WIA	Administration and Sales

During years 2016 and 2017, the following companies were contacted by the Job Placement Officer to coordinate interviews for eligible students.

2016

Agencia de Viajes CARELY	Hospitales Hima San Pablo
Ambiente Moderno	Inside Communications Corp.
Clasificados El Nuevo Día (MONSTER)	La Aldea Elderly Home
Centro Neurodiagnóstico	Lexmark Int. Inc.
Clasificados online	Like Family
Cold Stone Viejo San Juan	Plan Médico HUMANA
CTS (Caribbean Temporary Services)	PSS Pathfinders, Inc
Cupey Hospital & Nursing Home	Puerto Rico Nurse Head Hunter
Departamento de Corrección	Sea World PR
Departamento de Hacienda	Synergy Holding Corp. Ice Media PR.
Doctor's Hospital - Santurce	Telecontacto
Dwight Rodríguez Acevedo	To Go Store
Helvetia	Tripletón
HOARE	Uniformes y Zapatos
Hospital Municipal San Juan	www.buscojobs.com.pr/
Hospital Pediátrico	

2017

AG Group	Hospital del Niño
Ashford Hospital	Metro Pavia Arecibo
Base Muñíz	Metro Pavia Clinic
Clasificados online	Mofonguería
Cuidadores Sra. Rosario	Qipro
Esperanza para la vejez	

Product Evaluation

To what degree did the program achieve its stated short, mid, and long-term outcomes?

The CUSJ TAACCCT Round 3 established nine short, mid, and long-term outcomes. Each one, with its corresponding achievement rate is presented in the following table:

Outcomes	Indicators	Expected	Achieved	Achievement rate
1.Total Unique Participants Served	Cumulative total number of individuals entering any of the grant-funded programs offered	140	218	155.71%
2.Total Number of Participants Completing a TAACCCT-Funded Program of Study	Number of unique participants having earned all of the credit hours (formal award units) needed for the award of a degree or certificate in any grant-funded program	45	117	260.00%
3.Total Number of Participants Still Retained in Their Program of Study or other TAACCCT-Funded Program	Number of unique participants enrolled who did not complete and are still enrolled in a grant-funded program of study	126	159	129.19%
4.Total Number of Participants Completing Credit Hours	Total number of students enrolled that have completed any number of credit hours to date.	126	185	146.83%
5.Total Number of Participants Earning Credentials	Aggregate number of degrees and certificates completed by participants in grant-funded programs of study	45	117	260.00%
6.Total Number of Participants Enrolled in Further Education After TAACCCT-funded Program of Study Completion	Total number of students who complete a grant-funded program of study and enter another program of study	10	40	400.00%
7.Total Number of Participants Employed After TAACCCT-funded Program of Study Completion	Total number of students (non-incumbent workers only) who completed a grant-funded program of study entering employment in the quarter after the quarter of program exit	35	7*	20.00%*
8.Total Number of Participants Retained in Employment After Program of Study Completion	Total number of students (non-incumbent workers only) who completed a grant-funded program of study and who entered employment in the quarter after the quarter of program exit who retain	35	7*	20.00%*

Outcomes	Indicators	Expected	Achieved	Achievement rate
	employment in the second and third quarters after program exit			
9. Total Number of Those Participants Employed at Enrollment Who Received a Wage Increase Post-Enrollment	Total number of students who are incumbent workers and who enrolled in a grant-funded program of study who received an increase in wages after enrollment	5	2*	40.00%*

*Information for these outcomes was obtained through online surveys administered to all participants. Since only 17 participants completed the instruments, results are limited. Additional information on employment performance indicators and outcomes was not available at the time of this report.

Detailed information on outcomes 1, 2, 4, 6, 7, 8 and 9 is presented in the Effectiveness evaluation section. Outcome 3 was related to student retention rates at the CUSJ. The results are shown in this section.

Outcome 3: Total Number of Participants Still Retained in Their Program of Study or other TAACCCT-Funded Program

Retention rate was determined by considering participants who enrolled in each of the eligible academic term, from August 2014 (FA14) to January 2017 (WI17). In the following table, the amount of retained students by cohort and certificate program are shown.

Academic program	Students retained after first semester by admission term (cohort)					Retention rate
	FA-14	WI-15	FA-15	WI-16	FA-16	
Office Systems with Electronic Medical Billing	-	-	8 66.67%	-	11 91.67%	19 79.17%
Forensic Nursing	-	-	-	-	11 45.83%	11 45.83%
Gerontology with Home Care	-	-	21 84.00%	9 69.23%	14 82.35%	44 80.00%
Surgical Technologist	28 90.32	2 40.00%	24 80.00%	-	31 64.5%	85 73.28%
Total	28	2	53	9	67	159
Retention rate	90.32%	40.00%	79.10%	69.23%	66.34%	73.27%

The average retention rate for TAACCCT Round 3 Project participants at the CUSJ was 73.27%. Retention rates fluctuated between 45.83% (Forensic Nursing) and 80.00% (Gerontology with Home Care). The cohort with the lowest retention rate was WI-15 (40.00%), while the cohort with the highest rate was FA-14 (90.32%). It was stated that, by the end of the Project, 126 students would have been retained in eligible programs. A hundred and fifty-nine (159) participants were retained after completing their first semester enrolled at eligible programs, so the achievement rate for this outcome was 129.19%.

S1. Were the nine proposed Certificate programs ready by the expected date?

The TAACCCT Round 3 Project Statement of Work (SoW) stated that on January 2015, five of the certificate programs would be offered. The last four certificate programs were supposed to be offer on January 2016. The first certificate program available for enrollment, *Surgical Technologist*, was offered earlier than expected (August 2014).

On the other hand, two certificate programs, *Gerontology with Home Care* and *Office Systems with Electronic Medical Billing and Legal Documents*, were available on August 2015. A fourth certificate program, *Undergraduate Certificate on Forensic Nursing*, was offered on August 2016.

Even though the other five Certificate programs, *Crime Scene Technician*, *Criminology Technician*, *Security Guard*, *Criminal Investigation Technician*, and *Information Systems Networks Technician*, were completed by the expected date, they could not be offered due to lack of student financial assistance. It was on January 2018 that the CUSJ received notification from the Department of Education of the United States

of America (DoL) stating that those programs would be eligible for financial aid (Pell grants, student loans, etc.). This delay on part of the DoL presented a challenge to the implementation of the SoW, since most students in Puerto Rico, especially those enrolled at the CUSJ, depend on financial assistance to enroll at any given academic program. It must be noted that, even though five certificate programs were not offered during the TAACCCT Round 3 Project operations, some courses part of the curriculum sequence of each Certificate program were offered (students enrolled on other academic programs, such as associate and bachelor's degree in related fields took some courses from the certificate programs developed by TAACCCT Round 3 Project).

All courses, with the number of students enrolled on each academic term are shown in the following tables.

Surgical Technologist courses and number of students enrolled, per academic term

Course ID	Course name	Credit hours	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	Total
TQUI 0001L	Fundamentals of Surgical Instrumentation I	2	-	8	29	-	47	-	84
TQUI 0002L	Fundamentals of Surgical Instrumentation II	2	-	9	30	-	45	-	84
TQUI 0003	Anatomy and Human Physiology	2	-	25	4	24	-	32	85
TQUI 0004	Bioethics and Safety in the Surgical Environment	2	-	9	30	-	47	-	86
TQUI 0005L	Sterile Field Preparations and Surgical Sterilization	2	-	25	4	24	-	31	84
TQUI 0006L	Surgical Trays Preparation	2	31	9	30	-	50	-	120
TQUI 0007	Microbiology and Infections Control in Operating Room	2	31	5	32	-	48	-	116
TQUI 0008	Applied Surgical Terminology	2	31	25	3	19	-	24	102
TQUI 0009	Types of Surgeries and their Preparations	2	31	5	32	-	46	-	114
TQUI 0010	Professional Role of the Surgical Technician in the Labor Field	2	31	25	4	18	-	24	102
TQUI 0011L	Practice (180 hours)	4	31	25	4	18	-	24	102

Office Systems Administration with Electronic Medical Billing courses and number of students enrolled, per academic term

Course ID	Course name	Credit hours	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	Total
ADMI 0001	Principles of Management	2	-	-	-	8	-	12	20
ESCO 0001L	Business Spanish	2	-	-	-	8	-	12	20
ESPA 0001	Spanish I	2	-	-	11	-	12	-	23
FALE 0001L	Health Insurance and Legal Documents Procedures	2	-	-	-	8	-	12	20
INGL 0001	English I	2	-	-	-	8	-	12	20
MATE 0001	Business Mathematics	2	-	-	12	-	12	-	24
REHU 0001	Human Relationships and Personality	2	-	-	12	-	12	-	24
SIOF 0001L	Keyboard	2	-	-	12	-	12	-	24
SIOF 0002	Document Management	2	-	-	12	-	12	-	24
SIOF 0003L	Computer Literacy: Microsoft Word, Excel, PowerPoint and Access	4	-	-	11	-	12	-	23
SIOF 0004	Modern Office Procedures	2	-	-	-	8	-	12	20

Gerontology with Home Care courses and number of students enrolled, per academic term

Course ID	Course name	Credit hours	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	Total
TEGE 0001L	Patient Care I	2	-	-	25	13	16	-	54
TEGE 0002L	Patient Care II	2	-	-	25	12	16	-	53
TEGE 0003	Gerontology	2	-	-	25	12	16	-	53
TEGE 0004	Human Being as a Bio – Psych – Social Unit	2	-	-	0	21	9	14	44
TEGE 0005	Health Valuation	2	-	-	25	12	16	-	53
TEGE 0006	Family as Context	2	-	-	25	12	16	-	53
TEGE 0007	Community Health	2	-	-	0	21	9	14	44
TEGE 0008	Health Care of the Elder Adult	2	-	-	0	21	9	14	44
TEGE 0009	Home Care	2	-	-	0	21	9	14	44
TEGE 0010	Death	2	-	-	0	21	9	14	44
TEGE 0011	First Aid and CPR	1	-	-	0	21	9	14	44
TEGE 0012	Activity and Exercise	1	-	-	0	21	9	14	44
TEGE 0013	Security and Protection	1	-	-	25	13	16	-	54
TEGE 0014	Human Relationships and Personality	1	-	-	0	21	9	14	44

