The BOROUGH of MANHATTAN COMMUNITY COLLEGE
TAACCCT-II EVALUATION

Final Finding:
A Comparative Assessment of TAACCCTT and Health Lattice

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Evaluation Summary

To address and respond to the health care workers' shortage and recession, The Borough of Manhattan Community College (BMCC) has expanded its education program to create a seamless career path for TAA eligible workers and non-TAA workers in the healthcare sector. The program was aimed at providing educational and hands on training to students in careers such as medical assistant specialist, medical billing and coding, certified nursing assistants and electronic health record specialist. Two programs were created and funded by the Department of Labor, the Health Lattice and Health Information Pathway Academy (TAACCCT II). Both programs were evaluated to assess the programs success in training and creating job opportunities for students. The Health Lattice program has reported 68% (n=234) of the students graduated from the program and 111 were placed in jobs as nursing assistants, 98 were placed in jobs as medical assistant specialist, 50 in electronic health record specialist and 20 were placed in jobs as home health aid assistants. Compared to the TAACCCT program that trained 318 students, in which 314 completed the program and 198 were placed in employment site. The TAACCCT II program, demonstrated overall success in its ability to form partnerships with employment agencies, understand the challenges the students faced and provided continuous support to students in the career endeavors. One limitation to the program was obtaining student participation to assess   students understanding of industry content, and their career success. The low participation did not allow for a statistical analysis of program's success rate and cost benefit analysis.

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EVALUATION FRAMEWORK

Introduction:

In 2012, 186, 300 jobs were reported, in fields such as medical records technicians working in physician offices and hospitals.[1] Moreover, employment in health information technician is expected to grow by 22% in 2012-2022. Between 2007-2011 HITECH job growth accounts for 48% of growth in the US. [2] By 2020 medical billing and coding specialist job will increase by 21%.[3]

New York City is considered having the largest hospital and health care systems that would contribute to the health care job creation and demand for health care workers. To address and respond to the health care workers' shortage, Borough of Manhattan Community College (BMCC) and its partnering organizations have expanded to improve on existing program offerings to create a seamless career path for TAA eligible workers and non-TAA workers.

BMCC has a long history and maintains a strong working relationship with several NYC agencies responsible for TAA benefits to workers, the NYC Dept. of Small Business Services (SBS) and the WIB.

BMCC's job training program is inline with industry job growth predictions by developing and training TAA eligible workers in the field of ***medical billing and***

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[1] United States Bureau of Labor Statistics (2012). Occupational outlook handbook. Retrieved February 3rd, 2013 from http://www.bls.gov/ooh/healthcare/medical-records-and-health-information-technicians.htm

[2] Herch, W. (2013). Health I.T job growth has been underestimated? *Health Data Management.* Retrieved on February 3rd, 2014 from http://www.healthdatamanagement.com/blogs/health-IT-job-growth-has-been-underestimated-46746-1.html

[3] Open Education Database (2014). Retrieved on February 3rd, 2014 from http://oedb.org/careers/medical-billing-and-coding/

coding specialist, medical assistant specialist, electronic health record

specialist, and health informatics specialist. These job-training programs will

prepare and equip students to be able to compete in the marketplace. The need for

medical billing and coding specialist is evident in New York City due to the increased

(4, 300) job opportunities between 2003-2008.[4] Additionally, the Bureau of Labor

Statistics estimates the number of medical billing jobs increase by 27% nationwide

in 2008-2018 and 17% in New York State between 2008-2018. [5] Moreover, there is

an expected growth by 34% by 2020 for medical assistant specialist due to the

growing demand for preventive medical services. In New York, the demand is

expected to increase, by an estimated 23, 850 job vacancies through 2018[6]. Another

fast-growing industry is electronic health records specialists (EHR) with

approximately 35, 100 jobs anticipated by 2018 and the demand for EHR specialist

in New York City is 11% through 2018. Lastly, health informatics specialist will

account for 60% of health information jobs and is considered the 8th largest health

care occupation. Employment for health care informatics increased by 36% and an

estimated 69, 290 individuals are currently employed in health informatics and 12,

472 job opening are expected over the next 10 years. BMCC has received two grants

for their training programs, Health Lattice and TAACCCT II to train students in the

healthcare sector.

