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CREAR FUTUROS: OBSERVATIONS AND OUTCOMES
2015-2018 FINAL REPORT

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ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

"This is what the program does. It guides you so you know that you are not alone."
2017-2018 CF Mentee

"It was the fact that knowing that there was someone there that believed in you when you couldn't believe you could do it."
2017-2018 CF Mentee

In 2012, the Hispanic Federation initiated a peer mentoring program at four City University of New York (CUNY) colleges[1] to improve the academic success of Latinx students, many of them first generation college students. Funded by the Lumina Foundation for Education, the new program called Crear Futuros, involved a multi-faceted approach to build a "*community of care*" for students at risk for dropping out. The Crear Futuros program consists of several inter-related components including peer mentoring, advising and referrals, and community building activities.

In establishing Crear Futuros (CF), the Hispanic Federation identified five interrelated goals.

- *To improve mentees' rates of retention from semester to semester, year to year*
- *To improve mentees' GPAs*
- *To improve credit accumulation by mentees*
- *To improve mentee's rates of completion from two-year colleges and their transfer to four-year colleges*
- *To improve mentees' rates of completion from four-year institutions*

In 2013, the Michael and Susan Dell Foundation awarded a grant to the Hispanic Federation to continue and expand the Crear Futuros (CF) initiative, to additional CUNY colleges and beyond, and to facilitate the institutionalization of these campus-based programs. The shift to the Dell grant was accompanied by a second generation of programing structures and policies. Over the past six years, CF has been established at five CUNY colleges – John Jay College of Criminal Justice (JJ), Lehman College (LH), New York City College of Technology known as City Tech (CT), LaGuardia Community College (LaG) and the Borough of Manhattan Community College (BMCC); as well as three non-CUNY colleges - Connecticut's' Naugatuck Valley Community College (NVCC); University of Central Florida (UCF); and most recently Rhode Island College.

In the winter of 2015, HF contracted with Rutgers' University's Education and Employment Research Center (EERC) to be the third-party evaluators for CF. Over the past three plus years the EERC team has worked with HF staff to better understand the implementation of the

[1] City College, Hostos Community College, John Jay and Lehman. Note after one year, given "*limited administrative capacity to support the students in a fair and just way*," Hostos and then City College opted out of the program.

various campus programs; to help HF make improvements along the way; and to refine the CF campus model. In addition, EERC has helped HF track and analyze the impact of program participation on both CF mentees and their mentors. EERC has utilized both qualitative and quantitative evaluation methods.

The full EERC evaluation report presents EERC's observations, and based on available data,[2] student demographics and outcomes. It also identifies some of the implementation and institutionalization challenges colleges are facing; and makes recommendation how to address some of these challenges. Further, it discusses issues of model building, sustainability and expansion.

We begin this executive summary by setting the context - a brief overview of the Crear Futuros program model. We then highlight findings from EERC's evaluation of both mentor and mentee experiences, and CF's impact on student outcomes - academic, social and personal. These outcomes are followed by EERC's identification some of the challenges Hispanic Federation faces as it moves towards sustaining and expanding its campus programs and creating a signature and effective peer mentoring model.

CAMPUS PROGRAM MODEL

In launching Crear Futuros campus programs, HF offered a significant amount of program "elasticity." HF's goal was not to duplicate existent services, but to add to or enhance the array of services provided to students. The result was a fair amount of variation in the implementation of CF across the participating colleges. Currently there are four different structural models for CF that exist across the seven colleges under study.

- Universal peer mentoring and course enrollment
- Department faculty leading mentoring program
- Student support/services mentoring program
- CBO partnership with college

While variation can be good, the widely different structural models impede effective institutionalization at the participating colleges. Furthermore, model clarity is required for HF to develop a signature CF peer mentoring model, and assess which aspects of the model, and their synergy, result in the largest impact on student outcomes. Model clarity is also an important consideration for scale and sustainability.

"COMMUNITY OF CARE"

In its original proposal to the Michael and Susan Dell Foundation, the HF included the creation of a "*community of care*" for all the mentees as one of its goals. It appears from the feedback EERC received that most campus programs have achieved this – although not always in the same way. Most mentees spoke of feeling welcomed and connected to their respective mentors and to other mentees on their campus. The CF campus community facilitated mentees'

[2] Given geographic limitations, and the 2017 launch of NVCC and UCF, most qualitative findings come from EERCs work with the five CUNY colleges. Quantitative data analysis includes all but Rhode Island College with whom EERC never secured a data agreement.

transition from high school into college; and encouraged them to get to know students like themselves – first generation Latinx college students.

Participation in the CF community and the support of CF mentor and other mentees helped many mentees stay focused on their school work – CF creating both a peer support or reference group. Both mentees and mentors shared that participation in CF had resulted in enhanced self-confidence, more curiosity, and greater capacity to become engaged in other campus and community activities.

MENTEES

Experiential Outcomes

Mentees reported that their mentors served as helpful academic and personal role models. Ethnic-cultural identities were also a significant area where students – especially Latinx students felt the mentors influenced their personal growth.

The importance of mentor support resonated throughout EERC's interviews and focus groups with mentees- mentees felt heard, supported and valued. As one mentee stated, *"I feel like there is – she cares about you and she remembers everything that you (sic) told her."* And another shared, *"being supported and (feeling) there's somebody interested in how they're doing*

Mentors not only provided information, but helped mentees recognize their own capacities, assisting them to explore and expand other aspects of themselves. Mentees often consulted mentors on study skills, majors, tutoring, registration, time management, and scholarship opportunities, as well as career planning. This finding is particularly important as the social science literature identifies the need of first-generation students to have access to information about post-secondary education.

Academic Outcomes

City University of New York (CUNY) Colleges

To examine differences in student outcomes EERC conducted a propensity score matching analysis.

The following academic outcomes were found to be statistically significant when comparing CUNY mentees against the matched control group of CUNY students.

- CF has had a significant positive impact on students' fall to fall retention rate. CF mentees fall to fall retention rate was 10 percentage points higher than that of the controls.
- CF has had a significant positive impact on credit gain. In a three-year follow-up period, mentees earned 20 credits more than did the controls.
- CF has had a significant positive impact on cumulative GPA's. The CF mentees had significantly higher cumulative GPA's than the controls.

- The CF program is associated with mentees' enrollment in further education at a CUNY after completion of another program of study. The percentage of re-enrollment by CF mentees was close to 15 percentage points higher than that of the controls.
- A three-year comparison of fall 2014 CF mentees and their counterpart controls found that the mentees had a significantly higher graduation rate (0.17 for the mentees and 0.12 for the controls).

Naugatuck Valley Community College

The NVCC program was launched 2017. For the single year of the CF program, EERC used propensity score matching to analyze impact. found no statistical differences between the two cohorts for any of the student outcomes.

University of Central Florida (UCF)

The UCF program was launched 2017. For the single year of the CF program, EERC again used propensity score matching to analyze impact. And found that

the fall-to-spring retention rate of CF mentees was better than the control. With100 percent of CF mentees continuing versus 96 percent of controls, a statistically significant finding.

MENTORS

Not all CF mentors or mentees were of Hispanic origin, however, in EERC's interviews it was clear that becoming a role model for mentees became a very significant part of their experience and their personal identities. "*We tell them our own stories and how things worked for us.*

Mentors spoke about how they were growing socially and personally from their working with their mentees. And, some mentors reported that being a mentor helped them become even more attentive to their own academic performance.

A challenge but also an area of growth for many mentors was learning how to be emotionally and socially present but also how to set boundaries with mentees and maintain their own personal space.

CHALLENGES AND SUGGESTED SOLUTIONS

The following were the most frequently identified challenges and suggested solutions across the colleges.

Institutional Commitment: Campus liaisons were often stretched with multiple hats in addition to their liaison roles. Some campuses lacked a separate dedicated CF room in which mentees and mentors could meet. Colleges need to commit multi-year funding for a full-time liaison; and a dedicated space for the CF program.

Mentors Caseloads: In many cases mentors had more than 20 mentees – that was too much. The consensus was to have only 10-15 mentees.

***Mentors' Stipends*:** Mentors often worked 12 months but were being given a stipend for only 10 months. Further, stipends were not competitive with other student work study opportunities and/or campus jobs. In order to recruit and maintain mentors**,** HF needs to re-assess mentor payment amounts and schedules.

***Mentor Training*:** While many mentors found the HF training retreat and monthly sessions helpful – only CUNY students could attend each month. Mentors and their liaisons requested more training content on setting boundaries; how to help mentees "*without doing for them;*" self-care; and how to effectively balance the demands of mentoring, being a student and having a life out of college. In addition, there was a request to sequence training topics to parallel the challenges students encounter over the course of semester, e.g. exam week; and to enhance the coordination between campus level workshops and HF trainings to reduce duplication of focus and ensure that critical topics got covered.

EVALUATION

"Keeping good quality interaction data was a challenge."

Measuring the impact and the success of CF is a multi-layered and involves the intersections of multiple factors. It also is predicated in the ability to identify what success means to whom; and to collect accurate data about program activities, and most critically mentor-mentee interactions.

To continue to assess the academic, social and personal impact of CF participation on mentees, HF should refine (with the help of mentors and liaisons) and commit to a log system that captures the frequency of contact, mode of contact and subject matter for all mentor-mentee interactions.

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PREFACE

Research shows that Latinx student enrollment in post-secondary education is increasing but that retention and graduation for these students is low (Castillo et al, 2006; Fry & Lopez, 2012). Using data from 2014, Krogstad found that completion of a bachelor's degree was lower for Latinx students than their white, black and Asian counterparts.(Krogstad, 2016) Data also shows that Latinx students are often the first in their families to attend college, which is a strong predictor for dropping out prior to their second year (Lohfink & Paulsen, 2005; Padgett, Johnson & Pascarella, 2012; Somers, Woodhouse & Cofer, 2004). First generation students lack information about college and often do not have people to turn to in their families or social networks to help them navigate the systems (Cabello, 2004; Kim and Schneider, 2005; Moschetti & Hudley, 2014; Pascarella, Pierson, Wolniak & Terenzini, 2004; Schneider, Martinez & Ownes, 2006).

One of the evolving strategies to address the above issues is the establishment of peer mentoring programs focused on at-risk student populations. Peer mentoring in an academic setting is defined by Colvin and Ashman as a more experienced student (mentor) helping a less experienced student (mentee) improve academic performance by providing advice, support and knowledge. (Colvin & Ashman, 2010) Others have noted that the goal of peer mentoring is to help with both social and academic integration into postsecondary education (Morales, Ambrose-Roman & Perez-Moldonado, 2015). Evidence on the effectiveness of peer mentoring however, is mixed. Some studies have found that peer mentoring improves retention, and results in favorable academic and social outcomes (Asgari and Carter Jr., 2016; Leidenfrost, Strassnig, Schabmann, Spiel & Carbon, 2011; Sanchez, Bauer, & Paronto, 2006). Others have argued that there is actually very little evidence establishing a link between peer mentoring and academic achievement (Budge, 2006; DuBois, Doolittle, Yates, Silverthorn & Tebes, 2006; Jacobi, 1991). While the research on peer mentoring demonstrates some conflicting evidence in terms of academic achievement there does seem to be evidence supporting the value of social outcomes and even the development of social capital (Moschetti, Plunkett, Efrat, & Yomtov, 2018). Additionally, there is a great deal of research documenting the importance of student integration and connection to a post-secondary institution as a determinant for academic success (Tinto, 1997; Tinto, 2006). Rios-Aguilar & Del-Amen (2012) found that the quality and quantity of social networks may help to explain the differences in both academic engagement and persistence for Latinx students.

In 2012, the Hispanic Federation initiated a peer mentoring program at four City University of New York (CUNY) colleges[3] to improve the academic success of Latinx students, many of them first generation college students. Funded by the Lumina Foundation for Education, the new program called Crear Futuros 1.0, involved a multi-faceted approach to build a "*community of care*" for students at risk for dropping out. From its inception, the Crear Futuros has included peer mentoring, advising and referrals, and community building activities.

[3] City College, Hostos Community College, John Jay and Lehman. Note after one year, given "limited administrative capacity to support the students in a fair and just way," Hostos and then City College opted out of the program.

In 2013, the Michael and Susan Dell Foundation awarded a grant to the Hispanic Federation to continue and expand, to additional CUNY colleges and beyond, and to facilitate the institutionalization of these campus-based programs. The shift to the Dell grant was accompanied by a second generation of programing structures and policies. Over the past six years, CF has been established at five CUNY colleges – John Jay College of Criminal Justice (JJ), Lehman College (LH), New York City College of Technology known as City Tech (CT), LaGuardia Community College (LaG) and the Borough of Manhattan Community College (BM); as well as three non-CUNY colleges, Connecticut's' Naugatuck Valley Community College (NVCC); University of Central Florida (UCF); and most recently Rhode Island College.

In the winter of 2015, HF contracted with Rutgers' University's Education and Employment Research Center (EERC) to be the third-party evaluators for CF. Over the past three plus years the EERC team has worked with HF staff to better understand the implementation of the various campus programs, identify promising practices as well as challenges; and to help HF make improvements along the way, address challenges, and refine the CF campus model. In addition, EERC has helped HF track the impact of program participation on both CF mentees and their mentors. These student outcomes, as will be discussed below, have included academic as well as more subjective social and personal changes identified by program participants.

To date, EERC has produced a series of evaluation reports, power point presentations, matrices and other data related materials to record and track the CF experience. These evaluation materials include the following.

- Quarterly reports for the Michael and Susan and Dell Foundation
- *Interim Evaluation Report* (June 2017)
- Model Matrix - College Campus Programs (Spring 2017)
- Liaison Session Power Point – *Evaluation and Reflections* (June 2017)
- Templates for Mentor and Mentee Contracts (July 2017)
- Mentor Training Power Point on Evaluation (August 2017)
- Liaison Retreat - Power Point - *Preliminary Evaluation Findings and Observations* (June 2018)
- Crear Futuros Logic Model
- Interim Survey Data Reports
    - Findings - Fall 2017 Mentor Survey
    - Findings - Spring 2018 Mentor Survey
    - Mentor/Mentee Interaction Surveys

This is Rutgers' final evaluation report to the Hispanic Federation about the Crear Futuros Initiative (CF). The report has been divided into nine (9) sections. INTRODUCTION: a discussion of the goals of CF and measures of possible success. METHODOLOGY: presents the evaluation methodology used by EERC - both qualitative and quantitative strategies. THE

CREAR FUTUROS PROGRAM: this examines the components of CF and the various CF campus models. PEER MENTORING & ITS IMPACT: in this section EERC discusses peer mentoring, presents observations from the field, as well as data from the mentor-mentee interaction logs. In addition, we present on the impact of program participation on both mentees and mentors. CUNY AGGREGATE – MENTEE CHARACTERISTICS, STUDENT OUTCOMES & PROGRAM EFFECTS: this central section includes a discussion of data used, outcome variables, and presents a descriptive analysis of CUNY mentees. This is followed by a comparative analysis of CF mentees and control students in respect to student outcomes. The section ends with analysis of program effects using propensity score matching. PROGRAM CHALLENGES & SUGGESTED RECOMMENDATIONS: this section explores specific campus challenges as well as overall concerns about the CF program model., and recommendations to address them. PROGRAM MODEL & SUSTAINABILITY: here EERC discusses the logic model that integrates lessons learned; and addresses some of EERC's concerns about campus integration and long-term sustainability.

PART I: INTRODUCTION

A. GOALS OF THE CREAR FUTUROS PROGRAM

In establishing Crear Futuros (CF), the Hispanic Federation identified five interrelated principal goals.

- *To improve mentees' rates of retention from semester to semester, year to year*
- *To improve mentees' GPAs*
- *To improve credit accumulation by mentees*
- *To improve mentee's rates of completion from two-year colleges and their transfer to four-year colleges*
- *To improve mentees' rates of completion from four-year institutions*

In addition to these goals, HF wanted the CF program to enhance the ability of mentors and mentees to make informed academic and career choices by providing opportunities and guidance about academic and career pathways. HF also wanted to develop the leadership skills of both mentors and mentees. Further, and significantly, HF wanted CF-campus and HF-related activities to create a "*community of care*" so that students felt supported in their academic and personal journeys as first-generation and Latinx students; felt more integrated into the life of their respective colleges; and had the chance to meet successful Latinx and begin to develop their social capital.

B. MEASURES OF SUCCESS – MAKING A DIFFERENCE

As a multi-faceted program, there are many ways measure the impact and the success of Crear Futuros. In this report, we present several different methodologies to identify program impact related to students' rates of retention, accumulation of academic credits, GPA, and program completion. You will see these analyses below. In addition to this impact analysis, we have also provided a qualitative analysis looking at the experiences of students (mentors and mentees) in the program. This too is valuable information to inform us about the impact of CF. While we have documented in this paper how we as evaluators are looking at the impact of the program, we also wanted to know from the mentees and mentors – how they would measure program success. The feedback we received speaks to the less tangible, but perhaps more weighty impact of CF on students.

As one mentor stated,

> *Going back to finding the voice it depends on the individual themselves. There is no way to measure it. It's about personal growth and based mostly on testimonial. If I look at me as a freshman, I'm different person now that I was then, but there aren't numbers to measure that. You can see it, but that's it. GPA and all the other areas can happen at any moment. Just because people take longer to get the GPA or something doesn't mean they aren't succeeding.*

And another mentor observed,

> *I don't really think there is one right way of measuring. If we look at GPA you can have a mentee with a 2.5 GPA and one with a 3.9, but that doesn't mean the 2.5 student isn't successful. There is no right way to measure it.*

The impact of the program was for many related to an increase sense of self-confidence - a new or heightened sense that they could do more than they thought they could.

> *Well, for me success would be when my mentee finally says, wow, I didn't know I could do it. A lot of times when they first started, they're like, oh, well, I don't know if I can do it. Maybe I don't know want to do it. But after they start to believe in themselves.*

> *My focus isn't entirely getting everyone to graduate. My focus falls on this one phrase, if you know better you do better. With that in mind I am always thinking, what can I give them, so they are well informed, they make better decisions.*

As will be further discussed below in Part V, growth - personal, social and academic - was for both mentees and mentors the measure of CF's impact.

> *It is very fulfilling to see how you benefit someone else. It makes you become a better version of you by help someone else achieve their best self.*

> *…seeing him grow and do what he wants to do and do it well, seeing any of my mentees doing well in whatever they're trying to do, that's how I measure it. If they do, we well then that means I'm doing well.*

Further, participation in CF helped students better understand that growth may come in different forms – thus helping both mentors and mentees shift their perspectives and giving more room to discover who they are and who they could become. Hard to measure but truly a sign of success.

> *There is no way to measure it because people grow in their own way. It's so hard to measure because it's so individualistic*

Finally, success meant finding support from and fellowship with their peers, experiencing a "community of care" and in the process gaining, in sociological parlance, "social capital."

> *An indicator of success is a mentee that (sic) is part of this program, does things successfully, and then comes back. I think that if they come back it shows that the system helped them, and they made a connection*

> *This is what the program does. It guides you so you know that you are not alone.*

As you read this report it is therefore important to think of the challenge and also the opportunity EERC had to measure the success of the different CF campus programs, and how the synergy of CF's multiple facets impacted the lives of program participants.

PART II: METHODOLOGY

Since the winter of 2015, EERC has been engaged in qualitative and quantitative data collection and analysis to evaluate the development and implementation of the Crear Futuros program; and to track and measure program outcomes, successes and challenges. This report primarily uses data collected in the final academic year of the EERC's contract (2017-2018) but also draws from some earlier data collection.

The report examines data collected from seven out of eight[4] Crear Futuros' colleges - John Jay College of Criminal Justice (JJ), Lehman College (LH), New York City College of Technology known as City Tech (CT), LaGuardia Community College (LaG) and the Borough of Manhattan Community College (BM); as well as two non-CUNY colleges, Naugatuck Valley Community College (NVCC); and the University of Central Florida (UCF).

A. QUALITATIVE METHODS

EERC's qualitative evaluation focuses on the Crear Futuros' program model; the implementation of CF at the seven colleges under study; HF's mentor training; and the experiences of both mentors and mentees who participated in the program. Qualitative data collection included the following activities and data sources.

- Interviews with senior staff at HF including the Assistant VP for Programs, VP for Strategic Advancement and Operations, the Director of Education.
- On-campus interviews with faculty and staff involved with CF
- Interviews and focus groups with mentors and mentees.
- Participant observation at HF's summer mentor training sessions
- Participant observation at several monthly mentor meetings hosted by HF
- Periodic meetings with campus liaisons
- Development and review of mentor- mentees interaction activity surveys[5]
- Development and analysis of mentor surveys.

Qualitative data was coded and analyzed using Nvivo qualitative data software. In addition to data collection EERC also worked with the Hispanic Federation to develop and refine a logic model for the project (See Section IX and Appendix G).

B. QUANTITATIVE METHODS

[4] No data agreement was established with Rhode Island College and thus no data was collected.
[5] To date there has been inconsistent completion of these surveys by colleges and by mentors. See sections on Mentor Interactions, Challenges and Next Steps.