Forensic Nursing (Undergraduate Professional Certificate) courses and number of students enrolled, per academic term

Course ID	Course name	Credit hours	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	Total
CPEF 5001	Introduction to Forensics Sciences in Nursing	2	-	-	-	-	21	0	21
CPEF 5002	Criminal Investigation and Law in Forensic Nursing	2	-	-	-	-	22	0	22
CPEF 5003	Skills Development in Forensic Nursing	2	-	-	-	-	21	0	21
CPEF 5004	Criminal Procedures and Evidence Rules	2	-	-	-	-	21	0	21
CPEF 5005	Theoretical Models of Forensic Nursing	2	-	-	-	-	0	11	11
CPEF 5006	Special Laws and Forensic Nursing	2	-	-	-	-	0	11	11
CPEF 5007	Protocols and Clinical Procedures in Forensic Nursing I	2	-	-	-	-	0	11	11
CPEF 5008	Protocols and Clinical Procedures in Forensic Nursing II	2	-	-	-	-	0	11	11
CPEF 5009	Practicum (XXX hours)	3	-	-	-	-	0	11	11

Security Guard courses and number of students enrolled, per academic term

Course ID	Course name	Credit hours	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	Total
ESPA 1101	Spanish I	3	221	187	198	188	266	178	1238
INGL 1101	English I	3	191	160	159	179	248	175	1112
JUSC 1101	Introduction to the Criminal Justice System in Puerto Rico	3	96	96	60	84	111	78	525
JUSC 2209	Intervention in Crisis	3	48	33	52	28	38	38	237
JUSC 3307	Penal Rights	3	58	57	52	50	38	40	295
REHU 1101	Human Relationships	3	11	39	0	44	12	40	146
SEGU 100	Civil and Constitutional Rights Application in the Security Guard Scenario	2	-	-	-	-	-	-	-
SEGU 103	Introduction to Security	2	-	-	-	-	-	-	-
SEGU 110	Ethical and Legal Aspects Focused in Security	2	-	-	-	-	-	-	-
SEGU 115	Personal Defense and Security	2	-	-	-	-	-	-	-
SEGU 117	Use and Management of Fire Arms	2	-	-	-	-	-	-	-
SEGU 123	Security Guard Report Writing	2	-	-	-	-	-	-	-
SEGU 125	Practicum in Security Guard Settings	2	-	-	-	-	-	-	-
SICO 1101	Introduction to Psychology	3	57	73	64	60	86	82	422

Information Systems Networks courses and number of students enrolled, per academic term

Course ID	Course name	Credit hours	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	Total
INFO 1110	Data Processing I	3	39	33	45	19	37	20	193
INFO 1115	Business Apps	3	89	78	107	70	93	65	502
INFO 1130	Local Network Systems	3	11	14	21	11	0	24	81
INGL 1101	English I	3	191	160	159	179	248	175	1112
INFO 3430	Data and Networks Communication Lab	3	-	-	-	-	-	-	-
INFO 4435	Operating Systems	3	1	17	5	0	16	0	39
INFO 2280	Computer Repair	3	0	0	0	15	0	38	53
ADMI 1101	Management Principles	3	87	102	73	85	74	77	498

Criminal Scenes Technician courses and number of students enrolled, per academic term

Course ID	Course name	Credit hours	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	Total
ESCR 102	Site Plans and Sketches	2	-	-	-	-	-	-	-
ESCR 104	Monodactyl System	2	-	-	-	-	-	-	-
ESCR 106	Forensic Photography	2	-	-	-	-	-	-	-
ESPA 1101	Spanish I	3	221	187	198	188	266	178	1238
INCR 112	Investigation Ethical and Legal Aspects	2	-	-	-	-	-	-	-
INCR 114	Investigation and Fungible and Non-Fungible Materials Collection	2	-	-	-	-	-	-	-
INCR 122	Study and Analysis of Criminal Cases	2	-	-	-	-	-	-	-
INCR 124	Criminal Investigation Report Writing	2	-	-	-	-	-	-	-
INCR 128	Criminal Scenes Reconstruction	2	-	-	-	-	-	-	-
JUSC 1101	Introduction to the Criminal Justice System in Puerto Rico	3	96	96	60	84	111	78	525
JUSC 2206	Human, Civil, and Constitutional Rights	3	45	23	44	37	36	28	213
JUSC 2207	Interview and Interrogatory	3	-	39	-	32	-	30	101
JUSC 2214	Criminal Investigation	3	21	28	28	24	24	31	156
JUSC 2220	Criminalistics	3	37	-	44	-	7	-	88
JUSC 4025	Forensic Expertise	3	-	-	-	-	-	-	-

Criminology Technician courses and number of students enrolled, per academic term

Course ID	Course name	Credit hours	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	Total
CRIM 103	Procedural law and Probation Penal Rights Compendium	2	-	-	-	-	-	-	-
CRIM 105	Psychology and Sociology Compendium	2	-	-	-	-	-	-	-
CRIM 107	Deviation Theories	2	-	-	-	-	-	-	-
CRIM 109	Contemporary Social Issues	2	-	-	-	-	-	23	23
CRIM 115	Prevention as an Alternative to Criminality	2	-	-	-	-	-	-	-
ESPA 1101	Spanish I	3	221	187	198	188	266	178	1238
JUSC 1101	Introduction to the Criminal Justice System in Puerto Rico	3	96	96	60	84	111	78	525
JUSC 2203	Introduction to Criminology	3	-	44	-	51	42	46	183
JUSC 2205	Professionalism, Leadership, and Ethics	3	34	24	48	39	22	45	212
JUSC 2206	Human, Civil, and Constitutional Rights	3	45	23	44	37	36	28	213
JUSC 2212	Criminal Justice System and Community Relationships	3	40	26	35	30	30	32	193

Criminal Investigation Technician courses and number of students enrolled, per academic term

Course ID	Course name	Credit hours	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	Total
ESPA 1101	Spanish I	2	221	187	198	188	266	178	1238
INCR 103	Procedural and Evidentiary Compendium	2	-	-	-	-	-	-	-
INCR 112	Investigation Ethical and Legal Aspects	2	-	-	-	-	-	-	-
INCR 114	Investigation and Fungible and Non-Fungible Materials Collection	2	-	-	-	-	-	-	-
INCR 122	Study and Analysis of Criminal Cases	2	-	-	-	-	-	-	-
INCR 128	Criminal Scenes Reconstruction	3	-	-	-	-	-	-	-
JUSC 1101	Introduction to the Criminal Justice System in Puerto Rico	3	96	96	60	84	111	78	525
JUSC 2206	Human, Civil, and Constitutional Rights	3	45	23	44	37	36	28	213
JUSC 2207	Interview and Interrogatory	3	-	39	-	32	-	30	101
JUSC 2214	Criminal Investigation	3	21	28	28	24	24	31	156
JUSC 2220	Criminalistics	3	37	-	44	0	7	-	88
JUSC 3307	Penal Rights	3	58	57	52	50	38	40	295
JUSC 4025	Forensic Expertise	3	-	-	-	-	-	-	-

Impact Evaluation

S2. Was the intended audience served? How many participants were TAA eligible?

How many were displaced workers?

The intended audience of the TAACCCT Round 3 Project at the CUSJ included all newly enrolled (from academic term FA-14 to WI-17) in any of the funded Certificate programs. During the project implementation, 218 students were served. Their characteristics are shown below.

Demographics

Gender	Frequency	Average age*	Minimum	Maximum	Mode	Median
Female	151	27.49	17	61	18	22
Male	67	24.72	16	64	20	18
Total	218	26.64	16	64	18	21

*At enrollment.

Age distribution

Age group	Frequency	Percentage
16 – 21	115	52.75
22 – 25	29	13.30
26 – 35	23	10.55
36 – 45	28	12.84
46 and up	23	10.55
Total	218	100.00

At time of enrollment, the age mean of participating students was 26.64 years. Age ranged from 16 years old to 64 years old. Most of the students were female (69.27%). Even though initially the TAACCCT Round 3 Project targeted TAA eligible participants and displaced workers, services were extended to other adults who chose to enroll in the funded programs.

The CUSJ made many efforts to recruit TAA eligible participants (Included information on its web pages explaining the TAA program and participated in job fairs organized by the WIA Office at Puerto Rico), but no TAA eligible participants were enrolled at certificate programs offered by the CUSJ.

1. Companies contacted (four cycles)¹

Cycle 1

Company name	Number of employees	Follow-up calls	
Checkpoint Caribbean	128	9/17/2013	11/13/2013
Hanes Menswear	81	10/7/2013	12/5/2013
Heraus Noblelight	15	10/25/2013	12/6/2013
Hewelt Packard Caribe	53	10/28/2013	12/9/2013
Biovail Laboratories	124	11/4/2013	12/14/2013
General Electric	100	11/5/2013	
TOTAL	501		

Cycle 2

Company name	Number of employees	Follow-up calls	
Baxter	30	3/31/2014	5/15/2014
Osram	21	4/3/2014	5/20/2014
Micron	18	4/7/2014	5/27/2014
General Electric	68	4/23/2014	6/5/2014
3M del Caribe	38	4/28/2014	6/10/2014
TOTAL	175	5/9/2014	6/24/2014
		5/14/2014	

Cycle 3

Company name	Number of employees	Follow-up calls		
Salinas **	162	6/25/2014	9/29/2014	2/11/2015
TOTAL	162	7/3/2014	1/17/2015	2/15/2015
		7/7/2014	1/20/2015	2/16/2015
		7/15/2014	1/26/2015	

Cycle 4

Company name	Number of employees	Follow-up calls	
General Electric	105	2/19/2015	List received by the CUSJ
TOTAL	105		

¹ The first cycle was implemented during the year 2013, for TAACCCT Round 2. Once the TAACCCT Round 3 Project Grant was designated to the CUSJ, all enrollment efforts addressed both Projects (Round 2 and Round 3).