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[4] The Health Care Workforce in New York; Trends in the supply and demand for healthcare workers. (June 2014). Retrieved on September 8th, 2014 from
http://chws.albany.edu/archive/uploads/2014/08/nytracking2014.pdf
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http://www.healthcareersinfo.net/education-costs/
[6] New York State Department of Labor, Fastest Growing Occupations.
http://labor.ny.gov/stats/index.shtm

Purpose:

The purpose of this evaluation was to examine the efficiency of the BMCC Health Information Pathway Academy (TAACCCT II) in achieving its stated strategies. The overall evaluation was designed to track and monitor the development, recruitment, implementation, and summative processes of the TAACCCT II program. Data from the evaluation was used to assess the project's impact and outcomes in the success of training, credentialing and employment of TAA-eligible workers, unemployed candidates, and US Veteran workers. Moreover, evaluation findings provided guidelines and documentation of the programs progression, development, and programmatic improvement for future successful educational program implementation. Lastly, the evaluation compared the Health Lattice curriculum which encompasses a Certified Nursing Assistant (CNA) track, Medical Assistant Specialist (MAS), Electronic Health Records Specialist (EHR), and Health Information Technology (HIT) with the current TAACCCT II program (the TAAACCCT II program tracks were *medical billing and coding specialist, medical assistant specialist, electronic health record specialist, and health informatics specialist).*

Main Objectives/Goals:

The main objectives and goal of this evaluation was (two-fold):

Phase 1: evaluated BMCC's TAACCCT-II compared with the Health Lattice job training program by assessing the program's curriculum, student clinical training, internship opportunities and job readiness workshops that prepared the students to be able to obtain meaningful jobs in the healthcare industry. Moreover, the

evaluation examined the percentage of students who've earned enough credit to transition into an associate degree program and position themselves for long-term educational and job obtainment (TAACCCT II only).

Phase 2: reported on TAACCT-II evaluation study consisting of the survey findings from the process evaluation study. This randomized study evaluated the students' preparedness for jobs in the healthcare industry.
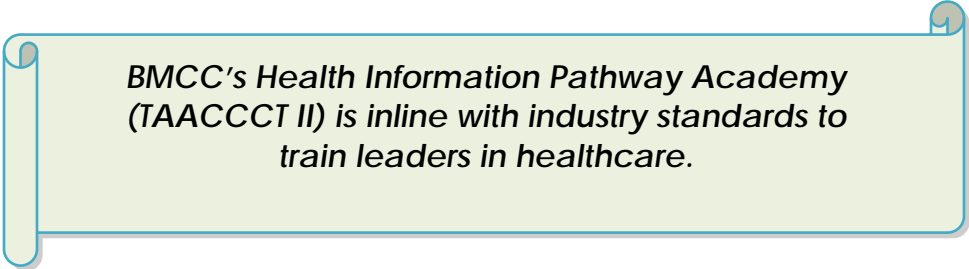
Results from the evaluation provided guidelines on areas that are effective and areas that needed improvement to help the students receive the best training that meet industry standards. Lastly, results gathered from this evaluation provided a detailed outcome of the Health Lattice program.

Evaluation Research Questions:

The evaluation sought to answer the following questions regarding the BMCC Health Information Pathway (TAACCCT II) project:

A. Is the project effectively training the students by creating a rigorous curriculum, providing industry standard internships that are improving the career outcomes of the TAA-eligible participants and non-TAA participants?

B. Is the project preparing the students with proper clinical experiences for jobs in the health care sector? Are students able to pass the required licensing exam and obtain jobs?

C. Is the project offering financial benefits to the students, government and society? Are the students pursuing advance degrees to further their education?

To properly assess and develop a thorough comparative evaluation of the Health Lattice and TAACCCT II program, specific methodologies were developed. The evaluation was divided into two phases: with phase one examining and comparing Health Lattice and TAACCCT II (curriculum and recruitment) programs. Phase two developed a randomized control study assessing TAACCCT II program and student's success.

BMCC's Health Information Pathway Academy (TAACCCT II) is inline with industry standards to train leaders in healthcare.