EERC's quantitative evaluation focuses on the sociodemographic characteristics of the mentees, and evaluates the program's impact on mentees' academic performance by addressing the following three major research questions:

1. Who were the mentees at each of the colleges?
2. Did mentees out-perform their counterparts at each of the colleges in terms of their academic outcomes: retention, earning credits, completing a program, and GPA?
3. To what extent were the academic pathways different between the mentees and their counterparts? Did two-year college (community college) mentees have a higher probability of transferring to senior colleges and re-enrolling in school after earned degrees?

Data

Quantitative data used in this final report were collected from CUNY's citywide student data base on behalf of the five CUNY colleges. NVCC and UCF provided data on their mentees directly to EERC. EERC received all data at the end of fall 2018. The data points requested from CUNY and the two other colleges included CF mentees' demographic information, registration, course history, and graduation outcomes.

To address the question of program effects, EERC requested CUNY, NVCC and UCF to provide a comparison cohort (control) that consisted of students who had similar demographic and academic characteristics to the CF mentees (treatment group). Demographics, school enrollment, class history, and graduation information on the comparison cohort were also provided. Note, each of the colleges differed in terms of program years (a range of five for JJ and one for both UCF and NVCC); and in their mentee recruitment. As a result, each colleges' control samples were chosen via a different method.

Smaller schools such as NVCC and UCF provided EERC their whole fall 2017 non-mentee first-time-in-college (FTIC) cohort to serve as their comparison groups. Since all fall 2017 UCF mentees were Latinx FTIC students, EERC restricted the controls to fall 2017 Latinx FTIC students not in CF. The NVCC control sample consists of white, black, and Latinx students to align with the mentee sample.

In the December of 2018, CUNY provided the list of their fall 2012 cohort, and requested that EERC to randomly select 5,000 students for the CUNY control group. The fall 2012 cohort was chosen so that we could look at longer term outcomes at CUNY including graduation.

Although the data requests for each CF college were consistent, the data sets from each college were different. This was the result of different school policies in respect to the handling sensitive student level data;[6] the variability in the availability of data points; differences in

[6] UCF could only provide birth year. Calculating age of the student based on birth year may not be accurate. Both UCF and NVCC did not provide information on student's disability status.

demographic categories, e.g. race/ethnicity; and differences in academic measurements, e.g., credit accumulation. As noted above, there were also differences in mentee recruitment and selection. The result was that EERC did not have cross college consistency of baseline academic information and/or outcome measures. Please refer to Appendix A for the definition of the variables and a comparison of the variables used for each college analysis.

Data analysis plan

Due to the differences in the data submitted by each school, especially the mentee population and outcome measures, and the different times each college's program was launched, EERC conducted separate evaluation analyses for CUNY, NVCC, and UCF. For each college, EERC first conducted a ***descriptive analysis*** of the CF mentees to present the demographic characteristics of the mentees, their academic background, and their academic outcomes. Then, EERC ***evaluated the program effects*** by comparing the demographic, academic background, and academic outcomes of mentee and their respective control sample using a propensity score matching analysis.

Descriptive Analysis

The descriptive analysis for each school begins by presenting the socio-demographic characteristics [gender, race/ethnicity, age, financial aid], academic background [student type – transfer or first -time college, starting term, academic level, registration status (part-time or full-time status), previous degree] of the mentees, and the academic outcomes of interest.

Outcome Variables

For its evaluation, EERC worked with the Hispanic Federation to identify outcome variables on which to focus. These include:

- ***Fall-to-spring retention rate*** - this measures the proportion of fall 2017 students who continued to pursue their academic studies by enrolling in spring 2018.
- ***Term GPA*** was provided by each school at the end of each semester.
- ***Number of quality credits*** are the sum of all course credits students earned with a grade C or higher. This measure follows the college guidance that any course where a student earns a C or better can be used to satisfy general education requirements.
- ***Credit gain in three years*** among CUNY students to explore the longitudinal impact of CF program on students' cumulative credits.
- ***Transfers within CUNY colleges*** examines the transfer from a two-year CUNY community college to a four-year CUNY college.[7]

[7] The 2 CUNY two-year colleges are BMCC and LaGuardia.

- ***Re-enrollment after graduation*** reflects whether students remained in school for further education. In addition to the above outcomes, a few colleges provided supplementary data which we used for additional outcome measures. See the college sections.

Evaluating program effects

EERC used propensity score matching to estimate the CF program effects on the mentees. This method has become a popular approach to estimate program effects using observational data. In situations such as educational training programs where randomization is not possible, propensity score matching is an accepted method to account for the bias in the outcome effects introduced in the treatment selection process (Fan & Nowell, 2011; Morgan et al., 2008). It accounts for the conditional probability of treatment selection to reduce bias when comparing program outcomes between the treated and the controls. The propensity scores are estimated using socio-demographic and academic variables related to the outcome of interest - balancing scores to create matched treatment and control groups that are comparable to what researchers would achieve under a randomized control trial. The resultant matched treatment and control groups are similar except for their treatment status.

In this evaluation, the variables used for propensity score matching are those that have been demonstrated in the educational literature as associated with college student's academic outcomes (Koivusilta et al, 2003; Swell & Hauser, 1972; Stanfiel 1972; Strayhorn 2006; White 1982). The variables used for propensity score matching may vary slightly between schools because of differences in data. The mentee sample may also differ by schools based on how the colleges selected their mentee populations. Please see the individual college sections.

As its first step, EERC compared the mentees with a control sample drawn from data sets provided by the colleges. These data sets vary slightly, so please note the differences in each section. The descriptive analysis provides a general baseline comparison of the mentees (treatment group) and controls (non-treatment group) on the variables that were used for propensity score matching. The variables used for propensity score matching may differ from those presented in the mentee descriptive analysis. Variables that perfectly predict the treatment status or have lots of missing values are excluded from propensity score matching. Descriptive data is only presented to showcase the characteristics of the HF mentees and the control students.

To create a propensity score, we first fit a logit regression model using covariates to predict the treatment status to see if the covariates predict the treatment assignment. In other words, is being a part of CF explained by these variables. These covariates include student's sociodemographic characteristics (gender, race/ethnicity, age, financial aid status), baseline academic background (prior degree, student level), and registration status. The covariates are dichotomized before being entered into the logit model. For example, gender is dichotomized

with 1 indicating female students and males serving as the reference category.[8] Similarly, as applicable, white is used as the reference for minority groups.[9] For age, non-traditional age students (25 and older) are used as the reference category. Receipt of a Pell grant is used as a proxy for financial aid status - students who are economically disadvantaged. The reference category is non-receipt of Pell. Prior credential - a high school diploma or GED - is coded as 1 and the reference category is associate degree recipients. When student level is considered, the highest level such as sophomore or junior serves as the reference category. In terms of registration status – part-time student status is the reference category for full-time student status. Depending on the variables provided by each college, the covariates used for propensity score matching may vary.[10]

EERC then matched the mentees to the control students based on the propensity scores. In this process we used the nearest neighbor matching procedure. After matching, we assessed the extent to which propensity score matching reduced the difference between the treated and the controls on the covariates by examining the standardized differences between the treated and the controls in terms of the covariates.

Finally, EERC used the robust Abadie–Imbens standard error to evaluate the CF program participation effects on the outcomes. These estimated results are based on propensity score matching where the treated and controls are comparable except for their treatment status.

The results of the propensity score matching analysis provide the best evidence of the program impact. However, the reader should be aware – given sample sizes and the length of follow up, the results reported here should be viewed with some caution. Of note, the results from the propensity score matching analysis are the only comparative results tested for statistical significance.

[8] EERC is aware that gender is not binary, but for this study we used the data available which is binary.
[9] This remains an artifact of research protocols yet to be addressed as a problematic analytic construction.
[10] For example, all mentees in UCF were Hispanic. Therefore, the control sample consists of only Hispanic students as well. Race/ethnicity is not included as a covariate in the matching process. Moreover, NVCC provided the targeting credential of their students and this information was used for propensity score matching. However, this measure was not available for UCF students.

PART III: THE CREAR FUTUROS PROGRAM

A. COMPONENTS OF THE CREAR FUTUROS PROGRAM

The Hispanic Federation considers CREAR FUTUROS (CF) to be "*one of HF's strongest programs*," a "*signature" program*" that utilizes Latino cultural heritage and HF's network of community-based organizations. CF is described as a peer mentoring program in which trained students engage with new freshmen and transfers - their mentees. Mentors act as role models; offer information and guidance about academic and college life; supply information about internships, careers, employment, cultural, community and social activities; and help mentees to feel integrated into a "*community of caring."*

The core elements of the CF campus-based programs include the recruitment of mentors; the recruitment of mentees; mentor-mentee interactions; and mentee developed campus activities. Initially, in recognition that each college had its own unique student population, faculty/staff resources, and structures for student academic and advising services, HF offered a significant amount of program "elasticity." HF's goal was not to duplicate existent services, but to add to or enhance the array of services provided to students. The result was a fair amount of variation in the implementation of CF across the participating colleges. Over time, with feedback from the programs themselves and the need to measure student outcomes and program impact, HF clarified expectations in respect to the frequency of contact between mentors and mentees. This change was instituted in August 2017 with the development of mentor and mentee contracts. Establishing the minimum amount of mentor-mentee interaction – helped to align the different campus programs – but significant differences remain in program structure and activities. As such, there is not a singular CF model but an "*an overarching framework*" in terms of goals and activities.

B. PARTICIPATING COLLEGES

The original CREAR FUTUROS program began in 2014 and involved several two- and four-year colleges within the City University of New York system. In 2016, when Rutgers' EERC began its work with the Hispanic Federation, CF involved 3 four-year CUNY colleges (Lehman, John Jay and NY Technical College) and 1 two-year college (LaGuardia). Over the past three years, an additional two-year CUNY college launched its CF program (Borough of Manhattan Community College); and HF expanded out of state – adding community colleges in Connecticut (Naugatuck Valley CC) and Rhode Island College; and a four-year college in Florida (Central Florida University).

This report focuses on the CF programs at the five CUNY colleges, as well as at NVCC and CFU.[11]

[11] The delayed start of the Rhode Island CF program, and the absence of data agreements between ?? and EERC, precluded EERC from collecting data and evaluating outcomes.

C. CAMPUS PROGRAM MODELS

Currently there are four different structural models for CF (See Table 1 below).

- **Universal peer mentoring and course enrollment (**John Jay)
    - John Jay's CF program is located under Academic Affairs.
    - All registered John Jay students must participate in at least one peer mentoring program during their freshman or first transfer year.
    - John Jay CF mentees are assigned to one of two sections Latin American studies and English 101. As such, twice weekly all CF mentees meet as a class.
    - John Jay's CF mentors are required to take a two-semester course on mentoring for which they receive a total of 6 academic credits.
    - At least once per week CF mentors must be present in the CF course sections, as well as work closely with course instructors.

- **Department lead mentoring program (City Tech College)**
    - The CF program is located within an academic department – Human Services.
    - A member of the Human Services' faculty is provided release time to lead the program.
    - The majority of CF mentors are Human Service majors, who have completed several courses in counseling and human behavior.

- **Student support/services mentoring program** (**Lehman, BMCC, LaGuardia, UCF**)
    - The CF program is located under the college's Division of Student Services or a similar office and is often linked or embedded in other peer support and/or multi-cultural programs.

- **CBO partnership with college (NVCC)**
    - A community-based agency (CBO) provides leadership, staff, and the operational resources for the college's CF program.

Given the significant differences across the 7 CF programs – college peer mentoring, training activities, leadership, level of institutional integration, and to some extent different student populations - it is important that the reader understand that student outcome data is only suggestive of CF's impact on students' success outcomes. And, that the current report cannot identify which campus and program elements, and in what combination, contribute the most to positive student outcomes.

TABLE 1: CREAR FUTUROS PROGRAM STRUCTURES

	CUNY New York City College of Technology	CUNY Borough of Manhattan Community College	CUNY John Jay College of Criminal Justice	CUNY LaGuardia Community College	CUNY Lehman College	Naugatuck Valley Community College	University of Central Florida
First Year of CF Program	2012 (CF1) 2016 (CF2)	2013 (CF1) 2017 (CF2)	2014	2015	2016	2017	2017
2- or 4- year college	4 year	2 year	4 year	2 year	4 year	2 year	4 year
Campus Location	Academic Department - Human Services Department	Student Services – Peer Mentoring	Academic Affairs - Student Academic Success Program	Student Services Campus Life /Multicultural Exchange	Division of Student Affairs/ Urban Male Leadership	Hispanic Center of Greater Danbury	Office of Diversity and Inclusion
Liaison Position[12]	Faculty - Assistant Professor of Human Services	Program Coordinator - Peer Mentoring Program (PT)	Assistant Director of the Student Success Initiative (PT)	Student Life Manager Multicultural Exchange (PT)	CF Program Liaison (FT)	HF Conn. State Coordinator - (PT) plus / staff from HCGD (PT)	Assistant Director of Hispanic Initiatives (PT)
Principal Majors of Mentor	Human Services	Varied	Varied	Varied	Varied	Varied	Varied
Campus-based Mentor Training	Orientation workshop	Two-week training	3-day summer training plus 2-semester course on mentoring (total of 6 academic credits)	Orientation workshop	Orientation workshop	Workshops	??
Mentees Required Course(s)	None	None	Two courses (6 credits) [13]	None	None	None	None
Number of CF mentors	6	4	4	4	4	2	4

[12] Except for Lehman College's full-time liaison, CF campus liaisons wear other hats and vary in their time commitment to CF from 30-50 percent.

[13] All CF mentees take the same section of Latin America studies course and an English 101 during their first year at John Jay.

PART IV: MENTORING & ITS IMPACT

A. MENTORING

The word "mentor" comes from the Greek. In Greek mythology, mentor was a friend of Odysseus whom Odysseus asked to tutor and guide his son, Telemachus, when Odysseus went off to fight in the Trojan war. Over the centuries "mentoring" has come to mean being guided and advised by a trusted and "wiser" individual who is often older than the mentee (Emory University Human Resources, n.d.); a helping relationship that can be developmental, psychosocial, instructional, and/or social, in its focus.

In the literature, the functions of mentoring, have been described as social and resource networking; advising; role modeling; tutoring; and peer support; etc. (Crisp, 2010). And the process of mentoring is often discussed in terms of the frequency and regularity of mentor/mentee contacts; the nature and the intensity of the interactions; individual or group sessions; mandated or voluntary; the mechanics of mentoring; the use of technology (Ward, Thomas & Disch, 2014); as well as types of rewards or compensation for being a mentor (Gershenfeld, 2014).

While the above descriptors provide a general conceptual framework, the literature consistently observes that "mentoring" is poorly defined or operationalized (Dawson, 2014; Crisp, 2010; Kutieleh & Kutieleh, 2015; Terrion & Leonard, 2007). This is the case even in studies which report that "mentoring" improves retention and completion rates (Leidenfrost et al, 2014; Ward, Thomas, & Disch, 2014); enhances social integration and civic engagement (Naseem, 2013); and facilitates academic and career choices.

The frequent failure of researchers to operationalize "mentoring" results in methodologically and conceptually problematic studies, wherein it is challenging to measure the true impact of mentoring on individuals. In the absence of an operational definition, it is difficult to identify evidence-based practices; or to develop a dynamic and integrated theoretical framework (Gershenfeld, 2014; Ward, Thomas & Disch, 2014;) on which programmatic decisions can be based.

Without better definitions of the "what" and the "how," including mentor selection, mentor training, and/or mentor/mentee matching, evaluating the impact of mentoring will continue to be a challenge and practitioners will struggle to create the most effective mentoring programs. In it is in this context, the section below presents how the CF mentors and the supervising campus liaisons described the role of the mentor and the mentoring process at the seven CF campus programs.

B. OBS**ERVATIONS FROM THE FIELD - Being a Mentor & the Process of Mentoring**

Over the past 18 months, members of the EERC team have interviewed CF mentors, CF mentees and campus liaisons to ask them about mentor-mentee interactions; and the role of the mentor. Consensus emerged across the interviews, that a mentor's role is to guide mentees – to "*help them*," "*meeting them where they're at and helping them grow from there*." Interviewees stated that mentors had to be "*active listeners*," able forge a connection with their mentees. The work was to provide support and facilitate the process of getting needed information and/or resources. "*Guiding someone through steps that they need to take and supporting them."*

While the mentors recognized they might not always "*have all the answers*" they stated that they had a responsibility to help the mentee find them. As one mentor reflected, "w*alking along the journey with them."*

All mentors spoke about the need to reach out and connect with their assigned mentees, to work on developing some type of relationship. To begin this process, the liaison at one college – post mentor-mentee matching – instructed the mentors and mentees during orientation to "*give each other a 3 second eye-to-eye look*…" telling them. "*We want you to know this will be your partner to success. We want that visual respect*."

Many mentors spoke about being sensitive to their mentees' different "*needs and communication styles."* They described a continuum of mentor-mentee interactions from casual to more intense. Over time, given changes in the mentee's life, the intensity of the mentor/mentee relationships might shift. Several mentors reflected that it was often tricky *"to switch from the more casual to more serious conversations about academics"* and other issues. Thus, the bottom line for even casual relationships, was the formation of some type of connection – "*because without the connection they won't come back."* Developing a relationship enabled mentors to work with mentees as one mentor said,

> *Emphasis is on using our relationships with them to help them achieve their dreams and help them feel more at home. Owning their identity.*

Another foundational element of mentoring process was the creation of a "*safe space*" where mentees could "*feel(s) someone is on their side*."

> *If you just help them with the homework, and then there's nothing really there they won't feel it. They won't want to. As long as you try to relate; as long as you try and be there more than just this is it, and that's that, then I think that's the most important thing, because that means they'll …. open for the improvements. They'll come back.*

But mentors also recognized that

> *…usually by the time they tell somebody something that's wrong or that they're struggling, it's gone so far down the tracks that it's hard to even put a dent in addressing it, so I think giving them the place to talk.*

Mentors therefore felt a responsibility to create a metaphoric, if not literal space, where work could get done – "*sitting down and talking about problems,"* included *giving people context for how you're going to move forward;"* helping them to develop guidebook or a map *"to help you try to find out where you want to go;"* as well as how best to *"weather this storm*."

What emerged in EERC's interviews with mentees – was that it was truly important to them to be heard, supported and valued. *"I feel like there is – she cares about you and she remembers everything that you (sic) told her."* Significantly, this sense of a support and caring was echoed even by those mentees who did not feel the best mentor match had been made for them. Even if there was not much closeness or mutuality, they felt they were *"being supported and (feeling) there's somebody interested in how they're doing*."

During our interviews the terms "*coaching*" and "*mentoring*" were often used interchangeably. However, at John Jay where there is a universal peer support culture – mentors spoke about the difference between the two terms. For John Jay mentors, "*mentoring*" had more to do with the identification and the facilitated use of information and resources. In contrast, "*coaching*" focused on the details of the interaction, observing body language, mixing both the cognitive and the emotional. In some ways, like being an athletic coach observing and guiding an athlete to achieve an improved performance.

John Jay's mentors suggested that coaching was to help students make the transition into the college community while mentoring was helping them think and move beyond college - the student's post college plans and preparing for that future.

> *Mentoring is your traditional, focused on first-year transition, connecting them with resources, kind of like getting them off on the right foot. And the coaching is really, you know, supporting these planning behaviors.*

John Jay's campus liaison echoed the mentors.

> *…coaching often involves setting a specific goal whether that's academic, professional or personal and coaching the student, supporting the student along the way. It's really about, it's more of a partnership between the coaches and the students, as opposed to the mentoring relationship when we had a peer kind of like giving a tip or telling students how to do things or how they should behave.*

At the other colleges, the roles of coach and mentor were more blended. Mentors were there to help mentees with their high school to college transition; and to help them gain a "*better understanding of what college is about*." These mentors saw their roles as helping mentees access information on scholarships, and/or finding internships. They were also there to help mentees "*gain knowledge about how to be successful." "If you need help for academic issues or personal issues or anything you can go to your mentor*."

Providing role models to Latinx students is a major aspect of the CF program. And while not all mentors or mentees were of Hispanic origin, being a role model was very much part of each mentor's identity. "*We tell them our own stories and how things worked for us."*

Mentors shared their own challenges and how they learned to advocate for themselves – and thus as they advocated for their mentees they also were teaching "*them to advocate for themselves."*

As one mentor reflected,

> *I teach them to be vocal throughout their life and if they want something to go for it. I know most of them are freshman and sophomores and they tend to be shier, so I encourage them to find their voice.*

Mentors also spoke how they worked to develop their mentees' self-confidence and expand their knowledge of educational and career opportunities.

> *"My focus isn't entirely getting everyone to graduate. My focus falls on this one phrase, 'if you know better you do better.'"*

> *"My focus is preparing the student to be the most competitive and marketable student possible. They're not hiring degrees, they're hiring people who can do something."*

For many mentees who are first generation college students – developing both confidence and knowledge are critical for their success.

In EERC's interviews, a number of mentees shared how their mentees had supported them and showed that they believed in their ability – pushing them beyond their comfort zone.