2. Emails and letters sent (dates)

Emails		Letters			
10/7/2013	7/11/2014	9/4/2013	4/23/2014	9/8/2014	1/22/2015
10/30/2013	7/17/2014	9/10/2013	5/9/2014	9/9/2014	1/23/2015
1/4/2014	7/18/2014	10/1/2013	6/9/2014	7/15/2014	1/24/2015
5/28/2014	8/11/2014	10/7/2013	9/1/2014	7/29/2014	1/25/2015
6/23/2014	10/2/2014	11/14/2013	9/2/2014	10/22/2014	1/26/2015
6/25/2014	10/6/2014	11/4/2013	9/3/2014	1/16/2015	1/27/2015
7/3/2014	10/10/2014	12/6/2013	9/4/2014	1/17/2015	1/28/2015
7/8/2014	10/27/2014	1/7/2014	9/5/2014	1/18/2015	1/29/2015
8/6/2014	2/24/2015	4/1/2014	9/6/2014	1/20/2015	1/30/2015
		4/7/2014	9/7/2014	1/21/2015	

3. Orientations provided during local TAA events

Dates	
10/25/2013	6/24/2014
8/23/2014	6/25/2014

4. Follow-up to prospective students

Compañy name	Prospects
3M	26
Salinas **	66
Baxter	4
General Electric	36
Micron	1
Checkpoint Caribbean	21
Sylvannia	2
Hewlet Packard	4
Hanes Menswear	4
Bioval	25
Heraus Nobelight	2
TOTAL	191

Questionnaires were administered to active, inactive and graduated participants, including questions regarding how they learned about the academic offering of the CUSJ. Text messages and phone calls, as well as multiple emails to personal and institutional

accounts were sent, during a period of one month, to all project participants (218). Only 16 students completed the questionnaires.

How did they learn about the CUSJ programs	Student status			Total
	Active	Inactive	Graduated	
TAA activity or job fair	-	1	0	1
CUSJ webpage announcement	-	1	3	4
Open house at the CUSJ	-	1	4	5
A friend's referral	-	1	7	8
Other means	-	1	2	3

Half of the participants who completed the questionnaires indicated that they learned about the CUSJ academic offerings through a friend's referral. This indicated that the primary promotion technique for the certificate programs was "word of mouth" (did not provided information on how they learned about the academic programs of the CUSJ. Other important strategies were Open Houses at the CUSJ (31.25%), and CUSJ webpage announcements (25.00%).

Information on previous jobs or employment status at enrollment was collected by Project personnel, but not provided to the Evaluator, so it could not be corroborated how many participants were displaced workers.

Effectiveness Evaluation

S3a. How effective was the project in achieving its goals in terms of the total number of participants (headcount) who were served?

Outcome 1: Total Unique Participants Served

The Project considered to be participants students enrolled at the CUSJ on August 2014 or later in any of the Certificate programs funded by the Project (term FA-14). August 2014 (FA-14) was the first academic term in a funded Certificate program was offered (Surgical Technologist).

A total of 218 students from the cohorts FA-14 (August 2014), WI-15 (January 2015), FA-15 (August 2015), WI-16 (January 2016), FA-16 (August 2016) and WI-17 (January 2017), were served. Participants served by the TAACCCT Round 3 Project are shown by date of admission into the CUSJ and by their academic program.

Academic program	Students enrolled, by admission term						Total
	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	
Office Systems with Electronic Medical Billing	-	-	12	-	12	-	24
Forensic Nursing	-	-	-	-	24	-	24
Gerontology with Home Care	-	-	25	13	17	-	55
Surgical Technologist	31	5	30	-	48	1	115
Total	31	5	67	13	101	1	218

The Certificate program with the highest number of enrolled students was Surgical Technologist, with a total of 115 students enrolled during the TAACCCT Round 3 Project (52.75% of the participants). The second highest number of participants was enrolled in

Gerontology with Home Care (25.23%). The other two certificates enrolled 24 participants each (11.00% each).

S3b. How effective was the project in achieving its goals in terms of the total number of participants (headcount) who completed any number of credit hours?

Outcome 4: Total Number of Participants Completing Credit Hours

By the end of the academic term WI-17, a total of 212 out of the 218 participants enrolled in different courses, from which 185 completed, at least, one course with a grade of “A”, “B”, “C”. This group enrolled in 6,125 credits and approved 4,741 (77.40%).

S3c. How effective was the project in achieving its goals in terms of the total number of participants (headcount) who graduated/obtained at least one credential?

Outcome 2: Total Number of Participants Completing a TAACCCT-Funded Program of Study

A total of 116 participants completed their Certificate programs. Participants who completed their Certificate programs are shown by term of admission into the CUSJ and by academic program.

Academic program	Students who completed the funded programs, by admission term						Total
	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	
Office Systems with Electronic Medical Billing	-	-	7	-	9	-	16

Academic program	Students who completed the funded programs, by admission term						Total
	FA-14	WI-15	FA-15	WI-16	FA-16	WI-17	
Forensic Nursing	-	-	-	-	9	-	9
Gerontology with Home Care	-	-	19	8	11	-	38
Surgical Technologist	22	-	16	-	15	1	54
Total	22	-	42	8	44	1	117

Twenty-two students from the cohort FA-14, 42 from cohort FA-15, 8 from cohort WI-16, 44 from cohort FA-16, and 1 from WI-17 completed their Certificate programs. The respective completion rate for each cohort are shown below:

FA-14	WI-15	FA-15	WI-16	FA-16	WI-17
70.97%	0.00%	62.69	61.54%	43.56%	100.00%

Completion rates by academic program are as follows:

Academic program	FA-14
Office Systems with Electronic Medical Billing	66.67%
Forensic Nursing	37.50%
Gerontology with Home Care	69.09%
Surgical Technologist	46.96%

The general completion rate for all cohorts was 53.67%.

S3d. How effective was the project in achieving its goals in terms of the total number of participants (headcount) who continued their education to a higher or complimentary level?

Outcome 6: Total Number of Participants Enrolled in Further Education After TAACCCT – funded Program of Study Completion

After completing the Certificate programs, 40 students enrolled in other academic programs. Two (2) participants who completed the Gerontology with Home Care certificate enrolled in the Surgical Technologist certificate, eight (8) enrolled in the Associate degree in Nursing, and one (1) enrolled in the Bachelors' degree in Criminal Justice. One (1) participant from the Office Systems with Medical Billing certificate enrolled in the Associate Degree in Nursing, while two (2) enrolled in the Associate degree in Office Systems Administration. From the Surgical Technologist Certificate, one (1) enrolled in the Associate Degree in Criminal Justice, 21 in the Associate degree in Nursing, one (1) in the Associate degree in Computerized Accounting, one (1) in the Associate degree in the Office Systems Administration, one (1) in the Bachelors' degree in Nursing, and one (1) in the Bachelors' degree in Criminal Justice. Information on students enrolled at other Higher Education Institutions (HEI) was not available at the time of this report.

S3e. How effective was the project in achieving its goals in terms of the total number of participants (headcount) who obtained additional credentials after graduation?

Outcome 5: Total Number of Participants Earning Credentials

After certificate programs completion, two (2) participants completed higher level programs; one completed the Associate degree in Criminal Justice, while the other completed the Associate degree in Nursing. Information on students who may have completed additional credentials at other Higher Education Institutions (HEI) was not available at the time of this report.

Employment

Regarding the recruitment of displaced workers, the TAACCCT Round 3 personnel at the CUSJ collected information on the employment status data of its students. Unfortunately, this information was not available at the time of this report, as TAACCCT Round 3 personnel was no longer working at the CUSJ. Additional efforts to collect data on student employment at the date of admittance were made, but poor participation rate was achieved (Information on employment status included in the report was collected through an online questionnaire). Only 16 participants (none active, three inactive, and 13 graduated) completed the questionnaires.

Of the three that became inactive students, two were unemployed when they started their Certificate programs, while the other only was employed at a job not related to his/her Certificate program. Nonetheless, one of the inactive students was offered a promotion to a job related to his/her Certificate program and was offered a wage increase. Of the graduated participants, at the beginning of their Certificate programs, six were employed at a job not related to their Certificate programs, six were unemployed. One was employed at a Certificate program related job (Nursing).

While enrolled at their respective Certificate programs, two participants that completed their Certificate programs got jobs related to their programs (in Office Systems), were offered a promotion and got wages increase.

Currently (in 2018), five graduated participants still work at the same job, one change jobs to one related to his/her Certificate program, and one change to a non-related job. Seven are currently unemployed.

S3f. How effective was the project in achieving its goals in terms of the total number of participants (headcount) who and/or were employed within three months after graduation?

Outcome 7: Total Number of Participants Employed After TAACCCT-funded Program of Study Completion

Multiple efforts were made to contact graduate students (by phone and emails). Five participants indicated that they are currently employed (five in the same jobs, one in a certificate – related job, and one in a non-related job). The employment rate for this group of graduates is 53.85%.

S3g. How effective was the project in achieving its goals in terms of the total number of participants (headcount) who retained their employment four to nine months after graduation?