EVALUATION METHODS

Evaluation Theory:

Both impact and process evaluation methodologies were used for the evaluation. In addition, the Zimmerman and Schunk (1989) Self – Efficacy for Self-Regulated Learners was used to assess students' learning styles and confidence in succeeding in an intense workforce development training. Impact evaluation was used to assess lessons learned and the intended interventions' impact on the overall programs' outcome. The self-efficacy/self-regulated model was used to assess the students' motivation for being in the program. Self-efficacy/self-regulated leaners are defined as an individual's self-generated thoughts, feelings, and actions, towards their own career goals. Self-generated learners are defined as learners whom engaged in academic task for their personal interest and satisfaction. It was important for us to evaluate the motivational determinants for why the students applied to the training program because motivation and self-efficacy is a predictor for success.

Evaluation Design for Phase 2 TAACCTT II Study:

Methods:

The TAACCTT II study used both quantitative and qualitative methods to collect data; including questionnaires from Newman's quality of learning survey, Short-form of career decision making self-efficacy questionnaire, John Biggs Learning

Process Theory, and the self-determination scale. Lastly the Human Capital Scale was used to examine cost-effectiveness benefits.

Students were randomly assigned into either an intervention or control group.

All the students received the same education and activities. The only differences were those in the intervention received extra one-on-one time with the case managers, mentorship and special activities (Appendix 1: proposed logic model). Those in the control group received the prescribed educational curriculum.

Study Procedures:

On the first day of program's orientation students were asked to participate in a 30-minutes online- survey monkey questionnaire that took 30-minutes to respond. Students are asked to respond to questions assessing their self-determination, learning style, and career decision making self-efficacy. Two weeks into the program, students were asked again to participate in another survey monkey questionnaire that assess their quality of learning and understanding of the curriculum and clinical materials. Lastly, at the end of the program the final survey was administered to examine the students career decision self-efficacy.

Statistical Methods:

Mixed methods design quantitative and qualitative analysis was used. Quantitative approaches will allow us to aggregated data and analyze descriptive characteristics, and predictive relationships. Online surveys will be used to capture data on class session, such as exam and quiz scores to assess knowledge learned,

and educational log/diary about their program process, feelings about the program, and lastly self-efficacy/self-regulated survey (will be given at baseline, two month into the program and the last day before taking the certification exam).

Qualitative was used to probe, explain the relationships, contextualize differences in the relationships and lastly interpret observed patterns and trends amongst students who were not capturing the materials or social activities. Qualitative methodologies were adapted during one-on-one time with case managers (baseline interviews and throughout the semester), and during job readiness activities.

RESULTS

This section provides a brief overview of previous results on the comparative evaluation conducted on Health Lattice and TAACCCT II. In addition, this section will report final TAACCCT II outcome.

Health Lattice:

At the time of assessment and evaluation, the Health Lattice program had ended making the evaluation flawed with inconsistencies and unable to provide true program assessment due to missing data. Health Lattice had several challenges when assessing the program's curriculum objectives, program admission, procedures and outcome of the students' performance. The program's core objectives varied due to three director changes. The curriculum for Electronic Health Record and Information Technology were both detailed and program began in the second year of the grant. The curriculums objectives varied from professors teaching the classes and were not the same information being taught. In addition, there were no formal data collection, database or evaluation conducted for the programs. Obtaining data for the CNA program was challenging because it was not managed by the Lattice Director and was oversaw by a different department. Third, the oversight of the program's coordination and evaluation of the students learning objectives was not collected or maintained. There were no records of students' demographic information and ability to follow-up to assess the students' career success. In addition, the data could not be analyzed further to report the means of those whom succeed and thought the clinical objectives were beneficial based on, gender, ethnicity or social demographics. It was difficult to assess and develop
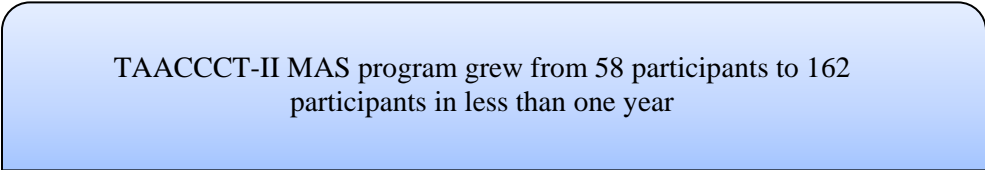
meaningful data for population sampling due to the invalid data collection. Fourth, it is unclear how students were recruited for the Health Lattice program for the first two year of the program because no data was collected. The success rate can only be measured by graduation of the program and not long-term job retention. Health Lattice did not have meaningful success with TAACCCT because of key challenges mentioned above.