> Mentee: "*And it's like most of the time some of the stuff she would be mentioning I'm like, I can't do that. And she's like, you can though, there is no doubt in my mind that you can. You know what I mean? "*
> EERC: "*So – So, she has faith in you? And she believes that you can do something more than you believe*."
> Mentee: *Yes. "*
> EERC: "*And what happens usually*?"
> Mentee: "*I end up doing it." [*laughter*]*

Mentors worked with their mentees "… *on soft skills as well as hard skills*." They were also invested in developing their mentees' critical thinking, and ability to make thoughtful and informed decisions, to function in the non-academic world.

> *Getting an A or a B means nothing if you have a piece of paper at the end of it but can't get a job. That's the core of it.*

During our interviews, mentors spoke about the balance between knowing and helping and shifting the work to the mentee. "*Being a good mentor does not mean giving everything that you have to give or that they want."* A few mentors said they realized they did not need to know everything, but they still could help guide - mentees need to learn how to problem solve, to advocate for themselves, to do the work. As one mentor commented,

> *Well, also you can't make it too easy because then they will have no proof that they did anything…: … that's what gives people confidence that – the fact that you can look back and say, hey, you know what, I did that already, of course I can do this.*

And another mentor reflected, in the end, "*it is up to the mentees to make the changes."*

Mentors made themselves available to help their mentees on any issue the mentee brought up. The range of issues is captured by the logs discussed below – but include concerns about friends, family issues, childcare, housing, and matters related to physical and mental health; as well as those related to their identity as Latinx.

C. CUNY MENTOR-MENTEE INTERACTION ANALYSIS

In fall 2016 and 2017, EERC worked with the Hispanic Federation and the participating colleges to develop and implement a tracking system for mentor/mentee interactions. The system was developed over a series of meetings[14] with the college liaisons and once finalized was presented to mentors at various training sessions. For the 2017-2018 academic year, mentors were asked to document their interactions with mentees each week sharing information on frequency, content and mode. The data collection system was set-up as an online survey. It was expected that this survey would take between 3-5 minutes per mentee per week, however, some mentors said that it took them much longer to document their interactions. Given the importance of the data to be collected – frequency and nature of interactions - the Hispanic Federation established consequences for mentors not entering this data. To that effect, Rutgers provided tables on a monthly basis with information about completed logs, notifying HF of problems with completion. However, despite Rutgers' on-going concerns about inconsistent submissions, it appears that those consequences were not enforced.

[14] For the 2016-2017 academic year the agreement was monthly submission of interaction logs. Given mentor and liaison feedback that mentors could not remember a whole month of interaction, a change was made to weekly logs for the 2017-2018 academic year.

Overall, as is noted in more detail below, mentors' submission of their mentee interaction tracking logs was quite poor. Mentors were inconsistent with their entries, some seemed to document a good deal of their work while others did not submit any data to the system. In some cases, data entry changed week to week. The 2016-2017 academic year submissions and the log submissions for spring of 2018 were particularly poor. As a result, this analysis focuses only on the logs submitted fall 2017, the most comprehensive of all interactive data sets with which we had to work (see Table 2 below).

It should be noted, however, that even the fall 2017 logs, thus the fall data set, was not without problems. Therefore, while we have analyzed this data to acknowledge the work that was done, we caution the reader here in drawing many or any conclusions about the program from this information. We really do not know if the documentation here actually represents the true interactions between students and mentors, but we strongly believe it does not. In fact, we think that the data probably greatly underestimates interactions between mentors and mentees. We do, however think that presenting this data is valuable for a few reasons: 1) It helps us to understand the different modes of interactions that mentors and mentees had. 2) It helps us to understand the different topics mentors and mentees discussed 3) It provides good information on the challenges of collecting interaction data in a peer mentoring program.

The analysis below focuses on CUNY students and their fall 2017 interaction logs[15]. Due to reporting errors and the lack of de-identified student ids, not all mentees in the interaction data file could be linked to the CUNY administrative and academic data base. Of the 433 mentees which the colleges reported to Rutgers for fall 2017, we were able to link 367 students (84.8 percent) to the CUNY data set with proper student IDs.[16] The following analysis of the interaction data set is therefore based on 367 CUNY mentees.

Fall 2017 CUNY Crear Futuros Mentees

In the fall 2017 interaction data we identified 367 trackable CUNY mentees. Over 40 percent of these students were from John Jay, followed by 19 percent from Lehman, 18 percent from BMCC, 14 percent from LaGuardia and 7 percent from City Tech (Table 2). John Jay had the most CF mentees in the data set and in the CF program (N = 157, 42.8 percent) while City Tech had less than 25 students in the dataset (N= 24, 6.5 percent).

TABLE 2. MENTEES AND LOGS BY SCHOOL

School	N Fall 2017 mentees	N mentee with logs	% of mentees logged
BMCC	86	66	75.6%
City Tech	52	24	46.2%
John Jay	149	157	98.0%
LaGuardia	76	51	67.1%
Lehman	70	69	95.7%
Total	**433**	**367**	**84.8%**

[15] NVCC and UCF mentor-mentee interaction data were sparse and cannot be linked to the student academic and administrative data sets.

[16] Identifiers were not always accurately noted in the data set.

Race/ethnicity

At each of the five CUNY schools, over half of the mentees identified as Latinx and in all schools Latinx students were the majority population in the dataset. At BMCC, students were a nearly equally distributed, around 15 percent, in the following race/ethnicity categories: Asian/Pacific islander, black and white. At City Tech, 3 students identified as black and 4 students identified as white. At LaGuardia, 4 students identified as white, 8 as Asian/Pacific Islanders and 8 as black. At Lehman, a fairly large percentage of students identified as black (25 percent), additionally 6 students identified as Asian/Pacific Islander, and 3 identified as white. See Table 3 below.

TABLE 3. MENTEES BY RACE/ETHNICITY, BY SCHOOL

School	Asian or Pacific Islander		Black		Hispanic[17]		White		Total
	N	%	N	%	N	%	N	%	
BMCC	10	15.2%	11	16.7%	35	53.0%	10	15.2%	66
City Tech	-	-	3	13.0%	16	69.6%	4	17.4%	23
John Jay	10	6.4%	15	9.6%	102	65.0%	30	19.1%	157
LaGuardia	8	17.0%	8	17.0%	27	57.5%	4	8.5%	47
Lehman	6	8.7%	25	36.2%	35	50.7%	3	4.4%	69

Gender

Except for Lehman college, there were more female mentees than male mentees in the data set. The proportion of female mentees was over 60 percent at BMCC, City Tech, John Jay, and LaGuardia. At Lehman, the proportions of female and male mentees were similar. Forty-eight percent were female, and 52 percent were male (Table 4).

TABLE 4. MENTEES BY GENDER, BY SCHOOL

School	Female		Male		Total
	N	%	N	%	
BMCC	49	74.2%	17	25.8%	66
City Tech	14	60.9%	9	39.1%	23
John Jay	101	64.3%	56	35.7%	157
LaGuardia	32	68.1%	15	31.9%	47
Lehman	33	47.8%	36	52.2%	69

[17] Here we use the demographic category used by CUNY.

Age

The majority of the mentees were traditional-age students (age 24 or younger). The mean age of the 367 mentees in the data set was 20 years old. However, there were a few non-traditional-age students (age 25 or older) mentees. At CUNY senior colleges (City Tech, John Jay, and Lehman), over 90 percent of the mentees were traditional students. The two community colleges, BMCC and LaGuardia, had more non-traditional students. However, the majority, over 70 percent, of mentees at these two schools were in the traditional age group.

TABLE 5. AGE, BY SCHOOL

School	Non-traditional student		Traditional student		Total
	N	%	N	%	
BMCC	18	27.3%	48	72.7%	66
City Tech	2	8.3%	22	91.7%	24
John Jay	5	3.2%	152	96.8%	157
LaGuardia	11	21.6%	40	78.4%	51
Lehman	2	2.9%	67	97.1%	69

Financial aid status

Among the mentees in the interaction data set, over half, 58 percent, received Pell grants – a marker for financial aid need.[18] However, financial aid status varied among the mentees in the five CF CUNY colleges. At BMCC, half of the mentees received financial support while the other half did not. At LaGuardia, around 65 percent of the mentees received financial aid. The rate also varied at senior colleges. Three quarters of the Lehman mentees received financial aid as did over 55 percent of the mentees from John Jay, and less than half (37.5 percent) of the mentees from City Tech.

TABLE 6. MENTEES BY FINANCIAL AID STATUS, BY SCHOOL

School	No financial aid		Financial aid		Total
	N	%	N	%	
BMCC	33	50.0%	33	50.0%	66
City Tech	15	62.5%	9	37.5%	24
John Jay	70	44.6%	87	55.4%	157
LaGuardia	18	35.3%	33	64.7%	51
Lehman	17	24.6%	52	75.4%	69

[18] We use Pell grants as the surrogate for financial aid.

Mentee/Mentor Interaction Logs

Log Submissions

In Table 7 we have aggregated the weeks into months; and present the number of unique mentees that the mentors recorded in each month by school. Please note that, the number of mentees in this table includes both those having interaction as well as those with no interaction with mentors during the month.

TABLE 7. NUMBER OF MENTEES TRACKED BY MENTORS BY MONTH, BY SCHOOL

School	N unique mentees	Month				
		September	October	November	December	Total
BMCC	**66**	34	49	56	54	193
City Tech	**24**	20	24	22	0	66
John Jay	**157**	157	112	51	0	320
LaGuardia	**51**	41	47	51	15	154
Lehman	**69**	60	69	62	18	209
Total	**367**	312	301	242	87	942

Of note, mentors from City Tech and John Jay did not submit any interaction logs for December. While we believe interactions occurred, the mentors did not document them – this is indicative of some of the challenges with this data set. Another point to note is that mentors from John Jay submitted fewer logs in November than they did in September or October. Again, given the inconsistencies in reporting, it is hard to know whether this represents a change in the number of mentees in the program or a lack of log submissions. Out the 157 students in the data set from John Jay, only 51 were reported as having interactions in November. For the most part, mentors submitted logs of their interactions for more than half of the mentees alleged to be in their campus' CF program each month.
We begin with one-to-one interaction data and then follow with reported group interaction data.

Reported One-To-One Interactions

The requirement for the CF program as developed by HF summer 2017, was that mentors had at least weekly contact with each of their mentees regardless of mode. The interaction logs asked mentors to indicate whether they had any interaction with each of their individual mentees during the prior week. They could choose from the following types of interactions in-person contact, phone, e-communication, and group contact[19]. Group contact included things like attending a class with the mentee, workshops or other group get togethers. If mentors were

[19] There are logs where mentor indicated he/she had an interaction with the mentee but without reporting any of the forms of personal or group contact.

not able to get into contact with mentee, they were asked to report the unsuccessful attempt to contact.

The number of mentees with reported interactions with mentors varied greatly between schools (Table 8). None of the schools reported having interactions with each of their mentees in each month during the fall 2017 term. There were no reported mentee-mentor interactions at City Tech or John Jay in December. This may not be too surprising given study weeks and final exams in December. However, while, mentors may not have recorded the interactions, they may have had some contact with their mentees during this stressful period of the semester.

There were few reported interactive activities in December by mentors from LaGuardia (5 mentees) and Lehman (10 mentees). However, in each month mentors had interactions with at least half of their mentees. The exception was John Jay where mentors only reported contact with 31 of their mentees in November. Knowing that mentors and mentees at John Jay see one another twice weekly in a year-long seminar this data does not appear to truly reflect their interactions.

TABLE 8. NUMBER OF MENTEES WHO HAD INTERACTION(S) WITH MENTORS IN EACH MONTH, BY SCHOOL

School	N unique mentees	Month				
		September	October	November	December	Total
BMCC	**66**	34	49	55	43	181
City Tech	**24**	18	24	13	0	55
John Jay	**157**	142	109	31	0	282
LaGuardia	**51**	31	42	37	5	115
Lehman	**69**	42	60	56	10	168
Total	**367**	267	284	192	58	801

As noted above, the interaction survey tracked four types of one-on-one interaction: in-person, phone, e-communication (emails, social media messaging), and text. Table 9 focuses on the frequencies of contact[20] (See Table 14 below for group interactions). Table 9 shows the total number of one-to-one interactions, the average and median, and the proportion of mentees that had more than 2, 4, and 5 one-to-one contacts in each month by school.

In general, the median and average number of contacts were higher in September and October. This may simply reflect the fact that this was the start of the program and so mentors were more diligent in their reporting. Most of the mentees (those who had contact with mentor) were in contact the mentors more than twice in a month. The reported proportion of mentees who had 4 or 5 one-to-one interactions with mentors decreased over time at all 5 schools.

[20] We focus on the mentees with one-to-one contact with mentor because there was likely an under-reporting of no-contact by the mentors. Mentors did not track all mentees in all weeks and those who did not have contact with mentors were not always reported in the weekly logs.

At BMCC, on average, the mentees had over 4 one-to-one interactions with mentors in each month except for December (mean = 1.9). The proportion of students with more than 2 one-to-one contacts with mentors was over 90 percent in the first three months of fall 2017. In December, there was a big drop in either reporting or interactions or both as only 56 percent of the mentees reported more than 2 contacts with mentor. Only half of the mentees who had contact with mentors in September had more than 4 contacts; a third had more than 5 contacts.

The average one-to-one contacts for City Tech mentees was around 4. In September and October, around 80 percent of the mentees at City Tech had more than 2 one-to-one interactions with mentors. Half of the mentees (12) had one-to-one interactions in November and a little over 58 percent had more than 2 one-to-one contacts with their mentors. A third had more than 4 and a quarter of them had more than 5.

Mentees at John Jay experienced a higher frequency of one-to-one contacts with mentors than their counterpart mentees at other CUNY CF colleges according to the data. This is in line with what we know as noted above about the intensity of the John Jay mentoring program. Almost all mentees (N= 142) had one-to-one interactions with mentors in September. All of them had more than 2 contacts. A little over 97 percent had more than 4 contacts and nearly 85 percent of them had more than 5 contacts. Although in October, the data only shows that 109 mentees had one-to-one contact with their mentors, each of these students had over 4 contacts. The high one-to-one interaction rate continues when we look at more than 5 contacts (94.5 percent).

Over 30 LaGuardia mentees had one-to-one interactions with their mentors in the first three months of fall 2017. Only 5 mentees had one-to-one contact with mentors in December. Although the average number of one-to-one contacts in the fall was only around 3.3, by month it varied considerably. In October and November, 71 percent mentees had more than 2 contacts with their mentors, the average one-to-one interaction around 9.8 and 7.8 respectively, with a little over 94 percent of the mentees in both months having more than 2 contacts.

Only half of the Lehman mentees reported interaction logs in September 2017. More Lehman mentees had one-to-one interactions in October and November (N = 60 and N= 56 respectively). The average number of one-to-one interactions was high in the first three months: around 7 in September and November, and around 8 in October. Nearly 89 percent of the mentees had more than 2 contacts in September and more than 90 percent of the mentees had more than 2 contacts in October and November. In December, only 10 mentees had one-to-one interaction records, but all of them had more than 2 contacts.

TABLE 9. NUMBER OF TOTAL AND MEAN ONE-TO-ONE INTERACTIONS IN EACH MONTH, BY SCHOOL

School	Month	N mentees > 0 one-to-one contacts	Total N of one-to- one contacts	Median number of one-to-one contacts	Mean one-to-one contacts	% with >= 2 one-to-one contacts	% with >= 4 one-to-one contacts	% with >= 5 one-to-one contacts
BMCC (N=66)	**September**	**34**	163	3.5	4.8	97.1%	50.0%	32.4%
	October	**49**	213	4	4.3	89.8%	61.2%	32.7%
	November	**55**	297	4	5.4	100.0%	69.1%	41.8%
	December	**41**	78	2	1.9	56.1%	2.4%	0.0%
City Tech (N=24)	**September**	**18**	75	3	4.2	83.3%	44.4%	27.8%
	October	**24**	119	3.5	5.0	79.2%	50.0%	45.8%
	November	**12**	45	2	3.8	58.3%	33.3%	25.0%
John Jay (N=157)	**September**	**142**	1543	8	10.9	100.0%	97.2%	84.5%
	October	**109**	986	8	9.0	100.0%	100.0%	94.5%
	November	**31**	106	4	3.4	100.0%	71.0%	0.0%
LaGuardia (N=51)	**September**	**31**	101	2	3.3	71.0%	32.3%	19.4%
	October	**35**	344	10	9.8	94.3%	91.4%	82.9%
	November	**35**	273	7	7.8	94.3%	77.1%	60.0%
	December	**5**	8	2	1.6	60.0%	0.0%	0.0%
Lehman (N=69)	**September**	**35**	261	5	7.5	88.6%	57.1%	54.3%
	October	**60**	527	7	8.8	93.3%	75.0%	68.3%
	November	**56**	417	6	7.4	91.1%	78.6%	62.5%
	December	**10**	31	3	3.1	100.0%	30.0%	20.0%

When we take a closer look at the different methods by which mentors made contact with their mentees (Table 10, Table 11, and Table 12), we find that e-communication and in-person contact were most commonly used. Fewer contacts were made via phone calls. However, commonality of modes of interaction varies by school.

At John Jay, most interactions were in-person. In September and October, in-person contacts averaged out to about 6. Over 60 percent of the John Jay mentees who had contact with mentor had over 5 in-person contacts in these two months. This is not surprising given that John Jay mentors and mentees meet in regularly scheduled classes each week as noted above.

The average in-person contacts for mentees from BMCC and City Tech was less than 2. In the first three months of fall, Lehman mentees who had in-person contact with their mentors typically had more than 2 contacts (70 percent). At LaGuardia, mentees who had in-person contacts in October, had 2.7 times contacts on average. About 70 percent of these students had more than 2 in-person contacts.

TABLE 10. NUMBER OF TOTAL AND MEAN IN-PERSON CONTACT

BY MONTH, BY SCHOOL

School	Month	N of unique mentees having > 0 in-person contacts with mentor	Total N of in-person contacts	Median number of in-person contacts	Average number of in-person contacts	% with >= 2 in-person contacts	% with >= 4 in-person contacts	% with >= 5 in-person contacts
BMCC (N=66)	**September**	33	52	1	1.5	36.4%	6.1%	3.0%
	October	43	68	1	1.4	48.8%	0.0%	0.0%
	November	43	84	1	1.5	51.2%	11.6%	0.0%
	December	21	22	1	0.5	4.8%	0.0%	0.0%
City Tech (N=24)	**September**	17	27	1	1.5	35.3%	11.8%	0.0%
	October	20	38	1	1.6	50.0%	10.0%	0.0%
	November	6	14	0.5	1.2	50.0%	16.7%	16.7%
John Jay (N=157)	**September**	141	945	8	6.7	97.9%	90.8%	62.4%
	October	105	638	6	5.9	94.3%	77.1%	62.9%
	November	31	99	4	3.2	77.4%	71.0%	0.0%
LaGuardia (N=51)	**September**	23	37	1	1.2	39.1%	8.7%	0.0%
	October	33	95	3	2.7	69.7%	33.3%	12.1%
	November	23	48	1	1.4	47.8%	21.7%	8.7%
	December	1	1	0	0.2	0.0%	0.0%	0.0%
Lehman (N=69)	**September**	29	98	2	2.8	72.4%	27.6%	20.7%
	October	55	240	3	4.0	69.1%	43.6%	32.7%
	November	45	174	2	3.1	77.8%	48.9%	37.8%
	December	7	10	1	1	42.9%	0.0%	0.0%

Few of the mentees in the CUNY schools had phone interactions with mentees. If they had contact with mentees via phone, they on average only had 1 or 2 phone contacts.