Outcome 8: Total Number of Participants Retained in Employment After Program of Study Completion

Multiple efforts were made to contact graduate students (by phone and emails). Five participants indicated that they are currently employed (five in the same jobs, one in a certificate – related job, and one in a non-related job). The employment rate for this group of graduates is 53.85%.

Sustainability Evaluation

S4. What partnerships were created that will benefit future participants? What did partners considered to be their contributions to project success?

Among the partners for the TAACCCT Round 3 Project are the following organizations:

- Polytechnic University of Puerto Rico
 - The Polytechnic University of Puerto Rico is a continued partner. The PUPR has included the CUSJ in many of its Educational projects, funded by the Department of Education of the United States of America. After the TAACCCT Round 2 Project, the PUPR made an alliance with the CUSJ to provide services to students, under a Title V grant, to increase the number of students who complete bachelor's degrees in Science and Technology fields.
- Different companies that allowed students to complete practice hours in the Health field:

- During each academic term, the list of collaborators was revised, and new companies are added to provide students with different practices sceneries. A list of companies and agencies that provided the CUSJ students with practice hours in their field, since FA-15 was provided.

Companies and agencies	Terms in which the practice was performed
San Juan City Hospital	FA-15
Puerto Rico Medical Center at Río Piedras	WI-16, WI-17, and WI-18
Doctor's Hospital at Santurce	WI-16 and WI-17

Their contribution to the program success is extremely important, since these companies allowed students to complete 45 practice hours in their fields. This grants students with the necessary skills and job-related competencies to better success at their careers. In some cases, it opens opportunities to get employed by the same companies in which students made their practices.

S5. What is the impact of the project in the institution's capacity to improve and expand its academic offering through continued partnerships with businesses and industries beyond project completion?

As explained by Project and CUSJ staff, the CUSJ is currently in a consortium with the Polytechnic University of Puerto Rico (PUPR), under a Department of Education of the United States of America Post-Secondary Education Act - Title V grant. Both HEIs work toward increasing low – income, underrepresented groups in STEM fields, by

providing additional services, such as tutoring, mentoring, advising, and counseling, to improve opportunities for these groups to pursue careers in Sciences and Engineering.

Continued partnerships with companies and agencies plays an important role for academic programs success. Many of the companies allows students to complete their practice hours in different workplaces have collaborated with the CUSJ for many years. A commitment by these partners to continue providing CUSJ students with appropriate workplaces to acquire the necessary experiences and competencies to succeed in their fields is observed.

S6. What is the impact of the project in the institution's capacity beyond project completion to increase the number of Hispanic displaced workers, underemployed workers or other adults and young adults in obtaining stackable and latticed credentials in areas of high demand in the world of employment?

During the TAACCCT Round 3 Project, four of the nine Certificate programs were offered. After Project completion, all four Certificate programs are still being offered. It is expected that, by August 2018, the other five Certificate programs will be available for the first time, since, in January 2018, the CUSJ received notification from the Department of Education of the United States of America that those programs are now eligible for student financial assistance (Pell Grant, Student Loans, etc.)

TAACCCT Round 3 Project also allowed the CUSJ to improve and expand its academic offering by:

- Providing the resources needed to develop nine new Certificate programs (Surgical Technologist, Gerontology with Home Care, Undergraduate Professional Certificate in Forensic Nursing, and Office Systems with Electronic Medical Billing, Crime Scene, Criminology, Criminal Investigation, Information Systems Network, and Security Guard).
- Equipping the CUSJ all the necessary equipment and technology for the establishment of:
 - One Nursing lab (rooms 300 and 301)
 - One Surgical Technology Lab (room 302)
 - Two Language skills Labs (rooms 315 and 316)
 - One Networks lab (room 104)

- Equipping 15 rooms with smartboard technology that provided an enriched and diverse educational experience to students.
- Adapting general courses (taken by students of different academic programs) offered at the CUSJ, into technologically assisted courses, with online educational modules.
- Providing funding for the completion of a much needed second elevator (its construction started under TAACCCT Round 2 Project) that would improve access to laboratories, the library, and the EOC, among other services.
- Providing funding for the acquisition and installation of two power generators that provide electricity to the EOC and the Technology Assistance Office in emergency situations (such as the blackouts suffered after the impact of hurricane María).

The following photographs show the different spaces improved with TAACCCT Round 3 fundings.

Language skills laboratories



Elevator



Nursing Lab





Surgical lab



Networks lab



Impact Analysis

Control and treatment groups

To ascertain the impact of the technology assisted courses vs. traditional formats, Z tests for difference in two proportions with one-tailed tests hypotheses testing were performed, using a significance level of 0.05. For the analyses, the statistical software *PHStat* (a Microsoft *EXCEL* add-in tool) was used. Courses approval rates for technology assisted courses (courses modified after TAACCCT Round 3 Project implementation in academic term FA14 / August 2014 to WI17 / May 2017) were compared to courses approval rates for equivalent courses offered before the TAACCCT Round 3 Project (from academic term FA10 / August 2010 to WI14 / May 2014). Courses grades were transformed into three categories (*Approved, Not Approved, and Withdrawal*); proportions for the “*Approved*” category in both groups were included in the analyses.

For positive differences (improved approval rate), the following hypotheses were tested:

H₀: The approval rate in modified courses are equal to or lower than the approval rate in courses before TAACCCT implementation

H₁: The approval rate in modified courses are higher than the approval rate in courses before TAACCCT implementation

For negative differences (lower approval rate), the following hypotheses were tested:

H₀: The approval rate in modified courses are equal to or higher than the approval rate in courses before TAACCCT implementation

H₁: The approval rate in modified courses are lower than the approval rate in courses before TAACCCT implementation

These statistics tests were performed for courses that were offered in two modalities: (a) control groups (courses offered in the traditional format (without the assistance of technology), and (b) treatment groups (technology – assisted courses). A total of 15 courses, from different Certificate Programs, were analyzed. The results are shown in the following tables:

General courses approval rate comparison (Z test for Difference in Two Proportions)

Course	Technology-assisted		Traditional format		Proportion difference	p-Value	Results Decision
	Total	Approval rate	Total	Approval rate			
ESPA 1101	188	0.6064	3082	0.5805	0.0259	0.2421	Do not reject the null hypothesis.
SICO 1101	60	0.7000	1073	0.7400	-0.0400	0.2466	Do not reject the null hypothesis.

Criminal Justice related courses approval rate comparison (Z test for Difference in Two Proportions)

Course	Technology-assisted		Traditional format		Proportion difference	p-Value	Results Decision
	Total	Approval rate	Total	Approval rate			
JUSC 2206	37	0.8649	571	0.7933	0.0715	0.1470	Do not reject the null hypothesis.
JUSC 2207	101	0.9406	137	0.8175	0.1231	0.0027	Reject the null hypothesis.
JUSC 2209	28	0.7857	637	0.7331	0.0526	0.2685	Do not reject the null hypothesis.
JUSC 2214	156	0.8397	258	0.7984	0.0413	0.1477	Do not reject the null hypothesis.
JUSC 2220	88	0.9659	108	0.7500	0.2159	0.0000	Reject the null hypothesis.

Information Systems Networks courses approval rate comparison (Z test for Difference in Two Proportions)

Course	Technology-assisted		Traditional format		Proportion difference	p-Value	Results Decision
	Total	Approval %	Total	Approval %			
INFO 1110	19	0.4211	547	0.4223	0.0214	0.5646	Do not reject the null hypothesis.