TAACCCT-II Outcomes:

The final stage training for TAA eligible workers, as well as individuals impacted by the recession. The program is a 36-month educational program aimed at training a total of 420 individuals in pivotal roles in healthcare. In addition, a continuing education pathway has been implemented into earning a two-year degree after the successful completion of the TAACCCT training program. This stackable credentials were, three non-credit occupational tracks, leading to the creation of a One-Year Certificate Program in Health Informatics Science (HIS). The program consisted of 531 total hours, in which 352 hours was class training and the 180 remaining hours was allocated for internships. The students will be trained as a medical assistant specialist (MAS), medical billing and coding (MBC) and electronic health record specialist (EHR).
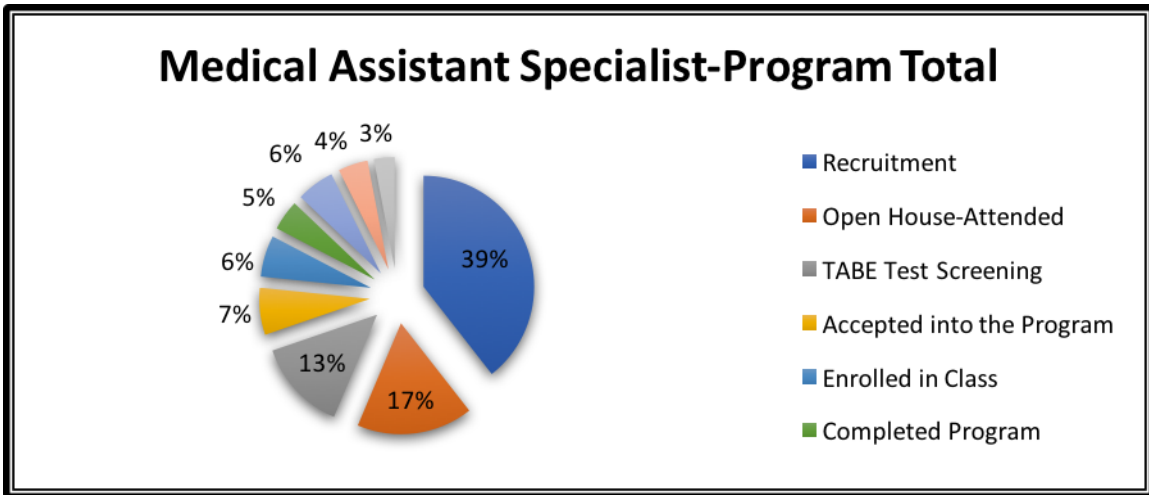
During this process evaluation recommendations were made to improve the overall low-employment placement and internship placement. Several strategies were developed and implemented, such as hosting a LinkedIn seminar with the students and the director of LinkedIn on how the students can improve their profile was conducted to improve student profile and job marketing. Second, a partner's luncheon was help to engage partners on understanding the challenges on