TABLE 11. NUMBER OF TOTAL AND MEAN PHONE INTERACTIONS BY MONTH, BY SCHOOL

School	Month	N of unique mentees having > 0 phone contacts with mentor	Total N of phone contacts	Median number of phone contacts	Average number of phone contacts	% with >= 2 phone contacts	% with >= 4 phone contacts	% with >= 5 phone contacts
BMCC (N=66)	**September**	**4**	8	2	2.0	75.0%	0.0%	0.0%
	October	**5**	8	2	1.6	60.0%	0.0%	0.0%
	November	**17**	50	3	2.9	82.4%	41.2%	0.0%
	December	**13**	13	1	1.0	0.0%	0.0%	0.0%
City Tech (N=24)	**September**	**7**	11	1	1.6	28.6%	0.0%	0.0%
	October	**6**	12	2	2.0	66.7%	0.0%	0.0%
	November	**2**	3	1.5	1.5	50.0%	0.0%	0.0%
John Jay (N=157)	**September**	**28**	47	1	1.7	28.6%	7.1%	7.1%
	October	**9**	16	1	1.8	44.4%	11.1%	0.0%
LaGuardia (N=51)	**September**	**14**	28	1	2.0	35.7%	28.6%	7.1%
	October	**26**	97	4	3.7	84.6%	61.5%	34.6%
	November	**20**	67	3	3.4	85.0%	40.0%	25.0%
	December	**2**	2	1	1.0	0.0%	0.0%	0.0%
Lehman (N=69)	**September**	**3**	4	1	1.3	33.3%	0.0%	0.0%
	October	**10**	13	1	1.3	10.0%	10.0%	0.0%
	November	**6**	7	1	1.2	16.7%	0.0%	0.0%
	December	**2**	2	1	1.0	0.0%	0.0%	0.0%

TABLE 12. NUMBER OF TOTAL AND MEAN E-COMMUNICATIONS BY MONTH, BY SCHOOL

School	Month	N of unique mentees having > 0 e-communication with mentor	Total N of e-communication	Median number of e-communication with mentor	Average number of e-communication with mentor	% with >= 2 e-communication with mentor	% with >= 4 e-communication with mentor	% with >= 5 e-communication with mentor
BMCC (N=66)	**September**	**33**	103	2	3.1	81.8%	21.2%	18.2%
	October	**45**	137	3	3.0	88.9%	35.6%	15.6%
	November	**55**	163	3	3.0	94.5%	32.7%	0.0%
	December	**35**	43	1	1.2	22.9%	0.0%	0.0%
City Tech (N=24)	**September**	**15**	37	2	2.5	66.7%	26.7%	13.3%
	October	**21**	69	3	3.3	71.4%	38.1%	14.3%
	November	**11**	28	2	2.5	54.5%	27.3%	18.2%
John Jay (N=157)	**September**	**96**	551	5	5.7	94.8%	62.5%	53.1%
	October	**74**	332	4	4.5	94.6%	71.6%	41.9%
	November	**7**	7	1	1.0	0.0%	0.0%	0.0%
LaGuardia (N=51)	**September**	**26**	36	1	1.4	26.9%	0.0%	0.0%
	October	**32**	152	4.5	4.8	93.8%	62.5%	50.0%
	November	**34**	158	4	4.6	85.3%	55.9%	44.1%
	December	**4**	5	1	1.3	25.0%	0.0%	0.0%
Lehman (N=69)	**September**	**33**	159	3	4.8	72.7%	45.5%	42.4%
	October	**53**	274	4	5.2	88.7%	58.5%	45.3%
	November	**51**	236	5	4.6	84.3%	58.8%	54.9%
	December	**10**	19	2	1.9	80.0%	0.0%	0.0%

Reported Interaction Topics

In addition to the number of meetings and the mode, mentors were also asked to share what issues or topics were addressed in their meetings with their mentees (Table 13). Mentors most often documented that their interactions were either general check-ins or discussions about campus events. Academic issues also emerged as a common interaction topic. Mentees often consulted mentors on study skills, majors, tutoring, registration, time management, and scholarship opportunities. This finding is important as the above cited literature identifies the need of first-generation students to have access to information about post-secondary education.

Career guidance and employment questions were other common areas of conversation. Financial aid, community/social isolation and cultural issues also emerged as areas of connection but were not mentioned as frequently as academic problems or general topics. This

was a surprising finding given that many of these issues are commonly identified as stressors for first-generation college students.

TABLE 13. ONE-TO-ONE INTERACTION TOPICS BY SCHOOL

Major topics	Specific topics	BMCC		City Tech		John Jay		LaGuardia		Lehman		Total	Total %
		N	%	N	%	N	%	N	%	N	%		
General greetings	General check in	167	13.7%	58	22.1%	551	25.8%	142	19.9%	260	17.6%	1178	20.3%
	Campus Events	206	17.0%	28	10.7%	341	16.0%	89	12.5%	156	10.6%	820	14.1%
	CF Meetings (scheduling, reminding)	193	15.9%	55	21.0%	122	5.7%	100	14.0%	92	6.2%	562	9.7%
	Brief hello	37	3.1%	28	10.7%	345	16.2%	27	3.8%	115	7.8%	552	9.5%
Academic	Academic - Study Skills	85	7.0%	29	11.1%	83	3.9%	54	7.6%	125	8.5%	376	6.5%
	Academic - Major Advising	31	2.6%	5	1.9%	113	5.3%	34	4.8%	102	6.9%	285	4.9%
	Academic – Tutoring	59	4.9%	18	6.9%	33	1.6%	38	5.3%	90	6.1%	238	4.1%
	Academic - Registration Advising	42	3.5%	5	1.9%	125	5.9%	6	0.8%	52	3.5%	230	4.0%
	General time management	19	1.6%	2	0.8%	39	1.8%	29	4.1%	123	8.3%	212	3.7%
	Scholarship opportunities	53	4.4%	4	1.5%	53	2.5%	17	2.4%	69	4.7%	196	3.4%
	Assistance with college website or portal, e.g. CUNY First	15	1.2%	3	1.2%	68	3.2%	12	1.7%	7	0.5%	105	1.8%
Career issues	Career Guidance	18	1.5%	1	0.4%	45	2.1%	23	3.2%	91	6.2%	178	3.1%
	Employment	46	3.8%	7	2.7%	32	1.5%	20	2.8%	40	2.7%	145	2.5%
	Internship	35	2.9%	7	2.7%	19	0.9%	11	1.5%	28	1.9%	100	1.7%
Financial aid	Financial aid, e.g., PELL, loans	17	1.4%	2	0.8%	27	1.3%	13	1.8%	15	1.0%	74	1.3%
	General household finances	3	0.3%	1	0.4%	10	0.5%	8	1.1%	2	0.1%	24	0.4%
Community and cultural identity	Community/Social isolation	8	0.7%	1	0.4%	10	0.5%	12	1.7%	8	0.5%	39	0.7%
	Volunteerism	24	2.0%	1	0.4%	4	0.2%	10	1.4%	17	1.2%	56	1.0%
	Issues of ethnic/cultural identity	1	0.1%	0	0.0%	12	0.6%	3	0.4%	5	0.3%	21	0.4%
	Social Service	2	0.2%	0	0.0%	7	0.3%	0	0.0%	2	0.1%	11	0.2%
Personal issues	Family	97	8.0%	2	0.8%	47	2.2%	19	2.7%	31	2.1%	196	3.4%
	Health/mental health	26	2.1%	1	0.4%	22	1.0%	24	3.4%	25	1.7%	98	1.7%
	Child Care	5	0.4%	2	0.8%	0	0.0%	7	1.0%	0	0.0%	14	0.2%
Other topics	Other	26	2.1%	2	0.8%	26	1.2%	14	2.0%	21	1.4%	89	1.5%
Total		1215	100%	262	100%	2134	100%	712	100%	1476	100%	5799	100%

Reported Group Contacts

As noted above, group meetings were common in the Crear Futuros program. These could include class meetings (common at John Jay), workshops, Hispanic Federation events, gatherings in CF spaces on campus, etc. Compared with other colleges, John Jay, on average, especially in September and October had more group contacts with mentees than other colleges. On average, mentees had more than 5 group contacts in these two months. In September 86.2 percent of the mentees had more than 2 group contacts, while in October 96.4 percent of the mentees had more than 2 group contacts.

More than half of LaGuardia mentees had group contacts in October and November. In October, the average group contact for the mentees was 3.4 and in November, the average was 2.6. In total, nearly 74 percent of the LaGuardia mentees had more than 2 group contacts in October and nearly 61 percent had more than 2 group contacts in November.

Over half of the Lehman mentees had group contacts with mentors in October (N= 37). However, on average, the number of group contacts in the month was 1.4. And less than a quarter of the mentees had more than 2 group contacts in October.

TABLE 14. NUMBER OF TOTAL GROUP CONTACTS BY MONTH, BY SCHOOL

School	Month	N of unique mentees having > 0 group contacts	Total N of group contacts	Median number of group contacts	Average number of group contacts	% with >= 2 group contacts	% with >= 4 group contacts	% with >= 5 group contacts
BMCC (N= 66)	**September**	**34**	100	2	2.9	88.2%	29.4%	20.6%
	October	**48**	205	4	4.3	100.0%	58.3%	35.4%
	November	**55**	120	2	2.2	81.8%	5.5%	0.0%
	December	**19**	23	1	1.2	21.1%	0.0%	0.0%
City Tech (N=24)	**September**	**14**	26	2	1.9	64.3%	7.1%	0.0%
	October	**24**	54	2	2.3	62.5%	16.7%	0.0%
	November	**12**	18	1	1.5	25.0%	8.3%	0.0%
John Jay (N=157)	**September**	**130**	667	4	5.1	86.2%	60.8%	34.6%
	October	**84**	472	5	5.6	96.4%	79.8%	54.8%
	November	**31**	52	2	1.7	67.7%	0.0%	0.0%
LaGuardia (N=51)	**September**	**17**	24	1	1.4	35.3%	0.0%	0.0%
	October	**35**	120	3	3.4	74.3%	48.6%	40.0%
	November	**28**	73	2	2.6	60.7%	28.6%	25.0%
	December	**5**	5	1	1.0	0.0%	0.0%	0.0%
Lehman (N=69)	**September**	**5**	8	2	1.6	60.0%	0.0%	0.0%
	October	**37**	52	1	1.4	24.3%	0.0%	0.0%
	November	**21**	51	2	2.4	95.2%	0.0%	0.0%

Group contact topics

The most often discussed topics in group contacts were similar to those discussed during one-to-one interactions (Table 15). Again, the most common topics discussed were related to campus events and general check-ins. Academic advising was also important and group contacts seemed to commonly focus on academic topics including registration advising, study skills, and scholarship opportunities. Community and cultural identity and career issues were not documented as being discussed in group settings. Nor were family, health, and child care. Though not often talked about in other colleges, mentees in John Jay had a lot of group contact regarding financial aid problems (N = 108).

TABLE 15. GROUP CONTACT TOPICS, BY SCHOOL - MAJOR TOPICS

	Group Topics	BMCC		City Tech		John Jay		LaGuardia		Lehman		Total	Total %
		N	%	N	%	N	%	N	%	N	%		
General greetings	Campus Events	337	40.7%	84	18.2%	413	21.4%	144	28.7%	28	16.1%	1006	25.8%
	General check in	60	7.2%	22	4.8%	358	18.6%	128	25.5%	18	10.3%	586	15.1%
	CF Meetings (scheduling, reminding)	81	9.8%	108	23.4%	92	4.8%	49	9.8%	28	16.1%	358	9.2%
	Brief hello	8	1.0%	24	5.2%	152	7.9%	18	3.6%	13	7.5%	215	5.5%
Academic	Academic - Registration Advising	45	5.4%	24	5.2%	199	10.3%	2	0.4%	0	0.0%	270	6.9%
	Academic - Study Skills	40	4.8%	55	11.9%	113	5.9%	32	6.4%	4	2.3%	244	6.3%
	Scholarship opportunities	79	9.5%	18	3.9%	51	2.7%	20	4.0%	61	35.1%	229	5.9%
	Academic - Tutoring	37	4.5%	62	13.4%	78	4.1%	26	5.2%	1	0.6%	204	5.2%
	Academic - Major Advising	18	2.2%	18	3.9%	162	8.4%	0	0.0%	1	0.6%	199	5.1%
	Assistance with college website or portal	3	0.4%	17	3.7%	62	3.2%	0	0.0%	0	0.0%	82	2.1%
	General time management	2	0.2%	1	0.2%	53	2.8%	3	0.6%	1	0.6%	60	1.5%
Community and cultural identity	Volunteerism	7	0.8%	3	0.7%	3	0.2%	58	11.6%	0	0.0%	71	1.8%
	Community/Social isolation	0	0.0%	0	0.0%	27	1.4%	0	0.0%	0	0.0%	27	0.7%
	Issues of ethnic/cultural identity	1	0.1%	0	0.0%	13	0.7%	0	0.0%	0	0.0%	14	0.4%
	Social Service	0	0.0%	1	0.2%	2	0.1%	1	0.2%	0	0.0%	4	0.1%
Career issues	Employment	20	2.4%	0	0.0%	7	0.4%	14	2.8%	0	0.0%	41	1.1%
	Internship	25	3.0%	5	1.1%	6	0.3%	0	0.0%	1	0.6%	37	1.0%
	Career Guidance	6	0.7%	0	0.0%	8	0.4%	4	0.8%	0	0.0%	18	0.5%
Financial aid	Financial aid, e.g., PELL, loans	1	0.1%	13	2.8%	108	5.6%	1	0.2%	0	0.0%	123	3.2%
	General household finances	0	0.0%	0	0.0%	5	0.3%	0	0.0%	0	0.0%	5	0.1%
Personal issues	Health/mental health	14	1.7%	0	0.0%	6	0.3%	1	0.2%	0	0.0%	21	0.5%
	Family	19	2.3%	0	0.0%	4	0.2%	0	0.0%	0	0.0%	23	0.6%
	Child Care	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.6%	1	0.0%
Other topics	Other	26	3.1%	7	1.5%	5	0.3%	1	0.2%	17	9.8%	56	1.4%
Total		829	100%	462	100%	1927	100%	502	100%	174	100%	3894	100%

On campus referrals

On-campus referrals were consistent with the topics noted in Table 13 that mentors and mentees discussed during their one-to-one meetings. Most on-campus referrals were about campus events, followed by academic advising, tutoring, student clubs, and career services. There were very few referrals to child care or health services (Table 16). This may be explained by the fact that most of the students were traditional students who might not have children and were generally healthy.

Off-campus referrals

There were very few off-campus referrals noted in the data. In fact, the Hispanic Federation was the only organization to which all 5 schools made off-campus referrals. At Lehman no other off-campus referrals were mentioned. Mentors from LaGuardia made 12 referrals to scholarship opportunities. The other referrals were sporadic (Table 17).

TABLE 16. ON-CAMPUS REFERRALS

On-campus referral	BMCC		City Tech		John Jay		LaGuardia		Lehman		Total	Total %
	N	%	N	%	N	%	N	%	N	%		
Campus Event	40	22.4%	4	12.9%	42	20.0%	23	16.3%	51	34.9%	160	22.6%
Academic Advising Office	18	10.1%	2	6.5%	80	38.1%	14	9.9%	21	14.4%	135	19.1%
Tutoring (e.g. academic support)	44	24.6%	7	22.6%	16	7.6%	18	12.8%	13	8.9%	98	13.9%
Student life/student clubs	27	15.1%	2	6.5%	29	13.8%	18	12.8%	2	1.4%	78	11.0%
Career Services	5	2.8%	4	12.9%	2	1.0%	6	4.3%	41	28.1%	58	8.2%
Financial Aid	6	3.4%	4	12.9%	15	7.1%	17	12.1%	3	2.1%	45	6.4%
Other	11	6.2%	0	0.0%	2	1.0%	7	5.0%	9	6.2%	29	4.1%
Counseling Center	11	6.2%	0	0.0%	6	2.9%	6	4.3%	1	0.7%	24	3.4%
Crear Futuros campus liaison	4	2.2%	1	3.2%	3	1.4%	14	9.9%	0	0.0%	22	3.1%
Bursar's office	1	0.6%	4	12.9%	8	3.8%	4	2.8%	1	0.7%	18	2.5%
Single Stop/Multi-Service Crisis Center	5	2.8%	0	0.0%	0	0.0%	5	3.6%	0	0.0%	10	1.4%
Technology Help Desk	1	0.6%	0	0.0%	1	0.5%	1	0.7%	4	2.7%	7	1.0%
Health Services	2	1.1%	0	0.0%	1	0.5%	3	2.1%	0	0.0%	6	0.8%
SEEK and other campus program opportunities	3	1.7%	0	0.0%	0	0.0%	2	1.4%	0	0.0%	5	0.7%
Transfer office	0	0.0%	0	0.0%	2	1.0%	3	2.1%	0	0.0%	5	0.7%
Athletics	0	0.0%	0	0.0%	3	1.4%	0	0.0%	0	0.0%	3	0.4%
Child Care Center	1	0.6%	2	6.5%	0	0.0%	0	0.0%	0	0.0%	3	0.4%
Public Safety Office	0	0.0%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	1	0.1%
Total	179	100%	31	100%	210	100%	141	100%	146	100%	707	100%

TABLE 17. OFF-CAMPUS REFERRALS

Off-campus referral	BMCC		City Tech		John Jay		LaGuardia		Lehman		Total	Total %
	N	%	N	%	N	%	N	%	N	%		
Hispanic Federation	63	81.8%	3	60.0%	1	20.0%	20	51.3%	2	100.0%	90	69.2%
Scholarship Programs/Opportunities	-	-	-	-	2	40.0%	12	30.8%	-	-	14	10.8%
Other (please specify)	5	6.5%	1	20.0%	1	20.0%	4	10.3%	-	-	12	9.2%
Immigration (e.g. legal services)	6	7.8%	-	-	-	-	-	-	-	-	6	4.6%
Child care (e.g. daycare)	1	1.3%	1	20.0%	-	-	-	-	-	-	2	1.5%
Employment/ Specific Job	-	-	-	-	-	-	2	5.1%	-	-	2	1.5%
Family services (e.g. emergency assistance)	1	1.3%	-	-	-	-	-	-	-	-	1	0.8%
Housing (e.g. rental assistance)	-	-	-	-	-	-	1	2.6%	-	-	1	0.8%
Legal services (non-immigration related)	-	-	-	-	1	20.0%	-	-	-	-	1	0.8%
Medical/Mental Health (e.g. family planning)	1	1.3%	-	-	-	-	-	-	-	-	1	0.8%
Total	77	100%	5	100%	5	100%	39	100%	2	100%	130	100%

D. IMPACT ON MENTEES

"The program has been life changing."
CUNY CF Mentee

As discussed above, mentoring is a social interaction that can affect the individuals involved in diverse ways. The Hispanic Federation specifically requested EERC to explore the academic outcomes of the CF program, but was also mindful that there would be other, less objective effects of the program on student participants. The following section focuses on these other effects of the CF experience on mentees.[21,22] (See below for a discussion of the impact of the CF program on mentors)

In reviewing interview and focus group data collected from the colleges, EERC identified several principal themes related to impact: experiencing a community of care and support; developing a stronger belief in their capacities and expanding levels of confidence; improving their study skills; doing better academically; and clarifying career options and choices.

Experiencing a Community of Care and Support

In its original proposal to the Michael and Susan Dell Foundation, the HF included the creation of a "community of care" for all the mentees as one of its goals. It appears from the feedback EERC received that most campus programs achieved this – although not always in the same way. Most mentees spoke of feeling welcomed and connected to their respective mentors and to other mentees on their campus.

> *I would say the most helpful part is just feeling a part of the community and feeling supported. Now I feel like X college is part of my second house. I spend more time probably here than in my house.*

The space created by CF – both physically and socially - made a big difference to many mentees.

> *It's not just about the programing. It's about the space and the people in it. There's a bit of a social connection that organically materializes. It provides a kind of community on campus.*
>
> *…more than just meeting with a mentor, real relationships develop between mentors, mentees and all members of the program.*

The CF campus community helped mentees make the transition from high school into college; and facilitated their getting to know students like themselves – first generation Hispanic college students.

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[21] EERC did extensive interviewing (one to one and focus groups) of mentees and mentors from the CUNY colleges. We also spoke with CF campus liaisons. We had some brief phone interviews with mentees from NVCC; and spoke with one mentor by phone. We did not speak with either mentees or mentors from UFC. Therefore, most comments contained in this section are drawn from the CF programs within the CUNY colleges.

[22] To protect privacy, we have aggregated all responses and do not identify any college or individual when using a quote.

> *It gave me a home on campus. I remember beginning of semester my freshman year I would go to class, get food and go home. I did not really like that. Thanks to Crear Futuros you had a place to go hang out, do homework, and talk to a mentor.*

The importance of feeling welcomed and having a campus community was affirmed by one campus liaison, who commented, "*persistence and student success are often highly related to how welcome students feel on campus."*

Being Encouraged to Develop Personally

> *So, when I meet my mentor D, she's just like a light in my life. It's like, oh, okay, I have somebody to help me, to guide me, to help me with little things that I may be missing but she knows already. And she was so supportive as well so, I feel like that was nice.*

Many mentees talked about how they felt that their mentors were always available to them – for some, even at night and on weekends. Mentors not only provided information, but helped mentees recognize their own capacities, pushing "*me to much greater things*."

> *It was the fact that knowing that there was someone there that believed in you when you couldn't believe you could do it.*

Mentees also described how their mentors helped them to explore and expand other aspects of themselves. One mentee shared that she had been very shy when she arrived at college, but with the help of her mentor she is now "*more social, more open to talk to people."* Anther mentee stated, because of his mentor and he is now *"more comfortable speaking in class and talking in front of large crowds."* Yet another mentee simply said she was *"grateful to CF"* as *"it pushed me to much greater things."*

Maturity and gaining a better sense of self also emerged in EERC's mentee interviews. The mentoring relationship – often with someone who was like them – who could act as a role model – facilitated a new or at least more refined sense of identity. This was experienced for some as a renewal of their Hispanic identity. For others it meant a greater sense of confidence. "*I have become a better version of myself because I have gained confidence."* And, another mentee commented "*…everything about this program is encouraging us to be comfortable being ourselves."*

> *When I first came to the United States, I didn't speak English. It was hard for me to connect with people. I have reconnected with myself by connecting with others and building a community.*

Further, mentees described that their mentors' presence, their guidance and leadership helped them expand their range of activities, *"she also inspired me to do so many other (sic) achieve stuff."* Another mentee commented, my mentor helped

> *…me find more resources, more sources like how to help me not only when it comes to my education, but also be a part of the community. How to build myself up as a person.*

Improving Study and Academic Skills

Participation in the CF community and having the support of their mentor and other mentees, helped some mentees feel they were better able to stay focused on their school work and to study for their exams – a peer support or reference group.