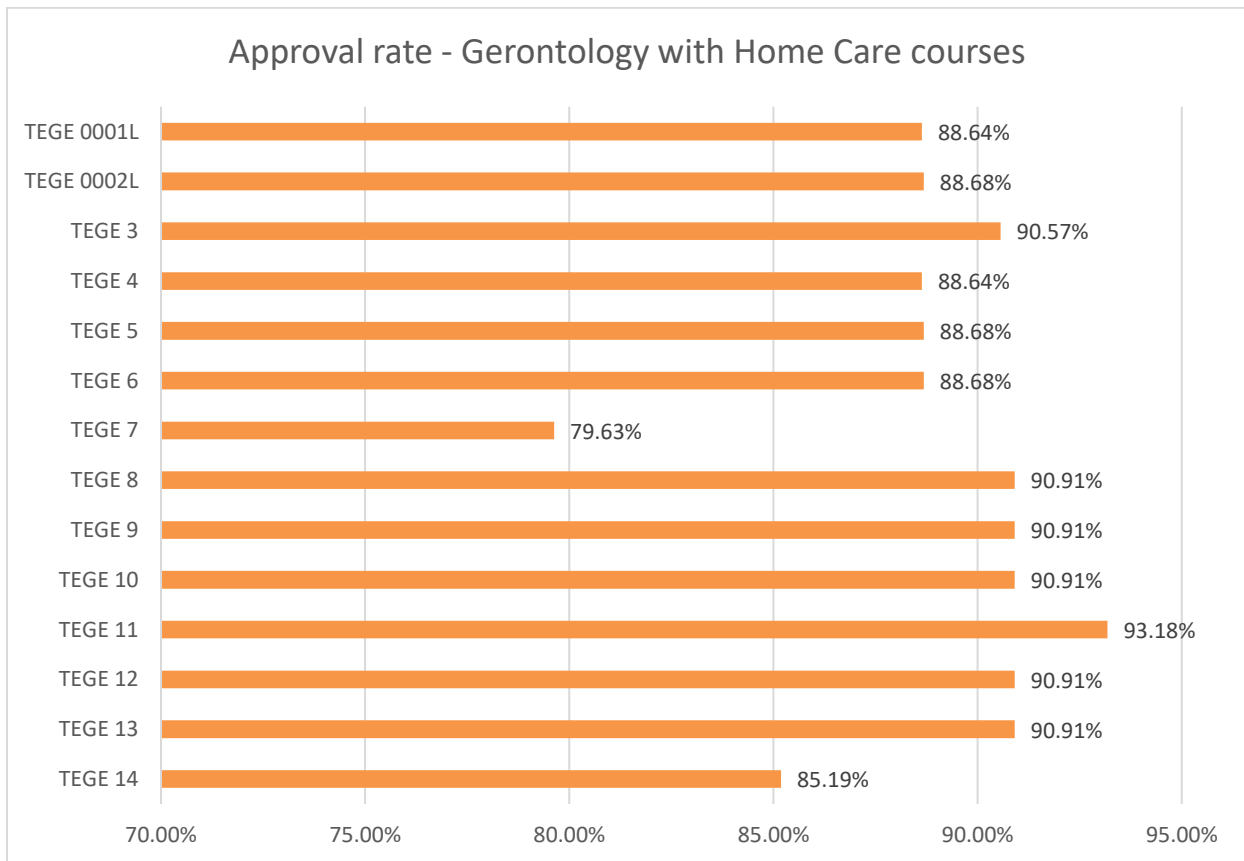
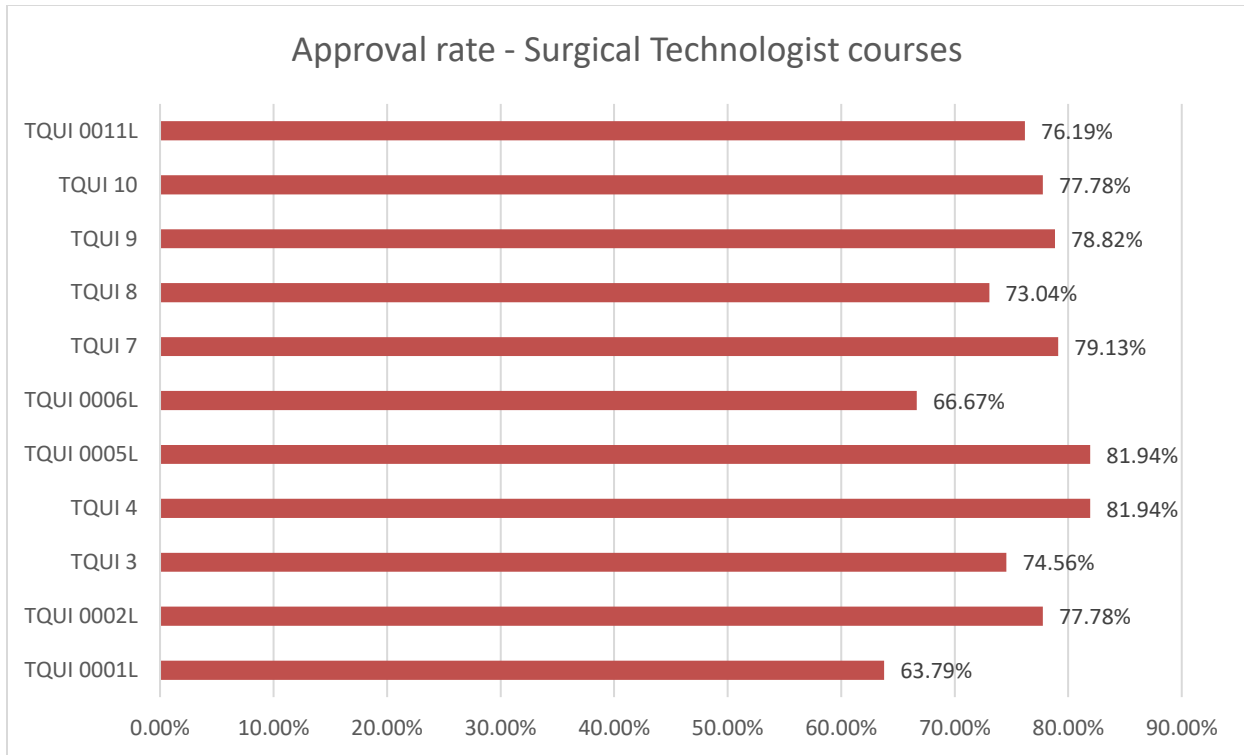
Office Systems with Electronic Medical Billing and Legal Documents courses approval rate comparison (Z test for Difference in Two Proportions)

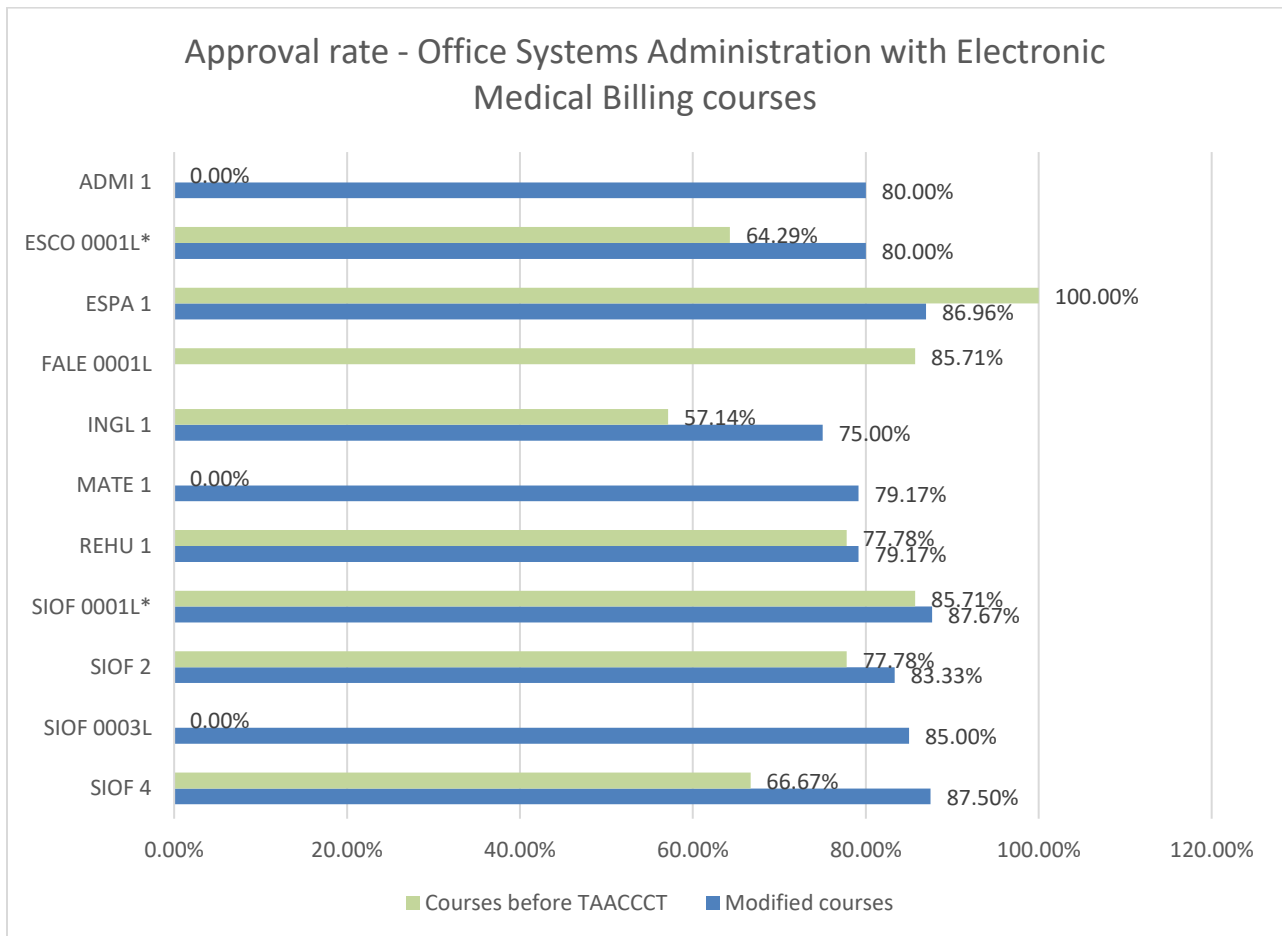
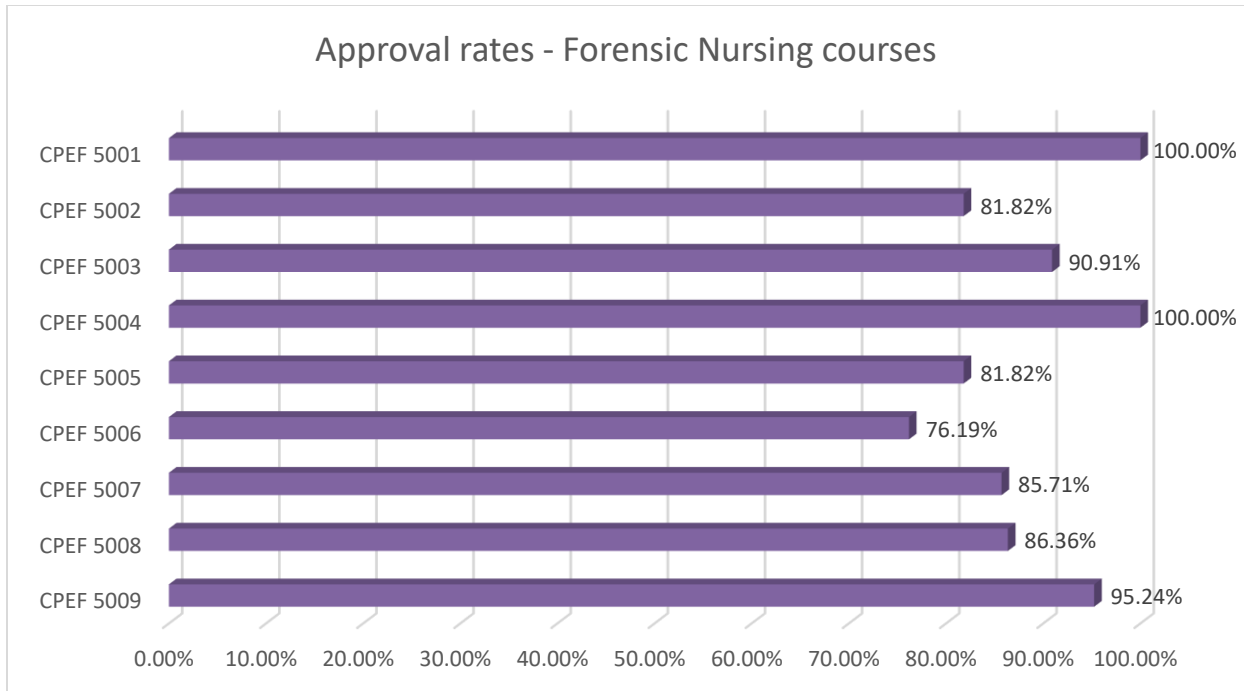
Course	Technology-assisted		Traditional format		Proportion difference	p-Value	Results Decision
	Total	Approval rate	Total	Approval rate			
ESCO 0001L	20	0.8000	14	0.6429	0.1571	0.1534	Do not reject the null hypothesis.
ESPA 1	23	0.8696	12	1.0000	-0.1304	0.0954	Do not reject the null hypothesis.
INGL 1	20	0.7500	14	0.5714	0.1786	0.1367	Do not reject the null hypothesis.
REHU 1	24	0.7917	9	0.7778	0.0139	0.4654	Do not reject the null hypothesis.
SIOF 0001L	23	0.9130	14	0.8571	0.0559	0.2977	Do not reject the null hypothesis.
SIOF 2	24	0.8333	9	0.7778	0.0556	0.3562	Do not reject the null hypothesis.
SIOF 4	24	0.8750	9	0.6667	0.2083	0.0835	Do not reject the null hypothesis.