converting an internship opportunity into a job, and assessing whether the students were trained per industry standards. Third, an alumni survey was implemented to assess challenges the students were facing in obtaining employment. Lastly, an employment specialist was hired to work with the alumnus on resume writing, job interviewing skill set and networking with the partners to help improve employment numbers.
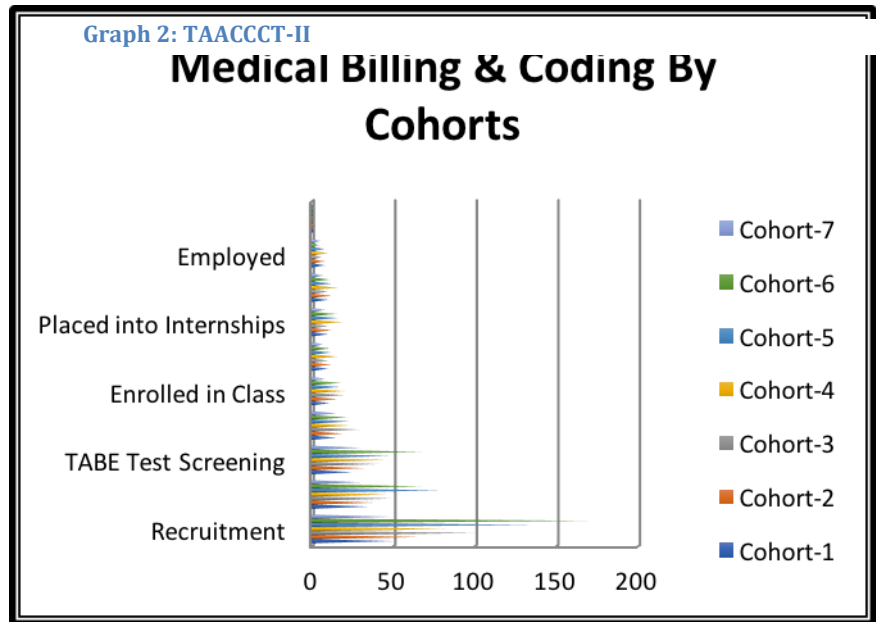
> TAACCCT-II MAS program grew from 58 participants to 162 participants in less than one year

The overall MAS program has strong recruitment in which over 1,229 students were recruited from which 529 attended the open house and 417 were TABE Tested. After taking the TABE test it revealed students qualifying to be accepted into the program were 214 and 188 were enrolled in the programs. The MAS program demonstrated that 138 students completed the program and 95 of those were placed in employment (see graph below). Although 135 students were placed in internship, unfortunately, 95 of those placed could get employment. At the time the program was being conducted New York faced a challenging employment market and some of the medical facilities were downsizing and unable to hire.

Medical Assistant Specialist-Program Total

- Recruitment — 39%
- Open House-Attended — 17%
- TABE Test Screening — 13%
- Accepted into the Program — 7%
- Enrolled in Class — 6%
- Completed Program — 5%
- 6%
- 4%
- 3%