Mentors' belief and support helped mentees academically such as studying harder for a statistics exam. Then, when the mentee passed the exam, celebrating together – which in turn further encouraged the mentee to strive harder.

In some cases, the college's CF campus program provided workshops on study skills. More frequently, however, individual mentors helped mentees improve their study skills, including time management. *"Now I know how to manage my time to do my homework and study, et cetera. So, I'm doing very great*."

Another mentee reflected, that as a result of her having a CF mentor,

> *I think academically I focus more. I have more time to prioritize and I am more organized. Coming into the end of the semester I have pretty much everything done because I had someone willing to help me and help me organize.*

And, while not technically part of the mentor role, mentees also shared that their mentor provided tutorial services – helping them prepare for an exam or review a paper prior to submission.

Clarifying Career Options and Choices.

In addition to being role models for their mentees, many mentors also provided their mentees with some guidance about career planning, especially as it related to academic planning. These activities were not to replace mentees' use of their respective college career services, but rather to help them better to connect to and use them.

Mentors asked their mentees about their plans and goals and then helped them identify potential options. In New York some of this exploration was complemented by HF sponsored events at various NY based companies.

In this regard, several CUNY mentees spoke about how the HF events had helped them to learn "*what is required in professional fields, what companies offer and what they expect*."

Other mentees shared that CF participation "*really broadened my horizons. I can see more clearly what steps I need to take to reach my goal of being a math teacher."*

Another mentee commented that CF helped him to rethink what she wanted to do.

> *…originally (I) wanted to be a math major, but now I think more about who I want to be and what I want to do with my life. Considered engineering, math teacher, and computer science.*

Other Types of Impact

In addition to academics and a refined sense of self, being part of the CF community provided mentees with the confidence, curiosity, even commitment, to move beyond CF to become more engaged in other campus or community activities.

I've changed a lot. I love my campus. Now that I walk around campus people notice me more and it gave me more of a presence. It's a big campus so you don't always know where things are, but I want to be the person to show others where things are. It helped me with my resume. Helped me become more socially active. Part of other organizations as well such as American Latinos Professionals for America, part if sigma fi fraternity, president of Greek life on campus, have an SGA senate position for next year. Have to really thank Crear Futuros for that.

Further, while talking to mentees, several spoke of wanting to become CF mentors in the future, to share what they know, and to give back what has been given to them.

Finally, many mentees expressed appreciation for mentors and their CF experience, confirming its impact.

I want to express my gratefulness for this program. This program is great for the community, based on my testimony I can say it is really working. I am thankful for being able to participate in the program and the joy it has brought to my life.

D. IMPACT ON MENTORS

The principal focus of CF is on mentees: helping them to improve and/or maintain their grades and complete their respective degrees; fostering their personal and social development; and providing them with knowledge and social capital for college and careers. It is, however, also very important to explore the impact of CF participation on the mentors. CF impacts mentors in a variety of way, including professional and personal development opportunities provided by the Hispanic Federation and the colleges, their relationships with other mentors and their relationships and lessons learned from working with their mentees. Mentors spend a great deal of time each week working on CF activities including working with their mentees, developing and planning programming, attending monthly meetings and other activities with the Hispanic Federation, and documenting their work for the evaluation.

Rather than looking at academic accomplishments of the mentors, we focused our data collection on their expectations and experiences with the CF program. We conducted surveys[23] with mentors at the start of the program in August/September and again at the end of the school year. We also spoke to them about their experiences in either interviews or focus groups. Additionally, we talked to mentors' supervisors, CF campus liaisons. The following section presents our findings. We begin with why the mentors decided to take on the mentor role.

Becoming a mentor

Knowing I get to help people and be there for somebody.

Many mentors shared with the EERC team that they had become a mentor because they had been helped in the past by someone – having been supported – they now wanted to be the one

[23] See EERC's interim reports: *Finding from the August 2017 Crear Futuros Mentor Survey* (October 2017) and *Crear Futuros Spring 2018 Mentor Survey, Preliminary* Report (August 2018)

who supports and helps someone else. As one mentor said, *"to give back what was given to me"* And another mentor said, *I decided to become a mentor because I had first-hand experience with how much a mentor can impact one's life.*

Of note 9 out of the 24 mentors (37.5) who completed an EERC survey during the fall 2017 mentor training, indicated they had previously served as a CF mentor and were returning for another year.

Some mentors told us they had chosen to become a mentor because of their own challenges. They wanted to help others find their own pathways.

> *During my first year it was hard for me because I migrated from a different country. When I thought about what I went through and realized I can help someone else through it I thought that would be something good to do.*

I had trouble finding direction in my career. I hope to help mentees to troubleshoot and to be able to reflect on decisions they make and how it(sic) affects their future goals.

A few mentors referred to their desire to build their communities through the support they can provide as a mentor. *"I feel that this is my way to pay it (sic) forward to my community."* And, *"I wanted to be the voice for people who are struggling the way that I did."*

Finally, several mentors identified mentoring as an important part of their training in psychology or human services, a good preparation for their futures. *I can relate to CF's mission and believe the experience I will gain will help my professional career."*

Training and Its Impact on Skill Development

Mentors received training both from HF and from their respective colleges or community affiliates. Every August prior to the beginning of the fall semester, mentors were mandated to participate in a three day training retreat sponsored by HF that included discussions about the role of mentors; the mentoring process; HF expectations for frequency of mentor/mentee interactions; the nature and goals of EERC's evaluation; the mandated submission of the on-line mentor/mentee weekly interaction survey; issues related to first-generation and immigrant students; as well as guideline for interviewing and counseling. This intensive pre-semester training was followed up by HF hosted monthly mentor meetings during which the mentors received further training from a curriculum the Hispanic Federation has developed and refined over the last few years. Sessions included: stress management and crisis intervention; building community; developing workshops; academic advising; among other topics. In addition to the substantive focus of the monthly meetings, mentors had an opportunity at these meetings to share their campus experiences, support and help one another problem solve, and network.

Mentors also participated in campus specific orientations and training workshops – some held prior to the fall term and others interspersed throughout the academic year. John Jay was the only college which required its CF mentors to enroll in a year-long seminar about mentoring for

which they received a total of 6 academic credits[24]. The topics at these campus trainings and workshops ranged from crisis management, domestic violence, financial literacy, and career development.

In addition to more formal trainings and workshops, HF required all mentors to regularly meet with their campus liaison for both supervision and support.

Data collected from interviews with mentors and the spring mentor survey indicate that the trainings and supervisory support of liaisons were an important feature of the mentors' CF experience.

> *"Each meeting had a different lesson to take back and apply to our mentees on our campus. They also covered things that weren't exactly visible at first when we are with our mentees.*

A liaison further observed,
…they were also growing I think it forces them to be more aware of who they were, are, and are becoming because they realize that people are expecting them to know that to be able to share it with others. So, they are much more cognizant of what they're learning or what they need to learn, of finding resources or finding answers. So, I think that's probably the biggest thing is that definitely they're growing

The practicality of the training content was cited by several mentors – the "take-aways" which they used as they worked with their mentees. One mentor wrote that the training enabled "*putting learning into practice.* Yet another mentor wrote,

The monthly meetings were very helpful and allowed me to learn new skills I can apply after attending the monthly workshops.

Not only did the trainings help with their roles as mentors, but also affected the mentors on a more personal level. One mentor wrote on her survey that the training "*helps me grow as an individual, student and professional*." Another wrote, "*my ability to grow as a person strengthened and I learned a lot*." And yet another mentor wrote, the trainings were valuable because she could "*apply knowledge to my life*."

> *I like that we always have to talk and participate. It has made me go out of my comfort zone. And also learning the ways to behave in a professional setting and to talk in a professional setting. Being raised in a Spanish speaking country I know very well how to speak in a professional setting in Spanish, but I didn't know much about English.*

In addition, a number of mentors indicated that the trainings were valuable because they provided opportunities to engage with mentors from other colleges; this in turn resulted in the development of a "*community of mentors*" that extended beyond the monthly HF meetings. This

[24] John Jay requires all its peer mentors, regardless of program to enroll in this course.

mentor community mirrored to some extent the "*community of care"* that HF strove to create on each campus.

> *Getting to know the mentors from other campuses helped me to understand that I wasn't alone in this fight to empower our community.*

Impact on Social and Personal Skills

> *Mentoring well is not just sitting down and talking about problems, mentoring is giving people context for how you're going to move forward.*

As the students grew as mentors – not without challenges (see below) - they realized how they were changing and growing on both social and personal levels.

Part of this was the explicit recognition that others were now "relying" on them moving them from an ego-centric to more of socio-centric identify. "*It feels good to not be selfish. It's not just about you. It's about others."* Another mentor shared *when I first started, last year compared to this year, has definitely helped me, just not being selfish."* Yet another observed that she was learning to

> *…to be empathetic, and not being so selfish, you're thinking about your mentee, stuff like that. I continue with connecting as a mentor because it's just helping me develop more. And you're always learning every day. So, I just wanted to continue that*.

One described her experience as a mentor in this way,

> *It (CF) allowed me to grow in a way that I didn't know I needed to grow, because I thought – I'm a very outgoing type of person, so I thought I was fine. But I had to actually think more on how I can help these people, not like well I'm helping you real quick. No, I have to think it through more, because even before I was mentor, and someone needed help I'll be like okay. I'll take you here. But I never had to follow up or make sure that they got it done, make sure that they're okay, or things like that. So, it's just learning how to do that more often and be better at it.*

Mentors spoke about the growth of confidence as a result of their work as mentors.

> *It's made me fiercer. Gave me the opportunity to speak on things in my heart that I normally wouldn't say out loud. It's given me opportunities I wouldn't have in a normal setting.*
>
> *Every moment has been a step towards becoming more confident and bolder. It has helped me develop things in me I did not know about like leadership skills*

Mentoring also helped students to expand their communication and social skills, and to be more present and engaged.

So, like I said, I didn't know that I needed to talk to people, communicate, and it was really about talking to people. So this role helped me a lot to just reach out to people.

In this context, some mentors seem to understand on a deeper level how each person can affect another person's life. *"You really don't know what impact that you're having on someone else's life."*

Setting and maintaining personal boundaries

While the survey and interviews surfaced significant growth for many mentors in terms of emotional and social presence – the role of mentor also came with some critical challenges including learning how to set boundaries. To what degree did they need to be available to their mentees? Some mentors reported that their mentees were in touch with them nights and weekends – mostly by text but also by phone.

> *Being honest with myself about the work load. This job doesn't end when leave or have to go to class. It never stops so being able to find time for other things is almost impossible.*

But mentors had multiple demands being placed on their time - school, family, perhaps a job – in addition to their mentoring. As such, some struggled how to remain accessible to their mentees but also establish boundaries in order to foster greater independence in their mentees as well as to maintain their own well-being – create needed space for themselves. Reflecting on this balancing act, one mentor observed,

> *Keeping track of my responsibilities, needs and focus has been a challenge. I often compromise myself in negative ways, mostly affecting my health. I put too much pressure on myself, while also giving myself too much to handle at times. I'm relearning how to prioritize and manage my time as to also not debilitate my communication."*

Another shared she was working on "*knowing when to step back and make myself the important one."*

Each of these mentors was learning valuable lessons about balance that would be helpful across their personal and professional lives.

Impact on Academics

To be accepted as a mentor, CF participating colleges required students to have a GPA of 3.0, if not a higher. Given the balancing of so many college and personal responsibilities EERC did not anticipate any specific impact on mentors' academic performance. However, in talking with mentors, we heard that mentoring other students had resulted in some mentors becoming even more attentive to their own academic performance. "*I feel like academically I've been striving to be better than I've been to be a good role model."*

Impact on Career Choices

During our interviews and in surveys, EERC asked mentors if their career goals had shifted in any way as a result of their CF experiences. In most cases, they had not. Many of the students who decided to become mentors had already identified social work, psychology or health care as their career goals. A few mentors, however, indicated that they have changed what they want to do in the future - they now want to pursue a career working and helping other people.

We have therefore ended this section with the following rather long quote. We think it best summarizes the growth process through which some mentors have gone beginning with their experience being a CF mentee.

For me I would say that being a mentor has helped me, made me realize that we're all gonna have mentors in our lives. And so, I've been – it just made me see the flaws that I have, but also the strengths that I have. And how do I grow up on there, or how do I get out of my comfort zone? So, it also – when I see the mentees, … I was the type of student that was afraid to go to office hours because I didn't want to seem like that type of nerd, oh they're going to office hours. So, I'm just seeing myself in them. I'm just seeing them grow. It made me envision, it made me think I really want to pursue social work as a field, as a career option. So just seeing and having this experience it made me value a mentor relationship.

PART V: CUNY AGGREGATE - MENTEE CHARACTERISTICS, STUDENT OUTCOMES & PROGRAM EFFECTS

As indicated above, 2012 was the inaugural year of the CF program at CUNY when four colleges launched their campus programs (John Jay, Lehman, Hostos and City College). However, over time, two CUNY colleges withdrew from the program; and three new colleges initiated their CF campus programs. [25] This study focuses only on the five current CUNY colleges (John Jay, Borough of Manhattan Community College, LaGuardia, Lehman and City Tech).

Since 2014 these five participating CUNY colleges have reported a total of 1,341 CF mentees (Table 18). The size of their mentee cohort their numbers, however, vary. This reflects the different launch dates of the five current colleges, and the size of their mentee cohorts. For example, City Tech's first mentee cohort began fall 2015; while BMCC did not begin to report any mentees until fall 2016.

John Jay college enrolled most of the mentees (N = 554) in this study. Both BMCC and City Tech had over 100 mentees while LaGuardia and Lehman had over 250 mentees.

EERC was able to identify the term of first enrollment for the most mentees. However, data was unavailable for twenty-four mentees (three from City Tech and 21 from Lehman).

Given program structure, most mentees were recruited and began their respective programs during the fall term. Only a few first mentees began their CF participation in the spring term.

[25] The original colleges included City College, Hostos Community College, John Jay and Lehman. After one year, Hostos and then City College opted out of the program. The current colleges include JJ, LH, BMCC, CT, LaG.

TABLE 18. MENTEE ENROLLMENT BY COLLEGE

Cohort	Starting term	BMCC		City Tech		John Jay		LaGuardia		Lehman	
		N	%	N	%	N	%	N	%	N	%
2014 cohort	Fall 2014					207	37.4%	77	28.8%	56	20.4%
	Spring 2015					1	0.2%	11	4.1%		
2015 cohort	Fall 2015			31	30%	96	17.3%	63	23.6%	86	31.3%
2016 cohort	Fall 2016	56	39.4%	17	17%	101	18.2%	40	15.0%	42	15.3%
2017 cohort	Fall 2017	74	52.1%	32	31%	149	26.9%	69	25.8%	70	25.5%
	Spring 2018	12	8.5%	20	19%			7	2.6%		
--	Unknown			3	3%					21	7.6%
Total		142	100.0%	103	100%	554	100.0%	267	100.0%	275	100.0%

A. DATA

At EERC's request, CUNY provided information on the mentees' demographic information (year of birth, gender, race/ethnicity); and financial aid status (Pell recipient) at entry into CUNY. Longitudinal data were also provided about students' school enrollment history and academic performance (cumulative credits earned in each term, cumulative GPA in each term), and earned degrees. Graduation information was provided up to and including summer 2018. Enrollment history was available through fall 2018.

The comparison cohort (control) consists of 5,000 randomly selected students enrolled fall 2012 at one of the five CUNY colleges in this study.

B. OUTCOME VARIABLES

Outcome variables for CUNY students include the fall to fall and fall to spring retention rates, credits gained in the three-year follow-up time, and cumulative GPA. In addition to the academic performance outcomes, we also examine students' academic pathway: transfer from two to four-year CUNY colleges and students' re-enrollment after graduation. These last two variables indicate whether students stayed in school to pursue higher academic degrees.

Given the mentee cohorts started the program at different terms, the follow-up time for mentees varied. Further, outcome measures were not always available for all cohorts. The amount of time from treatment to outcome varies for students. Therefore, EERC focused on defining the outcomes that may best capture the program effects.

Retention

The fall to fall and fall to spring retention rates were calculated for students who respectively started fall 2014, fall 2015, fall 2016, and fall 2017. For each of these groups we looked at whether they were enrolled in the subsequent fall/spring term.

For example, if the student started Crear Futuros program in fall 2014 then we looked if they were retained in the fall 2015. Similarly, if the student started the Crear Futuros program fall 2015 we looked if he/she was retained in the fall 2016. The fall to spring retention rate tells the proportion of each fall cohort of students who remained in the immediate spring term.

For the controls, we examined the proportion of fall 2012 controls who remained in school in spring 2013 (fall to spring retention) and in fall 2013 (the fall to fall retention).

Earned Credit Gain

As stated above, mentees and controls were followed up for different amounts of time and different mentee cohorts also had different follow-up terms. Earlier cohorts had more enrollment terms and therefore had the opportunity to earn more cumulative credits. To compare the treatment effects on cumulative credits, EERC focused on the fall 2014 CF mentees, the cohort which had the longest follow-up time. Both mentees and the controls were followed up for three years. The *credit gain measure* was calculated by subtracting the initial cumulative credit in the start term from the total cumulative credits in the student's final term. This measure reflects the addition of earned cumulative credits in the three years since the student's initial CF start term. This measure takes into account the difference in terms between the mentee and control cohort as well as prior earned credits.

Note, the students in the control cohort all started fall 2012, and the final term of record for this study was fall 2015.

GPA

GPAs are calculated as of the last term available (e.g., spring 2018). *Term GPA is* the average of all grades earned in a single semester. *Cumulative GPA* is the average for all grades for all semesters of enrollment. For this report, EERC decided to use the last term of the mentee's enrollment to examine both term and cumulative GPAs. For example, if the student was enrolled from fall 2014 to fall 2017, the fall 2017 term GPA would be for courses taken fall 2017; and the cumulative GPA would be inclusive of the fall 2017 term and all prior terms. In our analysis we examined mentees' cumulative GPA as of their last term during the study period; and then averaged it respectively over all the students in the mentee and control groups.

Two additional measures of GPA were also examined. For the fall 2014 mentee cohort, we examined their cumulative GPA as of the end of fall 2017 and compared that to the cumulative GPA at the end of fall 2015 for the controls. We also examined the fall 2014 mentee's cumulative GPA in spring 2018 and compared it to the spring 2016 GPA of the controls.

Graduation

EERC examined three graduation outcomes: overall graduation rate, 2-year graduation rate, and 3-year graduation rate.

The overall graduation rate is a crude measure counting all students who graduated within the study period (fall 2012-spring 2018)[26]. It ignores the differences in the possible length of enrollment given different start dates. In ERRC's analysis of 2-year and 3-year graduation rates, this is eliminated.

Graduation data for CF mentees (the treated group) is available only up to June 2018, as a result EERC only looked at the 2 year and 3-year graduation rates for the earlier cohorts. Our analysis therefore focuses on the fall 2014 mentee cohort. Graduation events were counted by year. For the mentee fall 2014 cohort, we examined graduation rates for the academic year 2016-2017 for 2-year graduation rate, and academic year 2017-2018 for the 3-year rate.

For the control group we looked at graduation in academic year 2014-2015 for the 2-year outcome, and academic year 2015-2016 for the 3-year graduation rate.

Transfers

EERC examined transfers from two-year CUNY community colleges (CC, BMCC and LaG) to a four-year CUNY senior college (SC) in any semester following the mentee's participation in CF. We also looked at if the student who transferred had completed an associate degree or not. Since the mentees had at most 4-year follow up time from fall 2014 to fall 2018, EERC also restricted the follow up time for the controls to fall 2016 so that both the mentees and the controls had somewhat comparable observational time.

Enrollment after graduation

EERC examined whether students re-enrolled after they completed a degree program. Re-enrollment suggests students pursued higher level degrees and/or additional degrees.

C. DESCRIPTIVE ANALYSIS

This part of the study presents the sociodemographic characteristics, academic background, and outcomes of interest (Table 19) of CUNY's mentees.

The CF program attracted more female students than male students. Among the 1341 reported mentees, two thirds were female. Sixty-five percent of the mentees identified themselves as being Hispanic[27], followed by black, white, and Asian/Pacific Islander. The majority of mentees (86.8 percent) were *traditional* students less than 25 years of age. Around 70 percent of them received financial aid. Very few mentees reported having a disability (N = 58), 4.4 percent.

The majority of mentees were first time freshman (91.1 percent. At the time of first enrollment in their campus' CF program around 90 percent were full time students. Over 80 percent of CF mentees had previously not been enrolled in a CUNY college. Less than a third of the mentees

[26] For the controls: fall 2012 – summer 2018. For the CF mentees: fall 2014 – summer 2018.
[27] Using the category name used by the colleges.

were in enrolled at one of CUNY's community college (BMCC, LaG) while over two thirds were enrolled at one of CUNY's senior colleges JJ, LH, CT).