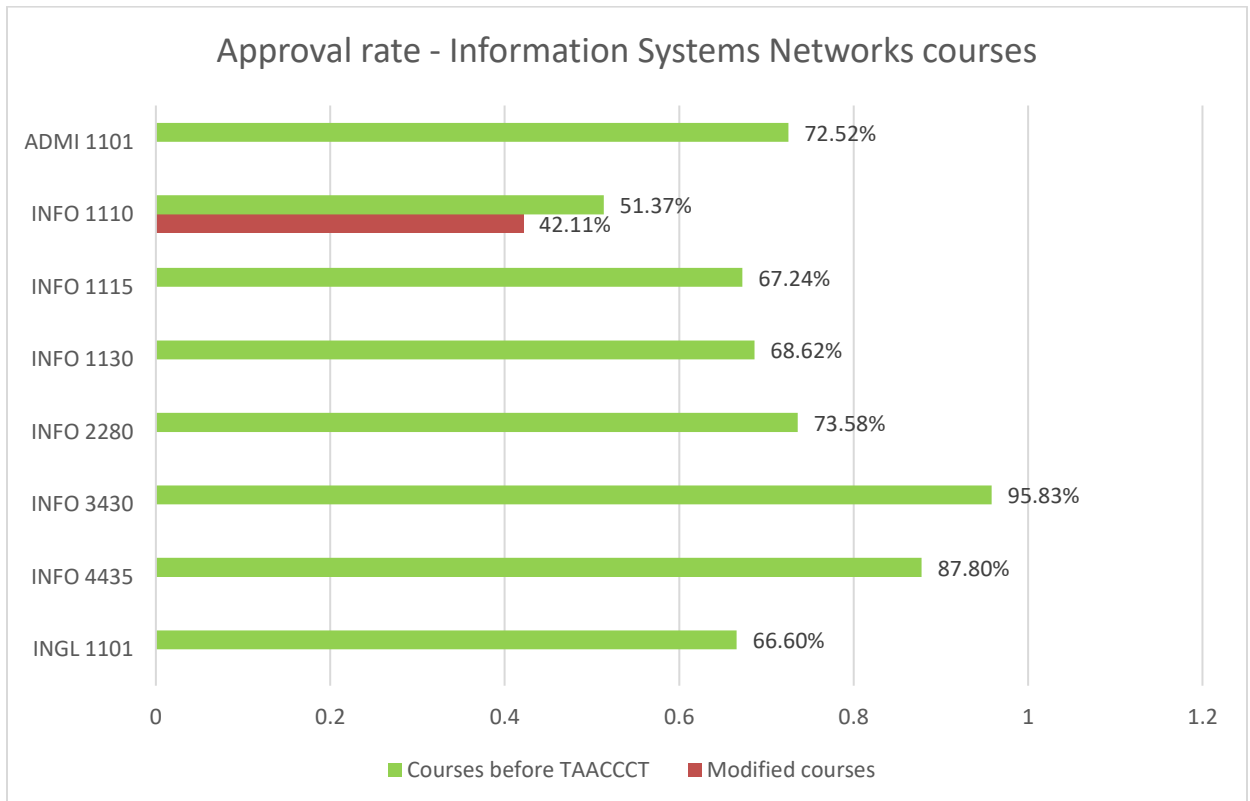
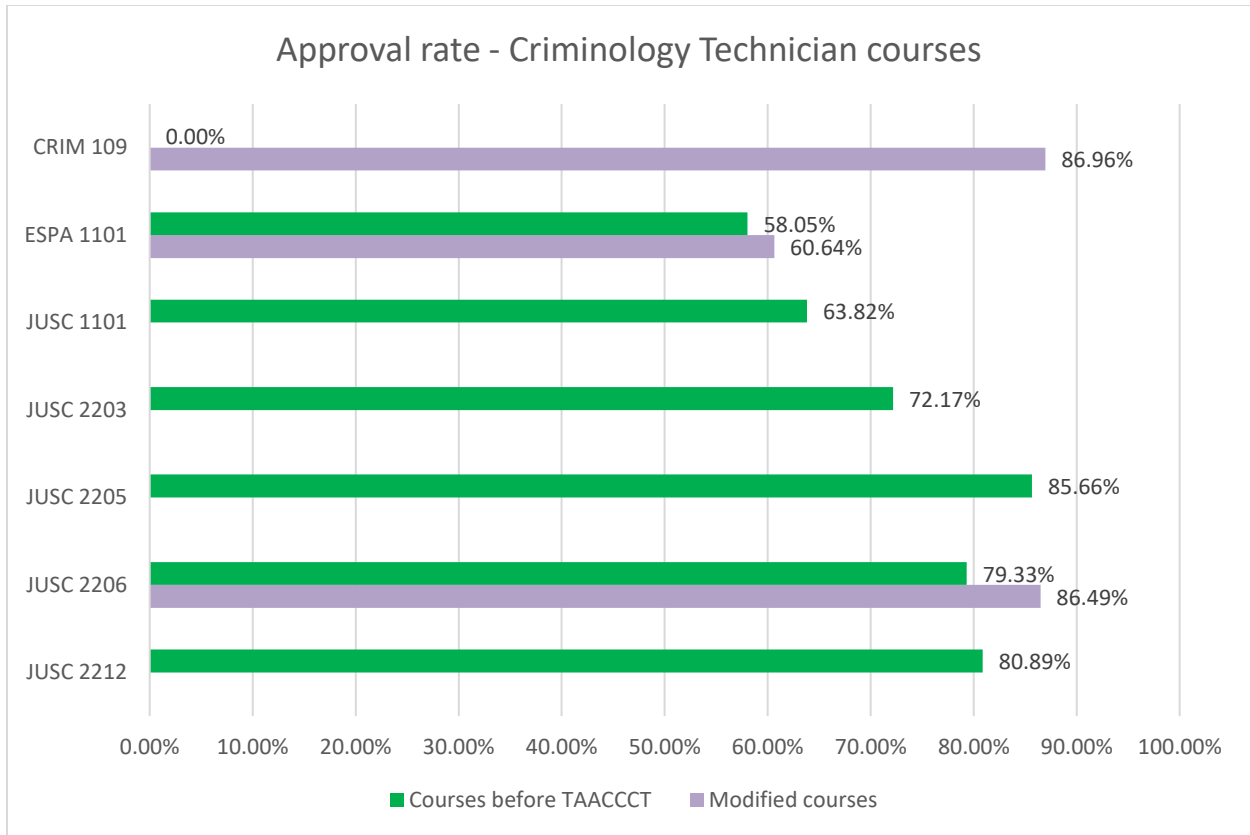
Two courses showed statistically significant differences between the approval rates of both groups (JUSC 2207 and JUSC 2220), meaning that technology – assisted courses achieved a higher approval rate than traditional courses. This indicates that those courses were more effective than their traditional counterparts. It is suggested that online educational modules helped students better understand those courses content. On the other side, for the rest of the courses there was no statistically significant difference, suggesting both modalities were equally effective.