Graph 1: TAACCCT-II

Graph 2: TAACCCT-II

Medical Billing & Coding By Cohorts

- Cohort-7
- Cohort-6
- Cohort-5
- Cohort-4
- Cohort-3
- Cohort-2
- Cohort-1

Categories: Employed, Placed into Internships, Enrolled in Class, TABE Test Screening, Recruitment
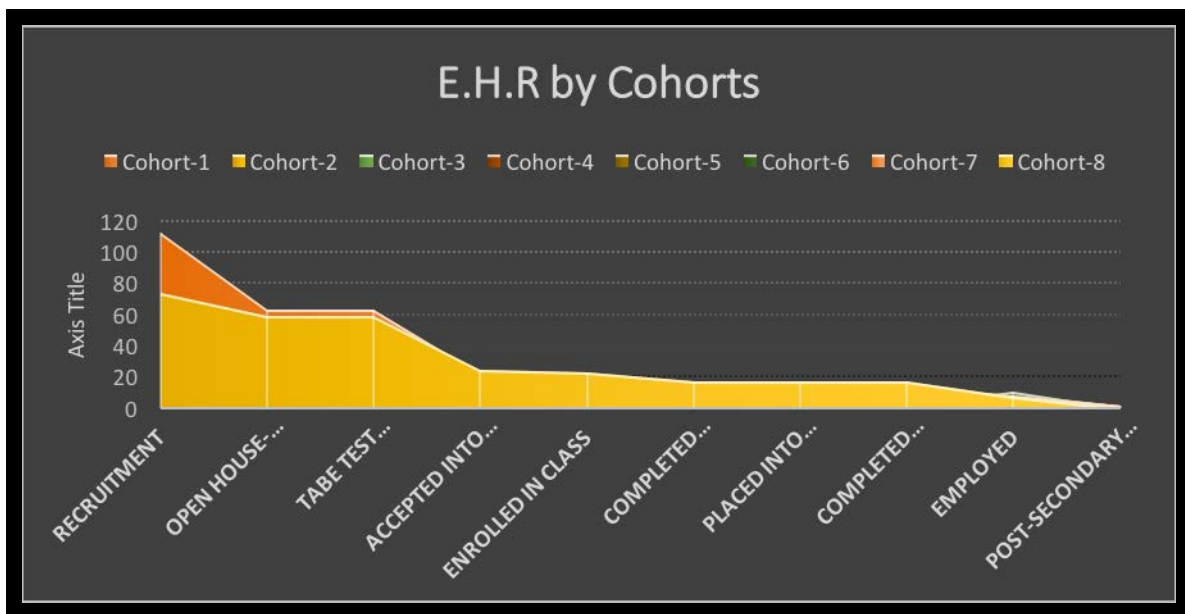
The Medical Billing and Coding program had several challenges in which of the 78 students that completed the program 37 could get employment. Although, 658 were recruited, 289 were TABE test, 146 were accepted only 110 were enrolled in the class (see graph 4). The program had high recruitment rates, after going through the inclusion criteria, the number of students that were qualified to enroll and complete the program were low. internship.
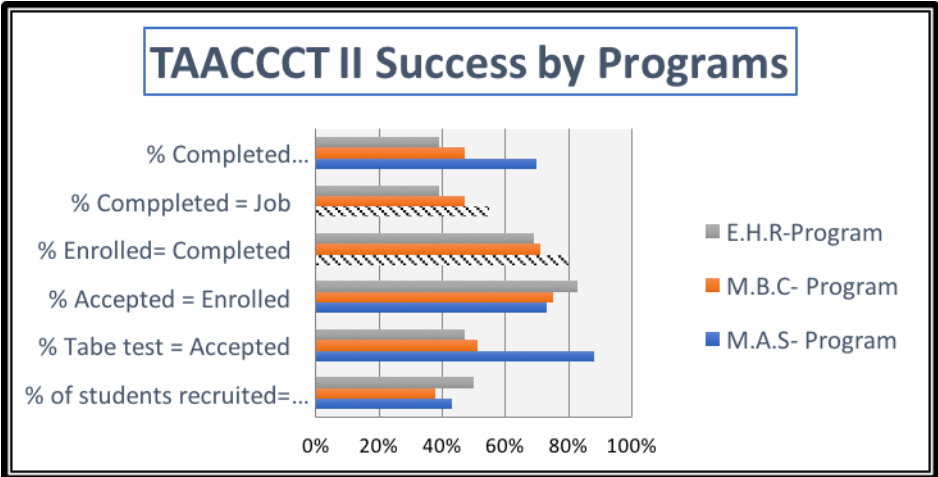
There is a decrease in the number of participants recruited, accepted, enrolled, completed and employed from cohort 1-cohort 8 in the MBC program.

The Electronic Health Record program, demonstrated improvement from cohort 1 through cohort 8, in which 54 students were employed from the 80 that completed the program. Although a total of 608 were recruited, 310 took the TABE test and 130 were accepted but only 118 enrolled for classes (see graph 5, the program demonstrated that there was a high interest in Electronic Health Record and a need for continued education in electronic health record programs.

Graph 3- TAACCCT II

Overall all three programs Medical Assistant Specialist, Medical Billing and Coding and Electronic Health Record demonstrated some programming success. The challenge these three programs encountered were placing students into jobs. BMCC's TAACCCT II program indicated that there were high number of students interested in the program due to high recruitment rates and those who attended open house sessions. Unfortunately, what impacted the number of students continuing into the program were TABE test qualifications and Department of Labor inclusion criteria, in which the students did not meet the standard qualifications to

TAACCCT II Success by Programs

% Completed…
% Comppleted = Job
% Enrolled= Completed
% Accepted = Enrolled
% Tabe test = Accepted
% of students recruited=…

- E.H.R-Program
- M.B.C- Program
- M.A.S- Program

0% 20% 40% 60% 80% 100%

Graph 4- TAACCCT II

be accepted into the program. After several meetings with employment partners, meeting with former graduate alumnus and one-on one sessions with the students to improvement employment placement, it was revealed that New York City was not the only city having a difficult time at improving employment for individuals engaging in career transitions, elderly and young adults.