The fall to fall, and fall to spring retention rates were over 80 percent, suggesting most of the mentees stayed in school.

In three years (2014-2017), the fall 2014 mentees earned on average 56 credits. The average cumulative GPA for all mentees was 2.8. For fall 2014 mentees, their average cumulative GPA by the end of fall 2017 was 3.1 and by spring 2018, 3.0.

A few students (N= 99, 24.2 percent of BMCC and LaG mentee sample) transferred from community colleges to senior colleges. Seventy-one (17.4 percent transferred with degree while twenty-eight students (6.9 percent) transferred without degree.

Half of mentees who had completed a credential program (certificate and/or degree), reenrolled after graduation.

TABLE 19. CUNY MENTEE CHARACTERISTICS AND OUTCOMES

Variables	**Mentee (N = 1341)**	
Sociodemographic variables	N	%
Gender		
Male	444	33.4%
Female	885	66.6%
Race/Ethnicity		
Asian or Pacific Islander	114	85.8%
Black	184	13.8%
Hispanic	870	65.5%
White	161	12.1%
Current Age		
Non-traditional	175	13.2%
Traditional	1154	86.8%
Mean age (sd)	22.6 (5.1)	
Family Income		
Mean (sd)	$36,447($39,551)	
Financial Aid Status		
Financial aid recipient/Pell	924	68.9%
Not financial support	417	31.1%
Disability Status		
Yes	58	4.4%
No	1264	95.6%
Baseline academic information		

Student Type		
First-time freshmen	1222	91.1%
Registration status at start term		
Full Time	1201	89.6%
Part Time	140	10.4%
Prior education		
No prior education	1084	80.8%
Prior to first CF enrollment	257	19.2%
Institution level		
At least 2 year but less than 4 years	409	30.5%
Four of more years	932	69.5%
Academic Performance		
Retention Rate		
Fall to Fall Retention	1077	80.3%
Fall to Spring Retention	1134	84.6%
Credit Gained		
Average cumulative credits increase	55.6 (26.7)	
GPA		
Average cumulative GPA	2.8(1.0)	
Average cumulative GPA in fall after 3-year	3.1(0.71)	
Average cumulative GPA in spring after 3-year	3.0(0.7)	
Graduation		
Overall graduation rate	317	23.6%
Graduation in 2 years	108	8.1%
Graduation in 3 years	206	15.3%
Transfers		
Transfer from CUNY CC to SC	99	24.2%
Transfer from CUNY CC to SC with degree	71	17.4%
Transfer from CUNY CC to SC without degree	28	6.9%
Enrolled after graduation		
Enrolled	159	50.2%
Not enrolled	158	49.8%

D. COMPARATIVE STUDENT OUTCOMES

We begin this section with an examination of the difference in the distribution of the variables - sociodemographic characteristics, baseline academic information, and outcomes - between the mentees and the controls as aggregates (See Table 20 below). In later sections we examine these variables by college. The statistics presented in the following school specific tables simply

showcase the differences between the mentees and the controls in the school. The findings presented in the propensity score matching section should be used to examine the impact of the program.

Note, the percentages of students from each college differed. In the mentee group, a majority of students (41 percent) were enrolled at John Jay while the majority of students in the control group were enrolled at BMCC (about 29 percent).

Sociodemographic Characteristics

The proportion of females is higher among the mentee group than the controls (66.6 percent vs. 55.9 percent). Hispanics constitute the majority racial/ethnic group in both the mentee and the control cohort. The percentage of Hispanic students in the mentee group, however, was much higher than in the control (65.5 percent vs. 39.1 percent). A significant majority of students in both groups were traditional students. The proportion of traditional students, however, was higher in the control group than the treated group (86.8 percent vs. 71.3 percent). Family income was also lower among the control group than the mentees. The average income was about $22,000 in the control while it was $36,000 in the mentee group. Among the mentees, 69 percent were receiving financial aid and in the control group 74 percent. Few students reported a disability in both groups (around 3 in the mentees and 4 percent in the controls).[28]

In summary, students in the mentee and control differed in terms of their socio-demographic characteristics[29].

TABLE 20. CUNY - DESCRIPTIVE STATISTICS OF STUDENT SOCIODEMOGRAPHIC, ACADEMIC BACKGROUND, AND OUTCOMES BY MENTEES AND CONTROLS

Variables	Mentee (Treatment Group)		Control Group	
SOCIODEMOGRAPHIC VARIABLES	**N**	**%**	**N**	**%**
Gender				
Male	444	33.4%	2205	44.1%
Female	885	66.6%	2794	55.9%
Race/Ethnicity				
Asian or Pacific Islander	114	85.8%	769	15.4%
Black	184	13.8%	1423	28.5%
Hispanic	870	65.5%	1954	39.1%
White	161	12.1%	853	17.1%

[28] Students self-report disability status, it is not known whether missing data on disability conditions reflected the fact that students did not have a disability, or this information was not reported. This is true for all schools in the analysis.

[29] The differences in the mentees vs. the controls maybe due to self-selection where motivated students were more likely to join the program; the program requirement where the program targeted Hispanic students; the recruiting methods where freshman students were targeted. All these factors would result in the imbalance or incomparable samples.

Current Age				
Non-traditional	175	13.2%	1437	28.7%
Traditional	1154	86.8%	3562	71.3%
Mean age (sd)	22.6 (5.1)		24.5(7.8)	
Family Income				
Mean (sd)	36,447(39,551)		21,885 (27,441)	
Financial Aid Status				
Financial aid recipient/Pell	924	68.9%	3703	74.1%
Not financial support	417	31.1%	1296	25.9%
Disability Status				
Yes	58	4.4%	168	3.4%
No	1264	95.6%	4831	96.6%
College				
BMCC	142	10.7%	1466	29.3%
City Tech	103	7.7%	906	18.1%
John Jay	554	41.3%	890	17.8%
LaGuardia	267	19.9%	1079	21.6%
Lehman	275	20.5%	658	13.2%
BASELINE ACADEMIC INFORMATION				
Student Type				
First-time freshmen	1222	91.1%	3851	77.0%
Registration status at start term				
Full Time	1201	89.6%	3248	65.0%
Part Time	140	10.4%	1751	35.0%
Prior Education				
No prior education	1084	80.8%	2032	40.6%
Prior education before start	257	19.2%	2968	59.4%
Institution Level				
At least 2 year but less than 4 years	409	30.5%	2545	50.9%
Four of more years	932	69.5%	2454	49.1%
ACADEMIC PERFORMANCE				
Retention Rate				
Fall to Fall Retention	1077	80.3%	3035	60.7%
Fall to Spring Retention	1134	84.6%	3829	76.6%
Credit Gained				
Average cumulative credits increase	55.6 (26.7)		29.7(25.8)	
GPA				

Average cumulative GPA	2.8(1.0)		2.7(0.88)	
Average cumulative GPA in fall after 3-year	3.1(0.71)		2.8(0.64)	
Average cumulative GPA in spring after 3-year	3.0(0.7)		2.8(0.6)	
Graduation				
Overall graduation rate	317	23.6%	2659	53.1 %
Graduation in 2 years	108	8.1%	517	10.3%
Graduation in 3 years	206	15.3%	502	10.0%
Transfers				
Transfer from CUNY CC to SC	99	24.2%	749	29.4%
Transfer from CUNY CC to SC with degree	71	17.4%	425	16.7%
Transfer from CUNY CC to SC without degree	28	6.9%	324	12.7%
Enrolled after graduation				
Enrolled	159	50.2%	1258	45.1%
Not enrolled	158	49.8%	3742	54.9%

Baseline Academic Characteristics

We examined the student type, registration status, prior educational experience in CUNY, and if the student was in a two or four-year college.

A higher proportion of the mentees than their counterpart controls were first time freshman students (91.1 percent vs. 77.0 percent). In their starting term, around 90 percent of the mentees registered as full time student while 65 percent of the controls did so. In the mentee group, prior to their CF term, most students had no prior educational experience within the CUNY system (80.8 percent). However, a higher proportion of the controls (59.4 percent) had been enrolled at one of the CUNY schools prior to fall 2012. While about half of the controls were from community colleges (50.9 percent), less than a third of the mentees were in community colleges (30.5 percent).

Academic Outcomes

The outcome measures include fall to fall and fall to spring retention rates; cumulative credit gained; cumulative GPA; graduation rate; as well as transfers and enrollment after graduation.

Retention

The result shows that for both fall to fall and fall to spring retention, the treated group outperformed the control group. A higher proportion of students in the CF mentee group

retained in the subsequent fall or spring than the control group. Fall to fall retention rate among the mentees was 80.3 percent compared with 60.7 percent for the controls. Fall to spring retention rate among the mentees was 84.6 percent compared with 76.6 percent for the controls.

Credit gain

The credit gain among the mentees was much higher than that for the controls. On average, fall 2014 mentees earned 55.6 credits in the three-year period following first enrollment. The average credits earned by the controls in the three-year follow-up time was 29.7.

GPA

The average cumulative GPA for the CF mentees was 0.1 points higher than that for the controls. When we accounted for the difference in duration of follow-up time for the mentees and the controls by restricting the measure to a time frame of three years for both groups, a higher cumulative GPA was still observed for the mentees than the controls.

Graduation

The overall graduation rate does not account for the time difference of the cohorts. Given that they had more terms to complete their studies, we were not surprised to find the control group had a considerably higher graduation rate (53.1 percent) than the treated group (23.6 percent). When we added in duration of studies, we found that, the 2-year graduation rate was still slightly higher among the controls (10.3 percent) as compared to the treated group (8.3 percent). However, we found that the 3-year graduation rate for the treated group (15.3 percent) was higher than the controls (10.0 percent).

Transfers

The proportion of students transferred from community colleges (2-year) to senior colleges (4-year) was low. The controls had a slightly higher rate of students transferring from 2-year to 4-year college (29.4 percent) compared with the mentees (24.2 percent).

The rate of transfers from community colleges to senior colleges with degree was slightly higher among the mentees than among the controls (17.4 percent vs. 16.7 percent). The rate of transfers from community colleges to senior colleges without degree was higher among the controls than that among the mentees (12.7 percent vs. 6.9 percent).

Re-enrollment after graduation

Mentees had a higher re-enrollment after graduation rate than the controls. Among the mentees, 317 students have graduated. About half of them (50.2 percent) did re-enroll in classes after graduation. In comparison in the control group about 45 percent of all those graduated enrolled after graduating. To better understand the percent of re-enrollment, see the following individual college analyses.

E. CUNY AGGREGATE - EVALUATING PROGRAM EFFECTS

Considering some of the significant differences in the sociodemographic and baseline characteristics of the CUNY CF treated and control groups, any comparison of outcomes are prone to error. To remedy this, EERC used *propensity score analysis* - one of the most frequently used approaches to balance the observable characteristics of control and treated groups (D'Agostino,1998; Rosenbaum & Rubin, 1983). In this study, EERC generated propensity scores, a probability of assignment to treated and control groups using both socio-demographic and baseline characteristics. We then used the nearest *neighbor matching method* with a caliper specification to find the match in the control group (Becker and Ichino, 2002). After balancing the two groups, we ran regression analysis to examine the difference in the outcomes between the treated and the controls. The results noted in this section are the most accurate to determine the impact of CF at CUNY.

Propensity scores

Using variables on student's demographic characteristics and baseline academic information. propensity scores were calculated by performing a logistic regression for predicting treatment status. These covariates have been broadly discussed in the educational evaluation literature as having strong association with enrolling in education/training program (Heckman & Ichimura et al. 2997; Houser & Garvey 1985; Fairweather & Shaver 1990).

Once we had the propensity scores, we used the nearest neighbor matching technique, set the caliper to less than 0.25 standard deviation of propensity score estimated from the sample (Cochran & Rubin, 1973). The caliper is a measure of match tolerance and specifies how close the distance needs to be for the match. In general, the smaller the caliper the smaller distance in matching the control. For our analysis we set the caliper at 0.25 following the technique defined by Cochran and Rubin (1973). Appendix Table B shows the result of the difference in the means of the covariates for the mentee and control groups before and after matching. After matching the percent of balance improvement suggests the improved comparability between the mentees and the controls on each specific variable. As you will see, for this study after matching EERC was able to substantially improve the overall balance between the mentees and controls.

Appendix Table B provides the result of the independent sample t-test for the covariates selected in the model for propensity score matching analysis. In addition, we also present the standardized mean difference before and after match. Both measures are commonly used to look at balance improvement for propensity score analysis (Olmos & Govindasami, 2015). Results of the independent sample t-test indicate that before matching many of the covariates for the mentee and controls were significantly different. But after matching, most of the difference in means between the mentee and control group after matching are not statistically significant. This suggests an improvement in balance of covariates between the mentees and the controls. The standardized difference in means looks at the difference in mean between the mentees and controls divided by their standard deviation. We then look at the absolute values.

According to Stuart & Rubin (2008) the standardized difference of less than 0.25 is desirable for balance diagnosis. Results of the standardized mean difference also suggests that in most of the cases balance between covariates have improved. This is particularly true for covariates with high-standardized mean difference before matching such as racial/ethnicity background and registration status of full time.

Treatment effects

Table 21 presents the estimated program effects on the CUNY mentees. We found that the CF program has a significant positive impact on students' fall to fall retention rate, credit gain, cumulative GPA's, 3-year graduation rate. The CF program also is associated with student's re-enrollment in CUNY after they had completed another program of study.

The fall to fall retention rate was 10 percentage points higher among the mentees than the controls. In a three-year follow-up time, the mentees earned 20 credits more than did the controls. The mentees also had significantly higher cumulative GPA's than the controls. In this study, we also found a higher proportion of mentees graduated in three-year following enrollment in CF. Moreover, mentees re-enrolled at CUNY for further education by around 15 percentage points more than their counterpart controls re-enrolled at CUNY after graduation.

The study fails to find any significant impact of the CF program on students' fall to spring retention rate, or transfer rates[30]. The significant difference in overall graduation rate between the mentees (low) and the controls (much higher) may be due to the follow-up time. In other words, most of the mentees had just one or two years from the start of their studies to graduation as compared to the controls whom EERC tracked for a much longer period of time. It is not surprising that greater proportion of the controls have graduated. However, when we constrained the observational time to 3 years by comparing the fall 2014 mentees and their counterpart controls for 3 years, we found that the mentees had a significantly higher graduation rate (0.17 for the mentees and 0.12 for the controls).

[30] The controls were better with transfer than the mentees. This may be due to follow-up time. Although we constrained the observational time to 4-year, most of the mentees from BMCC and LaG started CF in 2016 or 2017 which only allows us to follow for 1 or 2 years. With future data collection, the results may change.

TABLE 21: CUNY TREATMENT EFFECTS

Outcomes		Treated	Control	Difference	*p*-value
		Mean proportion	Mean proportion	Mean proportion	
Retention					
Fall to fall retention		0.79	0.69	0.1***	0.001
Fall to spring retention		0.8	0.83	-0.03	0.102
Credit accumulation					
Average cumulative credit earned		54.4	33.6	20.8***	0.001
GPA					
Average cumulative GPA		2.88	2.58	0.3***	0.001
Average cumulative GPA in fall after 3-year		3.07	2.79	0.28***	0.001
Average cumulative GPA in spring after 3-year		3.03	2.87	0.16***	0.001
Graduation					
Overall graduation rate		0.29	0.52	-0.23***	0.001
Graduation in 2 years		0.12	0.11	0.01	0.701
Graduation in 3 years		0.17	0.12	0.05**	0.002
Transfers					
Transfers from CUNY CC to SC		0.1	0.13	-0.03*	0.047
Transfers from CUNY CC to SC with degree		0.07	0.08	-0.01	0.32
Transfers from CUNY CC to SC with no degree		0.03	0.04	-0.01	0.053
Enrolled after graduation					
Enrolled		0.57	0.42	0.15***	0.001

*Level of statistical significance *p<.05, **p<.01, ***p<.001*

In sum, the CF program has had a positive impact on students' academic outcomes in terms of school retention, credit accumulation, GPA and graduation within three years. It positively affects students' decisions to re-enroll in academic programs after they finished a degree program.

PART VI: INDIVIDUAL CUNY COLLEGES - MENTEE CHARACTERISTICS & STUDENT OUTCOMES

The five participating CUNY schools differed in terms of type (2 or 4 year); the start date of the CF program; and the recruitment of mentees. In this section therefore, EERC presents separate analysis for each college - sociodemographic characteristics, baseline academic background, as well as outcomes. We did not conduct a propensity score matching analysis by college. This is because, the comparison cohort of 5000 students represent the student populations in all of the CF schools combined but not at individual colleges. As a result, the number of controls from each school varies and is not proportional to school size. It is for this reason that we did not conduct a propensity score matching analysis for each CUNY school.

A. BOROUGH OF MANHATTAN COMMUNITY COLLEGE (2 year)

Table 22 presents the distribution of socio-demographic characteristics, academic background, and academic outcomes for BMCC's mentees and controls.

Socio-demographics

During the study period, there were 142 BMCC CF mentees. Consistent with the distribution of female and male students in CUNY overall, there were more female than male mentees (72.5 percent vs. 26.8 percent). Almost 60 percent of the mentees were Hispanic; followed by blacks (18.4 percent); Asian/Pacific Islander (11.4 percent); and white (11.4 percent). The mean age of the mentees was 24 years of age. Around 26 percent of the mentees were non-traditional students, the majority (73.9 percent) were traditional students. Eleven percent (N=16) of the mentees had reported a disability. The average annual family income of the mentees was just over $22,000. More than half the mentees were Pell grant recipients (62.7 percent).

Compared with the BMCC controls, the mentee sample consisted of a higher proportion of female students (72.5 percent vs. 55.3 percent). Not surprisingly, the proportion of Hispanic students in the CF program was higher than that in the controls (58.9 percent vs. 41.5 percent). Compared with the mentees, a lower proportion of control students reported having disability (N = 54, 3.7 percent). The age distribution of the mentees and the controls was similar. The mean age of the mentees was 24 and the mean age of the controls was 23. The proportion of non-traditional students in the mentee group was 3 percentage points higher than that of the controls (26.1 percent vs. 22.9 percent).

The mean family income of the controls was over $21,000 which was about $1,000 lower than that of the mentees ($22,000). The proportion of control students receiving Pell was much higher than the mentees (82 percent vs. 62.7 percent).

BASELINE ACADEMIC BACKGROUND

Of the 136 CF mentees for whom EERC had student status, the majority were first time freshman (N = 112, 78.9 percent). This is a lower percentage than first time freshman in the control group (84.5 percent). The proportion of full-time students was higher among the mentees than the controls (85.9 percent vs. 69.3 percent). By a significant majority (93.7 percent) mentees had no previous educational experience at CUNY. In contrast, only 40 percent of the controls had no prior CUNY educational experience.

TABLE 22. BMCC - DISTRIBUTION OF SAMPLE DEMOGRAPHIC AND BASELINE CHARACTERISTICS, AND ACADEMIC OUTCOMES BETWEEN MENTEES AND THE CONTROLS

Variables	Mentees (N = 142)		Controls (N = 1466)	
SOCIODEMOGRAPHIC VARIABLES	**N**	**%**	**N**	**%**
Gender				
Male	38	26.8%	655	44.7%
Female	103	72.5%	811	55.3%
Race/Ethnicity				
Asian or Pacific Islander	16	11.4%	223	15.2%
Black	26	18.4%	474	32.3%
Hispanic	83	58.9%	608	41.5%
White	16	11.4%	161	11.0%
Current Age				
Non-traditional	105	73.9%	1131	77.2%
Traditional	37	26.1%	335	22.9%
Mean age (sd)	24.1 (5.7)		23.2 (6.9)	
Family Income				
Mean (sd)	22185.0 (18129.3)		20951.2 (26174.1)	
Financial Aid Status				
Financial aid recipient/Pell	89	62.7%	1202	82.0%
No financial support	53	37.3%	264	18.0%
Disability status				
Yes	16	11.3%	54	3.7%
No	126	88.7%	1412	96.3%
BASELINE ACADEMIC INFORMATION				
Student Type				
Advanced standing transfers	30	21.1%	227	15.5%
First-time freshmen	112	78.9%	1239	84.5%
Registration status at start term				

Full Time	122	85.9%	1016	69.3%
Part Time	20	14.1%	450	30.7%
Prior Education				
No prior education	133	93.7%	578	39.4%
Prior education before start	9	6.3%	888	60.6%
ACADEMIC PERFORMANCE				
Retention Rate				
Fall to Fall Retention	111	78.2%	884	60.3%
Fall to Spring Retention	101	71.1%	1183	80.7%
Credit Gained				
Average cumulative credits increase	--		28.96(25.37)	
GPA				
Average cumulative GPA	2.9 (1.0)		2.5 (0.9)	
Average cumulative GPA in fall after 3-year	3.2 (0.8)		2.8 (0.7)	
Average cumulative GPA in spring after 3-year	3.0 (0.8)		2.8 (0.6)	
Graduation				
Overall graduation rate	36	25.4%	701	47.8%
Graduation in 2 years	12	8.5%	118	8.1%
Graduation in 3 years	32	22.5%	165	11.3%
Transfers				
Transfer from CUNY CC to SC	34	23.9%	470	32.1%
Transfer from CUNY CC to SC with degree	21	14.8%	265	18.1%
Transfer from CUNY CC to SC without degree	13	9.2%	205	14.0%
Enrolled after graduation				
Enrolled	32	88.9%	486	69.3%
Not enrolled	4	11.1%	215	30.7%

ACADEMIC OUTCOMES

Academic outcomes for BMCC students focused on the following four dimensions: retention (fall to fall; and fall to spring); cumulative credits increase and GPA; graduation rates; and student transfers and/or enrollment after graduation.