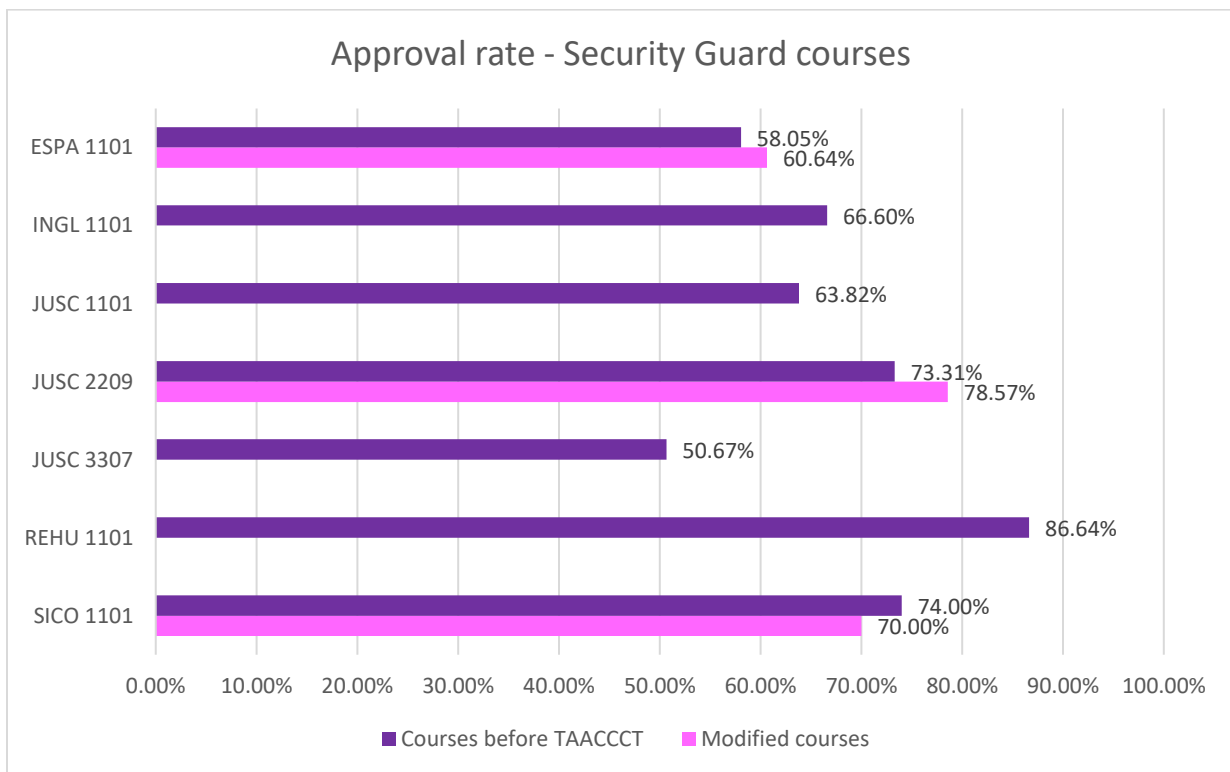
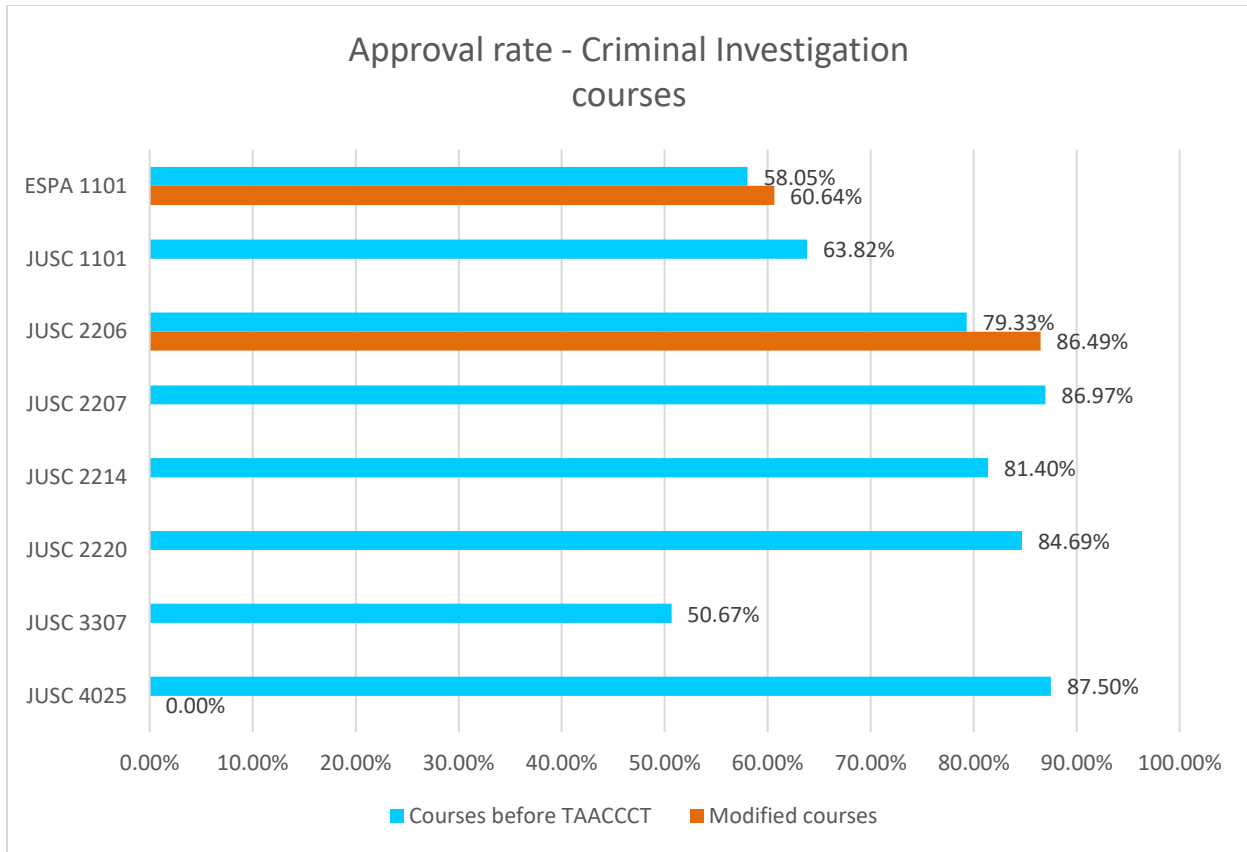
Courses Approval rates

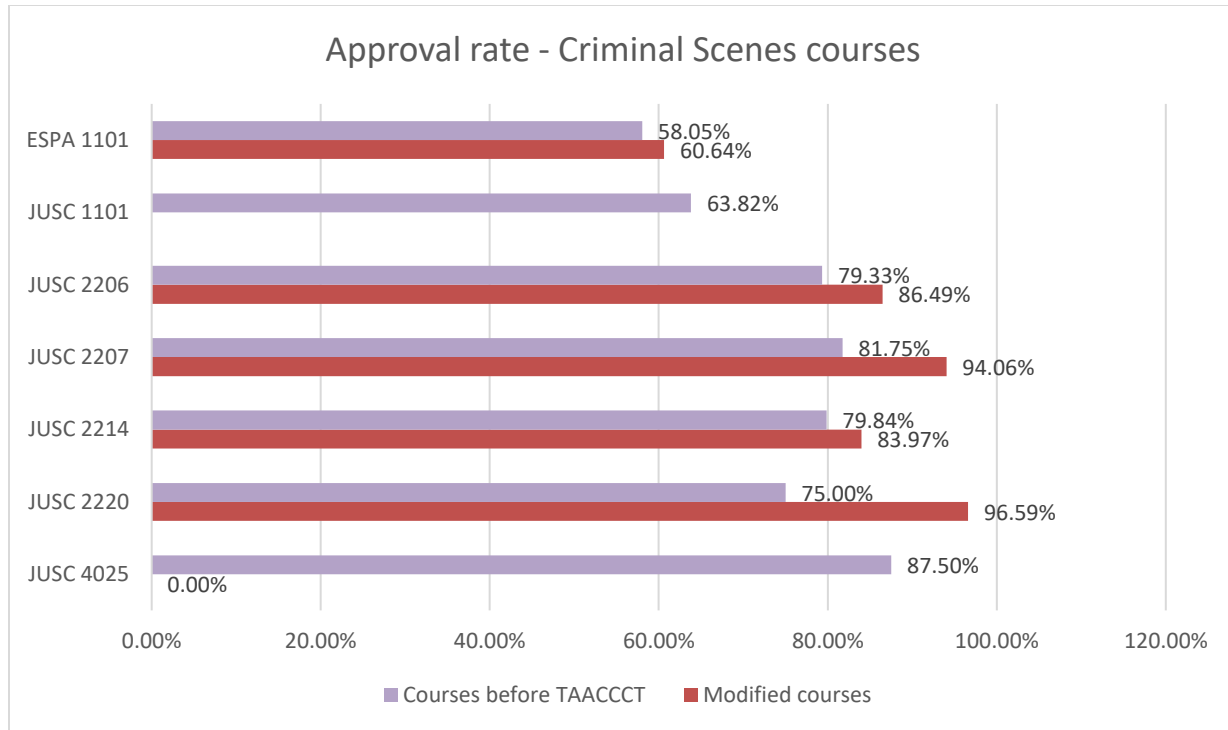
Even though not all courses were available or could be compared to a control group, courses from all Certificate programs were offered. Approval rates calculated for those courses are included in the following figures.











For modified courses (courses with online educational modules) the approval rates ranged from 42.11% (INFO 1110 – Information Systems Networks) to 100.00% (CPEF 5001 and CPEF 5004 – Forensic Nursing Undergraduate Certificate). Approval rate for INFO 1110 was an outlier (42.11%), since the second lowest approval rate for a modified course was ESPA 1101, with an approval rate of 60.64% (22.53% higher). This shows that most modified courses had good to great approval rates, which accounts for the higher than average retention and graduation rates achieved by the certificate programs.

Participants vs. non-participants analysis

A third analysis was to be conducted to compare project participants with other displaced workers who were contacted but did not participate in the project. Nonetheless, no contact information on non-participating displaced workers from the same source as the participants (TAA-eligible list) was available, thus this analysis could not be performed.

Conclusions and implications

Conclusions

Activity 1

Develop nine Certificate programs to train or retrain TAA-eligible displaced workers and others in careers of high employment demand in health, IT and security industries.