This is especially true amongst young adults today whom faced a tough job market. In a national data one in seven adults are out of school and unemployed7. Many young adults struggle to find work, and those who do find jobs, only find part-time, low wage work. According, to the Bureau of Labor Statistics United States Department of Labor (2015), unemployment rates were lower in July 2015 prior to other years8. While all young adults are facing a tough economic environment, young adults from poor communities face particularly long odds of success. In New

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7 Maguire, S. (2016). Optimizing talent: the promise and perils of adopting sectoral strategies for young workers. The Aspen Institute Economic Opportunities Program. Workforce Strategies Initiatives at the Aspen Institute and Job First NYC: Unleashing the economic power of young adults.
8 Bureau of Labor Statistics, U.S Department of Labor (2015). Employment and Unemployment among Youth 2015.

York City, the rates are staggering where, 35% of youth ages 18-24 are unemployed or in low-wage jobs9.

We there interviewed our partners to understand the challenges they faced when training and hiring our students. Our survey demonstrated that, our students were well prepared for the job market and understood the industry, unfortunately, the jobs were not available for them to be placed. Our data indicated that out of the 314 students that completed one of the three program, 198 did get employed and 213 needs to get placed into a job site (see graph 4 & 5). BMCC continues to engage and work with employment agencies to get the students placed and continues to offer job-preparation workshops. Our partners at various hospitals, clinics, and doctor offices were enthusiastic about our program and


Final Students Completed the TAACCCT Program
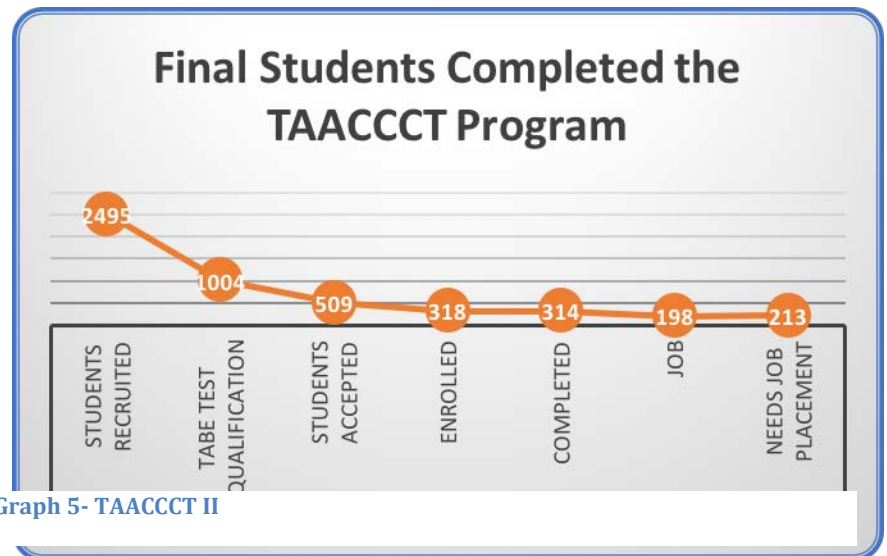
Graph 5- TAACCCT II

being an internship site for our students. Through these relationships the students were able to secure employment opportunities. All the partners indicated that the program was in-line with industry standard, the students were well trained and

9 New Skills at Work JP Morgan Chase& Co; Closing the skills gap preparing New Yorkers for high-growth, high demand, middle-skill jobs 2016.

were professional in the work place.