Retention

Around 78 percent of the fall CF mentees remained in school continuing their studies the following fall. Fall to spring retention was a little lower than the fall to fall retention rate at 71 percent. This suggests that some of the fall BMCC mentees skipped the spring term but came back the next fall. The fall to fall retention rate among the mentees was higher than that of the

controls (78.2 percent vs. 60.3 percent). But, the fall to spring mentee retention rate was lower than that of the controls (71.1 percent vs. 89.7 percent).

Credit gain and GPA

Since BMCC mentees were not enrolled fall 2014, the cumulative credit gain was not calculated for them.

The mentees outperformed the control in respect to GPAs. The average cumulative GPA for the mentees was 2.9 which was 0.4 points higher than that of the controls (2.5). The average fall cumulative GPA of the mentees after 3 years was 3.2, 0.4 points higher than that of the controls (2.8). Mentees also had higher average cumulative GPA in spring term after 3 years than the controls (3.0 vs. 2.8).

Graduation

The overall graduation rate of the mentees was 25.4 percent was much lower than that among the controls (47.8 percent). Follow-up time may account for this difference. The two-year graduation rate of the mentees was 8.5 percent which was close to the controls (8.1 percent). The graduation rate increased when we relax the time to three years. The 3-year graduation rate is much higher than the 2-year graduation rate which indicates that more students finished their program in 3-years. The mentees had a higher 3-year graduation rate than the controls (22.5 percent vs. 11.3 percent).

Transfer and re-enrollment

About 24 percent of the mentees at BMCC transferred to senior colleges after participating in CF (N = 34); compared to 32 percent of the controls. About 15 percent of the mentees transferred with degree (N = 21) and 9 percent transferred without degree (N = 13). The transfer rate was lower among the mentees than that of the controls regardless of whether it was transfer with or without degree. However, follow-up time may have affected these results as not all BMCC mentees were followed up for four years.

Thirty-two of the 36 mentees (88.9 percent) who completed their degree re-enrolled in a CUNY college. This is much higher than the 69 percent of controls who re-enrolled after graduation.

B. LAGUARDIA COMMUNITY COLLEGE (2 year)

Table 23 presents the distribution of socio-demographic characteristics, academic background, and academic outcomes for LaGuardia mentees and controls.

SOCIO-DEMOGRAPHICS

There were 267 students in LaGuardia's CF program from its inception in 2014 through spring 2018. Consistent with the distribution of female and male students in CUNY overall, there were more female than male mentees (67.8 percent vs. 32.2 percent). The majority of the mentees

identified as Hispanic students (close to 69 percent) followed by black (12.3 percent); Asian/Pacific Islander (8.8 percent); and white (10.3 percent). Most of LaGuardia's CF mentees were traditional students (69.3 percent) with close to 31 percent non-traditional. The mean age of the mentees was 25.4 years of age. Very few mentees reported a disability (N=22, 8.2 percent). The average annual family income of the mentees was just over $28,000 and a large proportion of the mentees received a Pell grant (N = 191, 71.5 percent).

Compared with the controls, there was a higher proportion of female students among the mentees (67.8 percent vs. 58.2 percent). Not surprisingly, the proportion of Hispanic students in the program was higher than that in the controls (68.6 percent vs. 41.6 percent). The percentage of traditional students among the controls was close to the mentees (71 percent vs. 69.3 percent). The age distribution of the mentees and the controls was also similar with mean age around 25 among the controls.

The mean family income of the controls was around $21,000, much lower than that among the mentees ($28,000). However, the difference in the receipt of a Pell grant between the controls and mentees receiving a Pell grant was very small, only one percentage point (72.7 percent vs. 71.5 percent).

BASELINE ACADEMIC BACKGROUND

The controls were comparable to the mentees in respect to student type. Eighty-three percent of the mentees were first time freshman while 77 percent of the controls were first time freshman students. Most of the mentees started as full-time students (N = 219, 82 percent) with only 18 percent (N=48) enrolled as part-time (18 percent). In contrast, 60.7 of the controls were full-time students. Over three quarters of mentees (75 percent) had no prior educational experience at CUNY compared to 40 percent controls.

TABLE 23. LAGUARDIA - DISTRIBUTION OF SAMPLE DEMOGRAPHIC AND BASELINE CHARACTERISTICS, AND ACADEMIC OUTCOMES BETWEEN MENTEES AND THE CONTROLS

Variables	Mentee (N = 267)		Control (N = 1079)	
SOCIODEMOGRAPHIC VARIABLES	**N**	**%**	**N**	**%**
Gender				
Male	80	32.2%	451	41.8%
Female	181	67.8%	628	58.2%
Race/Ethnicity				
Asian or Pacific Islander	23	8.8%	218	20.2%
Black/African American	32	12.3%	224	20.8%
Hispanic	179	68.6%	449	41.6%
White	27	10.3%	188	17.4%
Current Age				
Non-traditional	185	69.3%	770	71.4%

Traditional	82	30.7%	309	28.6%
Mean age (sd)	25.4 (6.8)		24.6 (7.6)	
Family Income				
Mean (sd)	28671.7 (28679.3)		21444.9 (24470.5)	
Financial Aid Status				
Financial aid recipient/Pell	191	71.5%	784	72.7%
Not financial support	76	28.5%	295	27.3%
Disability status				
Yes	22	8.2%	40	3.7%
No	245	91.8%	1039	96.3%
BASELINE ACADEMIC INFORMATION				
Student Type				
Advanced standing transfers	45	16.9%	244	22.6%
First-time freshmen	222	83.2%	835	77.4%
Registration status at start term				
Full Time	219	82.0%	655	60.7%
Part Time	48	18.0%	424	39.3%
Prior Education				
No prior education	204	76.4%	433	40.1%
Prior education before start	63	23.6%	646	59.9%
Academic Performance				
Retention Rate				
Fall to Fall Retention	189	70.8%	613	56.8%
Fall to Spring Retention	192	71.9%	796	73.8%
Credits Gained				
Average cumulative credits increase	37.9(25.9)		27.7(26.0)	
GPA				
Average cumulative GPA	2.5 (1.2)		2.6 (1.0)	
Average cumulative GPA in fall after 3-year	3.0 (0.8)		2.8 (0.6)	
Average cumulative GPA in spring after 3-year	2.9 (0.8)		2.8 (0.6)	
Graduation				
Overall graduation rate	103	38.6%	491	45.5%
Graduation in 2 years	32	12.0%	88	8.2%
Graduation in 3 years	40	15.0%	104	9.6%
Transfers				
Transfer from CUNY CC to SC	65	24.3%	279	25.9%
Transfer from CUNY CC to SC with degree	50	18.7%	160	14.8%
Transfer from CUNY CC to SC without degree	15	5.6%	119	11.0%

Enrolled after graduation				
Enrolled	78	75.7%	324	66.0%
Not enrolled	25	24.3%	167	34.0%

Academic Outcomes

Academic outcomes for LaGuardia students focused on the following four dimensions: retention (fall to fall; and fall to spring); cumulative credits earned and GPA; graduation rates; and student transfers and/or enrollment after graduation

Retention

Fall to spring fall retention rates for LaGuardia's mentees were similar 71.9 percent compared to 73.8 percent. However, the fall to fall retention rate of the controls was much lower than that of the mentees (56.8 percent vs. 71 percent).

Credits gain and GPA

Compared with the controls, mentees had accumulated more credits in 3 years than the controls (37.9 vs. 27.7).

The average cumulative GPA earned by LaGuardia mentees was similar to that earned by the controls (2.5 vs. 2.6). As of the last fall term, the average cumulative GPA after 3-years was 3.0 among the mentees, 0.2 points higher than the controls (2.8). The average cumulative GPA of the mentees in spring after 3-year was 2.9 and that of the controls was 2.8.

Graduation

The overall graduation rate of the mentees was 38.6 percent (N = 103) which is lower than that of the controls (45.5 percent). The two-year graduation rate of the mentees was 12 percent which was higher than that of the controls (8.2 percent). The 3-year graduation rate of the mentees was higher than that of the controls (9.6 percent).

Transfer and re-enrollment

In our study sample, around 24 percent of the LaGuardia mentees transferred to four-year colleges subsequent to their participation in the CF program. The transfer rate was slightly lower than that of the LaGuardia control sample (25.9 percent). However, the rate of transfer with degree among the mentees (18.7 percent) was higher than that of the controls (14.8 percent). The rate of transfer without degree of the mentees (5.6 percent) was lower than that of the controls (11.0 percent).

Of the 103 mentees who completed a degree program, 78 (75.7 percent) re-enrolled. after they earned their degree. This rate was higher that of the controls (66.0 percent).

C. CITY TECH COLLEGE OF TECHNOLOGY (4 year)

Table 24 presents the distribution of socio-demographic characteristics, academic background, and academic outcomes for City Tech mentees and controls.

SOCIO-DEMOGRAPHICS

There were 103 mentees in the City Tech CF program. Consistent with the distribution of female and male students in CUNY overall, more mentees were female than male (69.7 percent vs. 30.3 percent). The majority of the mentees identified as Hispanic (just under 55 percent); followed by black students (25.3 percent), white (13.1 percent) and Asian/Pacific Islander (7.1 percent). The mean age of the CF mentees was 25 years of age. Most CF mentees were traditional students (75.7 percent). Only 24.3 percent of the mentees were non-traditional students. Very few mentees had reported a disability (N=5, 4.9 percent). The average annual family income of the mentees was just over $34,000, and more than three quarters were Pell recipients (N = 81, 78.6 percent).

Compared with the controls, the mentee sample consisted of a higher proportion of female students (69.7 percent vs. 45.5 percent). Not surprisingly, the proportion of Hispanic students in the program was higher than that in the controls (54.6 percent vs. 26.8 percent). Compared with the mentees, a lower proportion of control students reported having disability (N = 25, 2.8 percent). The age distribution of the mentees and the controls was similar. The mean age of the mentees was 25 and that of the controls was 24. The proportion of traditional students in the mentee group was 75.7 percent, 3 percentage points higher than that of the controls (72.1 percent).

The mean family income of the controls was over $20,000 which was much lower than that among the mentees ($34,000). However, the proportion of mentees receiving a Pell grant was still 2 percentage points higher than that of the controls (78.6 percent vs. 76.7 percent).

BASELINE ACADEMIC BACKGROUND

Most of the mentees and controls were first time freshman (83.5 percent and 81.9 percent respectively). At the start of the CF program, a higher proportion of the mentees than the controls registered as full time student (80.6 percent vs. 65.6 percent). The proportion of the mentees who did not have any prior CUNY experience was much higher in the mentee cohort than in the control cohort (72.8 percent vs. 39.6 percent).

TABLE 24. CITI TECH - DISTRIBUTION OF SAMPLE DEMOGRAPHIC AND BASELINE CHARACTERISTICS, AND ACADEMIC OUTCOMES BETWEEN MENTEES AND THE CONTROLS

Variables	Mentee (N= 103)		Control (N = 906)	
SOCIODEMOGRAPHIC VARIABLES	**N**	**%**	**N**	**%**
Gender				
Male	30	30.3%	521	57.5%
Female	69	69.7%	385	42.5%
Race/Ethnicity				
Asian or Pacific Islander	7	7.1%	170	18.8%
Black/African American	25	25.3%	325	35.9%
Hispanic	54	54.6%	243	26.8%
White	13	13.1%	168	18.5%
Current Age				
Non-traditional	78	75.7%	653	72.1%
Traditional	25	24.3%	253	27.9%
Mean age (sd)	25.1 (9.2)		24.2 (7.9)	
Family Income				
Mean (sd)	34338.7 (58105.1)		20062.5 (26188.0)	
Financial Aid Status				
Financial aid recipient/Pell	81	78.6%	695	76.7%
Not financial support	22	21.4%	211	23.3%
Disability Status				
Yes	5	4.9%	25	2.8%
No	98	95.2%	881	97.2%
BASELINE ACADEMIC INFORMATION				
Student Type				
Advanced standing transfers	17	16.5%	164	18.1%
First-time freshmen	86	83.5%	742	81.9%
Registration status at start term				
Full Time	83	80.6%	594	65.6%
Part Time	20	19.4%	312	34.4%
Prior Education				
No prior education	75	72.8%	359	39.6%
Prior education before start	28	27.2%	547	60.4%
ACADEMIC PERFORMANCE				
Retention rate				
Fall to Fall Retention	68	66.0%	569	62.8%

Fall to Spring Retention	73	70.9%	702	77.5%
Credits Gained				
Average cumulative credits increase	--		32.1(26.3)	
GPA				
Average cumulative GPA	2.7 (0.9)		2.7 (0.8)	
Average cumulative GPA in fall after 3-year	2.9 (0.6)		2.8 (0.6)	
Average cumulative GPA in spring after 3-year	2.9 (0.5)		2.8 (0.6)	
Graduation				
Overall graduation rate	23	22.3%	440	48.6%
Graduation in 2 years	6	5.8%	96	10.6%
Graduation in 3 years	21	20.4%	88	9.7%
Enrolled after graduation				
Enrolled	17	85.0%	183	41.6%
Not enrolled	3	15.0%	257	58.4%

ACADEMIC OUTCOMES

Academic outcomes for City Tech students focused on the following four dimensions: retention (fall to fall; and fall to spring); cumulative credits gained and GPA; graduation rates; and enrollment after graduation.

Retention

Mentees at City Tech had higher fall to spring retention rate than the fall to fall retention rate. About 71 percent of the fall students remained registered in the spring immediately following the fall semester. However, only 66 percent mentees remained in college from ne fall to the next.

Compared with the mentees rate of 70.9 percent, the fall to spring retention rate of the controls was higher at 77.5 percent. However, the fall to fall retention rate was higher among the mentees than the controls (66 percent vs. 62.8 percent).

Credit gain and GPA

Since none of the BMCC mentees were enrolled in CF in fall 2014, the cumulative credit gain was not calculated for them. However, the cumulative measures of GPA of the mentees were similar or even a little higher than that of the controls.

The average cumulative GPA of both the mentees and controls was 2.7. The average cumulative GPA in both fall terms and spring terms after 3-years for the mentees was 2.9 compared to the controls, 2.8.

Graduation

The overall graduation rate of the mentees was 22.3 percent (N = 23). The overall graduation rate of the controls was two times higher than that of mentees (48.6 percent). Not surprising again, given follow-up time. The two-year graduation rate of the mentees was 5.8 percent. The rate increased to 20.4 percent when we relax the time to three years. The 3-year graduation rate is much higher than the 2-year graduation rate which may indicate that more students finish their program in 3-years. The controls had a higher 2-year graduation rate than the mentees (10.6 percent). However, the three-year graduation rate of the controls 9.7 percent was much lower than that of the mentees 20.4 percent.

Re-enrollment

Among the mentees who graduated, 17 students (85.0 percent) re-enrolled after they earned a degree. This rate was twice as high as that of controls (41.6 percent).

D. JOHN JAY COLLEGE OF CRIMINAL JUSTICE (4 year)

Table 25 presents the distribution of socio-demographic characteristics, academic background, and academic outcomes for John Jay mentees and controls.

SOCIO-DEMOGRAPHICS

From fall 2014 through the spring of 2018, a total of 554 John Jay students participated in the college's CF program. Consistent with the distribution of female and male students in CUNY overall, there were more female than male mentees (61.9 percent vs. 37.9 percent). The majority of the JJ mentees identified as Hispanic (70 percent); followed by white (15.6 percent); Asian/Pacific Islander (8.7 percent); and black (5.8 percent). Most of the JJ students in the CF program were non-traditional students (75.7 percent). Only 24.3 percent of the mentees were traditional students. The mean age of the mentees was 20.7 years of age. Very few mentees reported a disability (N=6, 1.1 percent). The average annual family income of the mentees was just over $43,000 and a large proportion of the mentees received Pell grants (N = 347, 62.6 percent).

Compared with the controls, the mentees consisted of a higher proportion of female students (61.9 percent vs. 56.4 percent). The proportion of Hispanic student among the mentees was much higher than that in the controls (70 percent vs. 37.6 percent). Almost all mentees were non-traditional students (98.6 percent) while 76.2 percent of the controls were traditional students. The mean age for the mentees, however, was slightly lower than the controls, 21 compared with 23.6. Few mentees or controls reported a disability. The average family income of the mentees was much higher than that of the controls ($43,000 vs $20,000). However, the proportion of students receiving Pell grants among the controls was only 3 percentage points higher than that among the mentees (66.5 percent vs. 62.6 percent).

BASELINE ACADEMIC BACKGROUND

Almost all John Jay mentees were first time freshman student (N = 545, 98.4 percent), much higher than the proportion of first-time freshman students among the controls (73.4 percent). A higher proportion of the mentees than the controls started as full time students (93.1 percent vs. 73.8 percent). Most of the mentees at John Jay (83 percent) did not have any prior education experience within the CUNY system compared to 40 percent of the controls.

TABLE 25. JOHN JAY -DISTRIBUTION OF SAMPLE DEMOGRAPHIC AND BASELINE CHARACTERISTICS, AND ACADEMIC OUTCOMES BETWEEN MENTEES AND THE CONTROLS

Variables	Mentee (N = 554)		Control (N = 890)	
SOCIODEMOGRAPHIC VARIABLES	**N**	**%**	**N**	**%**
Gender				
Male	210	37.9%	388	43.6%
Female	343	61.9%	502	56.4%
Race/Ethnicity				
Asian or Pacific Islander	48	8.7%	101	11.4%
Black/African American	32	5.8%	209	23.5%
Hispanic	387	70.0%	335	37.6%
White	86	15.6%	245	27.5%
Current Age				
Non-traditional	546	98.6%	678	76.2%
Traditional	8	1.4%	212	23.8%
Mean age (sd)	20.7 (1.8)		23.6 (6.8)	
Family Income				
Mean (sd)	43077.9 (40427.9)		20590.7 (25063.2)	
Financial Aid Status				
Financial aid recipient/Pell	347	62.6%	592	66.5%
Not financial support	207	37.4%	298	33.5%
Disability Status				
Yes	6	1.1%	21	2.4%
No	548	98.9%	869	97.6%
BASELINE ACADEMIC INFORMATION				
Student Type				
Advanced standing transfers	9	1.6%	237	26.6%
First-time freshmen	545	98.4%	653	73.4%
Registration status at start term				
Full Time	516	93.1%	657	73.8%
Part Time	38	6.9%	233	26.2%

Prior Education				
No prior education	460	83.0%	353	39.7%
Prior education before start	94	17.0%	537	60.3%
ACADEMIC PERFORMANCE				
Retention Rate				
Fall to Fall Retention	484	87.4%	551	61.9%
Fall to Spring Retention	524	94.6%	660	74.2%
Credit Gained				
Average cumulative credits increase	59.7(24.9)		32.3(26.4)	
GPA				
Average cumulative GPA	2.9 (1.0)		2.9 (0.7)	
Average cumulative GPA in fall after 3-year	3.0 (0.7)		2.9 (0.6)	
Average cumulative GPA in spring after 3-year	3.0 (0.7)		2.9 (0.6)	
Graduation				
Overall graduation rate	108	19.5%	586	65.8%
Graduation in 2 years	41	7.4%	126	14.2%
Graduation in 3 years	72	13.0%	99	11.1%
Enrolled after graduation				
Enrolled	16	15.0%	105	17.9%
Not enrolled	91	85.1%	481	82.1%

ACADEMIC OUTCOMES

Academic outcomes for John Jay students focused on the following four dimensions: retention (fall to fall; and fall to spring); cumulative credits gained and GPA; graduation rates; and student enrollment after graduation.

Retention

John Jay mentees had a higher fall to spring retention rate than the fall to fall retention rate, suggesting higher proportion of students dropping out of school with time. Almost all the fall mentees were retained in the immediate spring term (94.6 percent). The fall to fall retention rate of the mentees was 87.4 percent. The retention rates of the mentees were higher than that of the controls. The fall to spring retention rate of the controls was 74.2 percent and the fall to fall retention rate of the controls was 61.9 percent.

Credit gain and GPA

Mentees earned more credits than the controls in the 3-year follow up time (59.7 vs. 32.3 respectively). However, the GPA's for both groups were similar.