The CUSJ was successful in developing all nine certificate programs (even though some were completed later than the expected date proposed in the Statement of Work). The biggest challenge the TAACCCT Round 3 Project encountered for the completion of Activity 1 was the lack of financial aid for students. Most students enrolled at the CUSJ depend on financial assistance (Pell Grant, student loans, etc.) to pay for enrollment and course fees. Nonetheless, on January 2018, the CUSJ received notification from the Department of Education of the United States of America (DoE) authorizing the certificate programs to be eligible for federal financial aid. This will allow the CUSJ to offer the five certificate programs that were developed but not offered, on August 2018.

On the delivery methods used by the CUSJ to offer courses, currently, the CUSJ is not authorized by the Educational Council of Puerto Rico (CEPR, its Spanish acronym), institution that licenses all educational institutions and academic programs offering in Puerto Rico, to offer online academic programs nor deliver online courses (courses with a 100% online delivery method). Nonetheless, the improvements in infrastructure will allow the CUSJ in a near future develop and deliver online courses. This activity was successfully addressed.

Activity 2

Develop a continuous feedback improvement component (with elements taken from the Carnegie Mellon Open Learning Initiative model) which also includes online technical services for project participants to improve retention and graduation rates.

The second Activity adopted by the TAACCCT Round 3 Project was to develop a continuous feedback improvement component, which would include online technical services that would improve retention and graduation rates at the CUSJ. During Project implementation, two strategies were implemented: (1) Project staff created a database with information on all students enrolled in the certificate programs developed by TAACCCT Round 3 Project, and provided monthly follow-up, (2) Faculty members used the educational platforms (*Blackboard, Moodle, CAMS*) to assess students' academic achievement, provide additional courses content and activities, and provide feedback on student achievement.

After Project completion, the first strategy could no longer be performed. The CUSJ is currently encountering budget limitations, due to the crisis Puerto Rico is going through (impact of Hurricane María, increase migration patterns, changes in demographics / reduction in births) which did not allow to institutionalize the Educational Platforms Administration and the Educational Coordinator positions (covered by TAACCCT Round 3 Project). However, Faculty members, as part of their responsibilities, keep using the educational platforms to assess student performance and to provide feedback.

Even though the main component for the rigorous feedback and improvement could not be continued, additional efforts made by Faculty members and CUSJ administrative personnel, have been placed to increase graduation and retention rates.

Activity 3

Develop an aggressive and thorough placement component for this project, including building partnerships with employers in the health, security and other industries consonant with the short career programs to be develop through this project.

During project implementation, a Job Placement Officer was hired. Among the different services provided were: resumés reviews, workshops on how to write a resumé, interview strategies, job fairs, contacting potential employers to promote the hiring of CUSJ graduates. However, budget constrains have prevented the CUSJ in the institutionalization of the Job Placement Officer position, which is currently a limited hours contract. This situation may suggest that the CUSJ may not be able to continue offering the needed services provided by this position. In this matter, even though the Activity 4 was completed during Project implementation, there is insufficient evidence to support the CUSJ ability to continue offering job placement services in the near and more distant future.

It should be noted that some of this Activity's expected outcomes could not be properly assessed (students been employed within the field of their choosing, keeping their jobs, getting higher paying jobs, etc). Data on employment was collected during project implementation, but student tracking was a challenge, due to low participation rate in surveys. After students complete their academic programs, contacting them is difficult, as many change phone numbers, and institutional emails become inactive.

Even though the CUSJ made many efforts to attend to the student population needs, personal and professional circumstances could prevent students from achieving higher paying jobs, and promotions within the fields of their choosing. The financial crisis currently affecting Puerto Rico (which was worsen since the impact of Hurricane María

on September 20, 2017) has dramatically increases the number of companies closing operations in the island. This represents a great challenge for graduate employment.

Activity 4

Improve existing underused and/or deteriorated physical structures and related infrastructure to enable provision of the blended, online delivery of courses, teleconferencing and technology-enabled learning strategies such as interactive simulations, virtual instruction and others, as necessary to attain this project's objectives.

The Project was successful in improving its existing underused and deteriorated physical structures, and in updating many classrooms to provide the necessary equipment of a technology – enabled educational experience. Laboratories to provide practical experiences and equipment needed for simulations were purchased with TAACCCT Round 3 funding. Students expressed how satisfied they were with the equipment and labs they used during their enrollment at the CUSJ.

There is no doubt that the improvements the CUSJ's physical and technological infrastructure underwent as part of the Activity 4 will allow the CUSJ to keep offering academic programs aligned to labor market needs, and better serve its student population. Also, it will allow the CUSJ to increase the number of students enrolled at the institution, as well as the academic offerings available to different populations.

Implications for future projects

The lessons learned from the TAACCCT Round 3 Project at the CUSJ will allow future DoL projects to better address the needs of displaced, unemployed or at risk of losing their jobs populations.

- The working force is made up of an extremely diverse population, in terms of educational level, age, interests, location and needs. TAACCCT projects aim to help workers eligible for training under the TAA for Workers program, as well as a broad range of other adults. It is important that DoL local offices join forces with the TAA office to help HEI's to identify and address the needs of this population (displaced or at risk of losing their jobs).
- Even though community colleges developed projects to address different educational needs, the DoL, through its local offices and dependencies, needs to develop a research culture within industries, as to better assess the strengths and weaknesses, and needs of the current workforce. This information should be available to HEI's to better adapt their academic offerings.
- Future projects must address the specific needs of the population it served. Access to higher education institutions represent many challenges to the working force, which encompasses household providers of different ages and abilities. Older adults who have been away from a formal educational setting for a long time may encounter difficulties adapting to new technologies.
- Needs assessment should be done by local DoL offices periodically (yearly or every two years) and data be made public in a timely manner. Constant

communication much be enable between higher education institutions and DoL offices to allow for the appropriate feedback among efforts.

- One of the main challenges encounter during this Project's implementation was the lack of financial aid to pay for tuition fees. Part of the Project's funding should allow for scholarships and work-study financial assistance, which not only would provide much needed financial assistance to low-income students, but also provide professional exposition and experience in different fields, while allowing students to pay for their education.

Recommendations for project improvement and for future programs

Every educational project encounters challenges during its implementation. Some of these challenges are related to participant recruitment, unaccounted variables that affect decision making, and project management, among other. This project evaluation process has provided insight that allows to provide recommendations that may improve future projects and programs.

Participant recruitment

- Initially, participants were to be TAA eligible students, but access to this population was limited. In this matter, the local WIA office has a major role to fulfill. To improve the outreach to the TAA eligible population, and the displaced workers' population, the local Department of Labor (in this case, the Department of Labor and Human Resources of Puerto Rico) and local WIA offices must provide, in a timely manner, information that may allow TAACCCT grant recipients to contact eligible participants (while protecting confidential information, when appropriate).
- WIA offices and the local DoL agency should collaborate in program outreach and explain eligible participants of programs benefits.
- The CUSJ and the TAA local offices must implement more aggressive promotional campaigns of all funded programs, with special focus on the different job opportunities within the fields. While the Internet (social networks and institutional webpage) provides a great mean for communicating its academic programs offering population announcements, especially for the

younger population (students from 16 to 25 years old), it may not be as effective for older populations (26 and older). Other strategies to promote the funded programs could be radio and newspaper announcements. The CUSJ affiliation to the San Juan Municipality Administration represents a challenge on this matter, because the CUSJ is unauthorized to use part of its budget (administered by the SJM Finances Office) on Marketing strategies. More autonomy and independence must be provided to the CUSJ to promote its academic offerings, and an appropriate budget for Marketing must be allocated.

Project implementation

- Due to a delay in the availability of financial aid for the Certificate programs funded with TACCCT Round 3 Project funds, five out of the nine programs could not be offered during the Project operations. This affected both programmatic activities and outcomes. In future similar scenarios, the CUSJ should anticipate this situation. In the meantime, other tuition funding options should be provided to the educational community. This may be necessary to allow for proper project implementation and to achieve the expected results on a timely manner.
- As projects are implemented, different aspects from the original statement of work may need to be change. It is important to communicate those changes to project staff and to document the changes approved by the Project's DoL Monitoring Officer. All amendments should be documented and communicated in writing to project staff.

- Faculty members should have a more active role in project implementation. They serve as liaison between administration and students, and could help improve project outreach to the student community, by informing of activities and services available, communicating students' concerns to proper staff, etc. They, also, should be more involved in the development and implementation of new educational technologies and modules, to ensure proper adoption by faculty members who shall collaborate by adapting their own educational practices.
- As many students stated that more online activities should be available as part of the different academic programs, the CUSJ should request authorization to the CEPR for the offering of hybrid and completely online courses, and, when appropriate, should consider the possibility of designing academic programs that may be offered completely online.

Project management

- The DoL may provide grants recipients with a guide on how to document properly project activities. One of the biggest challenges for a project evaluation are related to the lack of documentation on efforts made by the Project staff. Many activities and work was placed into proper project execution, but in many instances, there were no documentation available to validate project results.
- To improve project effectiveness, all CUSJ personnel and students should be aware activities and efforts made by the project. Monthly reports from project staff must be collected, as well as quarterly activities reports should be

presented by Project Director and discussed with project and CUSJ staff. A periodical bulletin with activities, services and achievements could be distributed among CUSJ staff, faculty members and students.

- Just before project's conclusion, a closing report should be prepared by every project staff. These reports should include information about all activities performed during Project operations, as well as all activities in progress. Data collection and analyses performed should be explained to all CUSJ administrative staff, so that efforts can be retaken and continued after Project personnel is no longer working at the institution. If necessary, training of Project's operations and processes should be offered to CUSJ staff.

Partners and collaboration agreements

- The CUSJ has many partners when it comes to practice workplaces but need additional partners to provide job opportunities to graduated students.
- Many agreements are informal; it is recommended that meetings and agreements be documented and reviewed on a periodical basis.
- The lack of personnel at the CUSJ to provide follow-up on current collaboration agreements, as well as to identify additional partners on a regular basis is an area that needs to be addressed.

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