Partner Survey
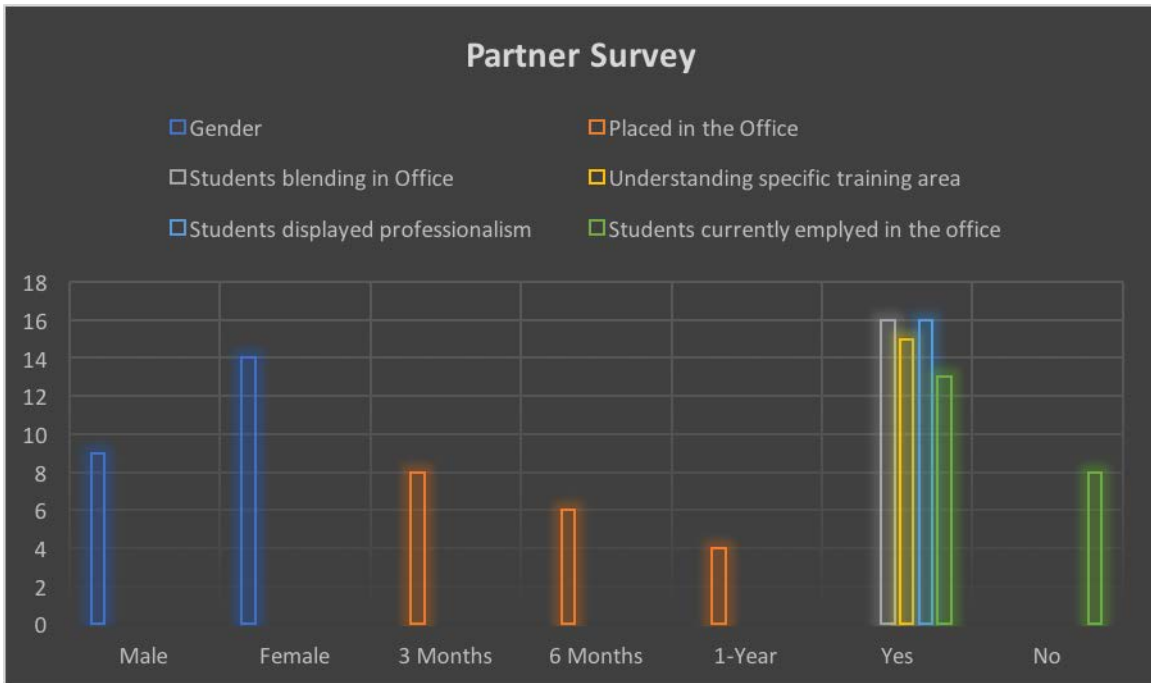
Graph 6- TAACCCT II

Future programs may consider developing initiatives with employment facilities in helping them improve their site to be able to facilitate opportunities of employment to the students. One example is the Office of National Coordinator worked with city regional centers to provide internships and employment opportunities for students trained in their health information technology curriculum. Through these efforts over 40,000 individuals were trained and employed. The TAACCCT II BMCC initiative was successful in developing the training program that trained students and provided them employment opportunities. BMCC has engaged in a marketing campaign and working with industry leaders in assessing and developing job opportunities for students. One key limitation to the program evaluation was ensuring the students were engaged in taking the research study survey that was designed to access program success, and

learners' objectives and understanding of the content being learned. The survey did not have enough cohort participation for a full data analysis for statistical significance. Future Department of labor projects may consider including a stipend for students to take licensing exam, work with employers for training and engage the community in understanding social factors that impacts employment.

Reference:

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Appendix 1: BMCC Health Information Pathway Evaluation

Logic Model Template

Program: Health Information Pathway

Goal: To provided students educational skills in the areas of Health Information that will translate into jobs and degreed programs

INPUTS	ACTIVITIES		OUTCOMES		
What we invest	**What we do**	**More activities**	**Why this project: short-term results**	**Why this project: intermediate results**	**Why this project: long-term results**
- Case Managers (4) - Job developers and coaches (4) - Research Assistant (1) - Data coordinator (1) - Project Director - One Computer - Safe and secure cabinet to keep data and files	- Specialized Career workshops - Career Counseling - Occupational Training - Certification - Internship preparation - Soft skills workshops	- Career Journals - Resume writing workshops - Special individual critic of their resume - Mock interview with case managers - One on one skills about social skills in the work place - Special Training on the use social media i.e. LinkedIn - Alumni events	*Learning* - Awareness - Knowledge - Attitudes - Skills - Opinions - Aspirations - Motivations	*Action* - Impart skilled occupational training - Prepare participants for entry into the workforce - Provide a pathway to a 1 year college certificate - An internship	*Conditions* - Students will have the confidence needed to become marketable and get a job in the designated industry - Create access for participants to pursue an associate degree

Assumptions	External Factors
• Lectures and professors teaching the program and their ability to relate to the students • Students not sharing their one on one sessions with their peers • Case manager's ability to provide constructive feedback • Biases during intervention implementation	• Positive and negative influences students experience with each other and the program staff • Cultural differences and economic issues students may face • Learning disabilities and class structure