The cumulative GPA remained steady for the John Jay mentees. The average cumulative GPA was 2.9 and the average cumulative GPA in the fall term after 3-years was 3.0. The average cumulative GPA for the spring term after 3-years was 3.0. The average GPA among the controls remained at 2.9. The mentees and controls were similar as to their cumulative GPA.

Graduation

The overall graduation rate among the mentees was 19.5 percent (N = 108). The rate was much lower than that of the controls. The overall graduation rate among the controls was three times as high as that of the mentees (65.8 percent). Again, follow-up time may have affected the results. The two-year graduation rate of the mentees was lower than that of the controls. Compared with the controls, the mentees out-performed the controls in terms of the three-year graduation rate (13.0 percent vs. 11.1 percent respectively).

Re-enrollment

Among all mentees 16 (15 percent) students re-enrolled after they earned a degree, slightly lower than the rate of the controls (17.9 percent).

E. LEHMAN COLLEGE (4 year)

Table 26 presents the distribution of socio-demographic characteristics, academic background, and academic outcomes for Lehman mentees and controls.

SOCIO-DEMOGRAPHICS

From fall 2014 through spring 2018, a total of 275 Lehman students participated in the CF program. Consistent with the distribution of female and male students in CUNY overall, there were more female than male mentees (68.7 percent vs. 31.3 percent). The majority (61 percent) of the mentees identified as Hispanic students; followed by black students (25.1 percent); Asian/Pacific Islander (7.3 percent); and white students (6.9 percent). The majority of the students in the CF program were traditional students (91.6 percent). Only 8.4 percent of the mentees were non-traditional students. The mean age of the mentees was 22 years of age. Very few mentees reported a disability (N=9, 3.3 percent). The average annual family income of the mentees was just over $36,000; and a large proportion of them were Pell grant recipients (N = 216, 78.6 percent).

The gender distribution of the mentees was similar to that of the controls. Just under 69 percent (68.7 percent) of the mentees were female compared to 71.1 percent of the control group. Not surprisingly, the proportion of Hispanic students in the program was higher than that in the controls (60.7 percent vs. 48.5 percent). The controls were older than the mentees. About half of the controls were non-traditional age students, compared to the mentees (7.4 percent). The average of the controls was 29 compared to 22 years old for the mentees. was 22.

The mean family income of the controls was around $29,000 which was lower than that among the mentees ($36,000). However, a higher proportion of the mentees received a Pell grant than the controls (78.6 percent vs. 65.4 percent).

BASELINE ACADEMIC BACKGROUND

A higher proportion of the mentees were first time freshman students as compared to the controls (93.5 percent vs. 58.1 percent). Most of the mentees started as full-time students (N = 261, 94.9 percent) compared to only half the controls, 49.5 percent. A larger proportion of the mentees had no prior education experience at CUNY (46.8 percent) as compared to the controls, 77.1 percent.

TABLE 26. LEHMAN - DISTRIBUTION OF SAMPLE DEMOGRAPHIC AND BASELINE CHARACTERISTICS, AND ACADEMIC OUTCOMES BETWEEN MENTEES AND THE CONTROLS

Variables	Mentee (N = 275)		Control (N= 658)	
SOCIODEMOGRAPHIC VARIABLES	**N**	**%**	**N**	**%**
Gender				
Male	86	31.3%	190	28.9%
Female	189	68.7%	468	71.1%
Race/Ethnicity				
Asian or Pacific Islander	20	7.3%	57	8.7%
Black/African American	69	25.1%	191	29.0%
Hispanic	167	60.7%	319	48.5%
White	19	6.9%	91	13.8%
Current Age				
Non-traditional	252	91.6%	330	50.2%
Traditional	23	8.4%	328	49.9%
Mean age (sd)	21.9 (3.2)		28.5 (9.6)	
Family Income				
Mean (sd)	36660.3 (41161.6)		29180.7 (37056.5)	
Financial Aid Status				
Financial aid recipient/Pell	216	78.6%	430	65.4%
Not financial support	59	21.5%	228	34.7%
Disability Status				
Yes	9	3.3%	28	4.3%
No	266	96.7%	630	95.7%
BASELINE ACADEMIC INFORMATION				
Student Type				
Advanced standing transfers	18	6.6%	276	42.0%
First-time freshmen	257	93.5%	382	58.1%

Registration status at start term				
Full Time	261	94.9%	326	49.5%
Part Time	14	5.1%	332	50.5%
Prior education				
No prior education	212	77.1%	308	46.8%
Prior education before start	63	22.9%	350	53.2%
ACADEMIC PERFORMANCE				
Retention rate				
Fall to Fall Retention	225	81.8%	418	63.5%
Fall to Spring Retention	244	88.7%	488	74.2%
Credits Gained				
Average cumulative credits increase	64.4(23.4)		28.0 (24.4)	
GPA				
Average cumulative GPA	3.1 (0.9)		3.1 (0.7)	
Average cumulative GPA in fall after 3-year	3.3 (0.7)		3.0 (0.6)	
Average cumulative GPA in spring after 3-year	3.2 (0.6)		3.1 (0.6)	
Graduation				
Overall graduation rate	51	18.6%	441	67.0%
Graduation in 2 years	17	6.2%	89	13.5%
Graduation in 3 years	41	14.9%	46	7.0%
Enrolled after graduation				
Enrolled	16	31.4%	101	22.9%
Not enrolled	35	68.6%	340	77.1%

Academic Outcomes

Academic outcomes for Lehman students focused on the following four dimensions: retention (fall to fall; and fall to spring); cumulative credits earned and GPA; graduation rates; and re-enrollment after graduation

Retention

Both mentees and the controls had better fall to spring retention rates than the fall to fall retention rates. Fall students were more likely to drop out of school after an academic year than enroll in the next immediate semester. Among the mentees, the fall to spring retention rate was 88.7 percent, higher than the controls (74.2 percent). The fall to fall retention rate for the mentees was 81.8 percent, also higher than the fall to fall retention rate of the controls (63.5 percent).

Credit gain and GPA

Compared with the controls, mentees had more credits within the three-year follow up time. On average, mentees earned 64.4 credits while the controls earned only 28 credits. This may be an artifact of the part-time status of a large percentage of the controls.

The average cumulative GPA earned by Lehman mentees was equal to that earned by the controls (3.1 vs. 3.1). The average cumulative GPA in fall term after three-years was 3.3 among the mentees, 0.3 points higher than the controls (3.0). The average cumulative GPA of the mentees in the spring term after 3-years was 3.2 and that of the controls was 3.1.

Graduation

The overall graduation rate of the mentees was 18.6 percent (N = 51) which was far lower than that of the controls (67 percent). The two-year graduation rate of the mentees was 6.2 percent compared to the two-year graduation rate of the controls, 13.5 percent. In contrast, the mentee 3-year graduation rate was twice as high as the controls (14.9 percent vs. 7.0 percent). This differences prompt interest in further inquiry.

Re-enrollment

Among the 51 Lehman mentees who completed a program, 16 (31.4 percent) students re-enrolled after they earned a degree. The rate was higher than that for the controls (N = 101, 22.9 percent).

PART VII: NAUGATUCK VALLEY COMMUNITY COLLEGE AND UNIVERSITY OF CENTRAL FLORIDA

As indicated above, NVCC and UCF were two of the three out-of-state colleges to launch a Crear Futuros program. We have therefore separated our analysis of these two colleges' programs from the CUNY colleges.

A. NAUGATUCK VALLEY COMMUNITY COLLEGE

NVV first launched its CF program fall 2017. EERC's analysis is thus for a single academic year 2017 - 2018.

DATA SOURCE

NVCC provided four data sets of sociodemographic and academic information for each student in the study sample: *student data file* – student's sociodemographic characteristics including gender, race/ethnicity, year of first entry to college, birth date, Pell status, and military background; *enrollment history data set* - longitudinal information on student's specific term GPA, enrollment type (new student, transfer student, or continuing student), student's need for developmental education courses, the degree the student is pursuing; the *course history data file* - all courses by term each student has taken, course grades, and final term grade GPA; and *a degree data set* - information on the degrees earned to date by each student.

DEMOGRAPHICS OF CF MENTEES

In fall 2017, 52 students enrolled in NVCC's CF program. Table 27 presents the characteristics of these NVCC mentees: sociodemographic characteristics, baseline educational information, and their one-year educational outcome. Most of the CF mentees were female students (63.5 percent). A little over half of the mentees were Hispanic (52.9 percent), followed by about 31 percent black, and just under 16 percent white. Close to one third of the mentees were on financial aid (Pell recipients). Most of the mentees were under 25 or traditional aged students (N = 45, 86.5 percent); but several mentees were over 25, or non-traditional aged students.

Of the 52 mentees, 25 were students who had first enrolled at NVCC prior to fall 2017 and were continuing their studies. Twenty-five of the mentees were first time college students who first enrolled at NVCC fall 2017. Two mentees were transfer students. As of fall 2017, thirty-nine of the mentees were freshman, and 13 were sophomore students.

Most of the mentees had previously or were currently enrolled in developmental education English or math courses education courses (N=48, 92.3 percent). During the fall 2017 semester, most mentees were full-time[31] students (N= 46, 88.5 percent); 6 were part-time (11.5 percent).

[31] Full-time student status is based on the total number of credits (12 credits or more) per term) a student takes per term. Students who take less than 12 credits are deemed part-time students.

Except for 2 mentees who were pursuing certificates, the CF mentees were pursuing associate degrees.

The 2017-2018 academic year was the first EERC study year at NVCC. The current study therefore only focuses on academic results for the fall 2017 and spring 2018 semesters. Forty out of the 52 mentees were retained from fall 2017 to spring 2018. On average, mentees earned 6.8 quality course credits (number of credits earned with a grade of C or higher) for the fall 2017 term. Spring 2018, the 40 retained mentees earned on average 6.8 quality credits. The mentees' average term GPA fall 2017 was 2.3.

TABLE 27. NVCC - MENTEE SOCIODEMOGRAPHIC CHARACTERISTICS, BASELINE EDUCATIONAL INFORMATION, AND ONE YEAR ACADEMIC OUTCOME

	CF mentees	
SOCIODEMOGRAPHIC VARIABLES	**N of Mentees**	**%**
Gender		
Female	33	63.5%
Male	19	36.5%
Total	*52*	*100.0%*
Race/ethnicity		
Black	16	31.4%
Hispanic	27	52.9%
White	8	15.7%
Total	*51*	*100.0%*
Financial aid		
Without financial aid	35	67.3%
Financial aid recipient/Pell	17	32.7%
Total	*52*	*100.0%*
Age		
Non-traditional student	7	13.5%
Traditional student	45	86.5%
Total	*52*	*100.0%*
BASELINE ACADEMIC INFORMATION		
Starting term		
Before fall 2017	25	48.1%
Fall 2017	27	51.9%
Total	*52*	*100.0%*
Enrollment Type		
Continuing Student	25	48.1%

New Student	25	48.1%
Transfer Student	2	3.9%
Total	*52*	*100.0%*
Student level		
Freshman	39	75.0%
Sophomore	13	25.0%
Total	*52*	*100.0%*
Developmental education required		
No, taking dev edu	4	7.7%
Yes, dev edu	48	92.3%
Total	*52*	*100.0%*
Registration status in fall 2017		
Full-time student	46	88.5%
Part-time student	6	11.5%
Total	*52*	*100.0%*
Degree of interest		
Associate degree	50	96.2%
Certificate	2	3.9%
Total	*52*	*100.0%*
OUTCOME VARIABLES		
Retention rate		
Fall to spring retention rate	52	76.9%
	N	**Mean**
Earned credit		
Average total good quality credits earned in fall 2017	52	6.8
Average total good quality credits earned in spring 2018	40	6.8
Term GPA		
Average fall 2017 GPA	52	2.3
Average spring 2018 GPA	40	2.3

EVALUATING PROGRAM EFFECTS

In this section EERC presents the results of its quasi-experimental analysis of propensity score matching analysis (see Appendix Tables C & D). After balancing the difference between the treated and the control groups, this analysis helps measure the potential impact of the CF program on the academic performance of NVCC mentees during the 2017-2018 academic year. As noted, given the short duration of treatment, EERC was unable to examine the rate of program/degree completion. As a result, EERC focuses only on four academic outcomes – fall-to-spring retention rate, student's term GPA, and quality credits earned during the first year of NVCC's CF program.

Sample

The treated

The treatment group consists of 52 students who were enrolled at NVCC fall 2017. Almost half of the mentees were new students to NVCC. Further, the CF cohort was a mix of Hispanic and non-Hispanic students.

Controls

Using the NVCC source data files cited above, EERC limited the study's control students to students with similar demographic and age characteristics and distributions as the mentees. The control group therefore consisted of Hispanic, white, and black students who ranged in age from 17 to 54. Moreover, since the NVCC mentees were freshman and sophomore students, EERC also confined the comparison sample to other freshman and sophomore students. The final NVCC 2017 academic year control group included 4,583 NVCC students.

Covariates

In this study, the variables used for propensity score matching included students' sociodemographic characteristics such as gender and receipt of Pell. EERC also included the students' fall 2017 registration status - full-time or part-time student.

Students' educational background is usually associated with their educational achievement. Therefore, EERC also considered whether sample students started their NVCC program of interest fall 2017; and if they were new students. Students' registration status - full-time or part-time at the beginning of fall 2017 and the launch of the CF program were also included in the analysis. The need for a student to take one or more developmental education courses was also considered. Student's academic level was controlled in the model by creating categorical variables of freshman with the reference category as sophomore. The type of credential the student was pursuing was also included in the matching process.

The above variables are all categorical variables with 1 indicating endorsing the item. Demographic information was self-reported while financial aid, and academic information was documented by the administrative database.

OUTCOMES OF INTEREST

EERC focused on three types of academic outcomes in its study of NVCC's CF program: fall-to-spring retention, term GPA, and number of quality credits gained. Except for the measure of fall-to-spring retention, all the other measures of GPA and quality earned credits were separately analyzed for fall 2017 and spring 2018 term. Note, since fall 2017 was the first CF program term at NVCC, mentee fall 2017 academic outcomes present an immediate impact of the program while spring 2018 measures show a longer/cumulative effect of the treatment of program year one.

The sample distributions of the covariates and outcome variables for the treated and the controls are presented in Table 28 below.

Propensity Score Matching[32]

Propensity score matching method has become a popular approach to estimate the program effects using observational data when randomization is unethical or unavailable. To examine the impact of the CF program on college student's academic performance, we used propensity score matching methods to create a control group that were comparable to the treated based on student's socioeconomic background and academic background that suggested in the literature having a strong association with college student's academic achievements (Stanfiel 1972; Strayhorn 2006; White 1982).

Results

Sample descriptive analysis:

Distributions of baseline covariates that were used for propensity score matching as well as outcome measures before matching are presented in Table 28 for both mentees and controls.

[32] See the above methods section for more detailed explanation of the process of creating a control sample using propensity score matching.

TABLE 28. NVCC - DISTRIBUTION OF COVARIATES AND OUTCOME VARIABLES FOR NVCC MENTEES AND CONTROLS

	NVCC mentees		NVCC Controls	
SOCIODEMOGRAPHIC VARIABLES	N	%	N	%
Gender				
Female	33	63.5%	2621	57.2%
Male	19	36.5%	1962	42.8%
Total	*52*	*100.0%*	*4583*	*100.0%*
Race/Ethnicity				
Black	16	31.4%	526	11.8%
Hispanic	27	52.9%	1602	35.9%
White	8	15.7%	2335	52.3%
Total	*51*	*100.0%*	*4463*	*100.0%*
Financial Aid				
Without financial aid	35	67.3%	3245	70.8%
Financial aid recipient/Pell	17	32.7%	1338	29.2%
Total	*52*	*100.0%*	*4583*	*100.0%*
Age				
Non-traditional student	7	13.5%	1318	28.8%
Traditional student	45	86.5%	3265	71.2%
Total	*52*	*100.0%*	*4583*	*100.0%*
BASELINE ACADEMIC INFORMATION				
Starting Term				
Before fall 2017	25	48.1%	2944	64.2%
Fall 2017	27	51.9%	1639	35.8%
Total	*52*	*1.0%*	*4583*	*100.0%*
Enrollment Type				
Continuing Student	25	48.1%	2980	65.0%
New Student	25	48.1%	1181	25.8%
Transfer Student	2	3.9%	422	9.2%
Total	*52*	*100.0%*	*4583*	*100.0%*
Student Level				
Freshman	39	75.0%	2970	64.8%
Sophomore	13	25.0%	1613	35.2%
Total	*52*	*100.0%*	*4583*	*100.0%*
Developmental Education Required				
No dev edu	4	7.7%	868	18.9%

Yes, dev edu	48	92.3%	3715	81.1%
Total	*52*	*100.0%*	*4583*	*100.0%*
Registration Status in Fall 2017				
Full-time student	46	88.5%	3728	81.4%
Part-time student	6	11.5%	851	18.6%
Total	*52*	*100.0%*	*4579*	*100.0%*
Degree of Interest				
Associate degree	50	96.2%	4427	96.6%
Certificate	2	3.9%	156	3.4%
Total	*52*	*100.0%*	*4583*	*100.0%*
OUTCOME VARIABLES				
Retention Rate	**N**	**Rate**	**N**	**Rate**
Fall to spring retention rate	52	76.9%	4583	71.2%
Credits Gained	**N**	**Mean**	**N**	**Mean**
Average total good quality credits earned in fall 2017	52	6.8	4579	6.4
Average total good quality credits earned in spring 2018	40	6.8	3262	6.6
Term GPA				
Average fall 2017 GPA	52	2.3	4583	2.4
Average spring 2018 GPA	40	2.3	3245	2.5

The distribution of gender was similar between the mentees and the controls, only 5 percent more female representation among the mentees than the controls (63.5 percent vs. 57.2 percent. Compared with the controls, there were more minority students in the mentee group. Around 31 percent of the mentees were black and over half of them were Hispanic students while only 12 percent of the controls were black and 36 percent of them identified as Hispanic. Since the control group represents the general student population in NVCC, the higher percentage of minority students suggests that minorities were more likely to join the HF program.

The proportion of students receiving financial aid (Pell grants) fall 2017 was similar between the HF mentees and the controls (32.7 percent versus 29.2 percent).

A higher proportion of the CF mentees were traditional age students than the controls (87 percent of mentees versus 71 percent of the controls).

The baseline academic background also varied between the mentees and the controls. Almost half of the mentees started their study in NVCC fall 2017 while only 36 percent of the controls started NVCC in the fall 2017. Students starting before fall 2017 were continuing students while those starting in fall 2017 were newly enrolled students. There was a higher proportion of

continuing students among the controls than in the CF mentee group (65 percent in the controls and 48.1 percent in the mentees).

Both the mentees and the students in the control group were freshman and sophomores. However, a higher proportion of the mentees were freshman than students in the control group (75 percent of mentees versus 64.8 percent control students).

All incoming students are assessed to determine whether they need to take developmental education courses while continuing students may have already taken those courses. Fall 2017, 92 percent of the mentees were required to enroll in either English and/or math developmental education courses, while only 81 controls needed to take these courses.

A slightly higher proportion of CF mentees registered as full-time students fall 2017 as compared to the controls (88.5 percent vs. 81.4 percent). The proportion of students pursuing associate degrees were similar between the mentees and the controls (96.2 percent vs. 96.6 percent).

As noted above, NVCC launched its CF program fall 2017. As a result, the current analysis is only based on the first-year academic outcome data. The fall to spring retention rate among mentees was almost six percentage points higher than that of the controls (76.9 percent vs. 71.2 percent). The earned quality credits for courses with grade C or better in both fall 2017 and spring 2018 were similar between the treated and the controls. In fall 2017, the average quality credits earned among the mentees was 6.8 percent compared to the controls, 6.4 percent. Spring 2018, the mentees, on average, earned 6.8 credits while the controls earned on average, 6.6 credits.

The difference in term GPAs between the mentees and the controls were minimal. The average fall 2017 GPA for the mentees was 2.3 and average GPA of the controls was 2.4. The average spring 2018 GPAs of the mentees was 2.3 compared to the average of the controls, 2.5.

In sum, based on the pre-matched data, the major demographic difference between the mentees and the controls lies in their ethnic/racial distribution. In terms of academic performance, the CF mentees and controls were similar with the exception that the fall to spring retention rate was 5 points higher for the mentees than the controls.

Matching Results

EERC used the 1:5 nearest neighbor matching procedure with caliper of .05. The results of the matching balance are presented in Appendix Tables C & D. In this analysis retention rate and the academic outcomes in fall 2017 were examined based on all students in the sample (N=4,510). However, given students' term to term attrition, the spring 2018 sample was smaller (N=3,219). The matching balance check was conducted for both the fall and the spring samples.

In general, logistic regression results suggest that minority students (black and Hispanic students) were more likely to be in the treatment group than white students. These two variables are significantly associated with participation in the CF program ($p = 0.05$). Propensity score matching results for spring 2018 outcomes suggest that in addition to ethnicity/race differences, mentees were more likely to be receiving financial aid than the control group students. EERC's propensity score matching helped reduce the difference in the CF mentee and non-mentee samples on these covariates. The reduction in difference toward zero after matching suggests better balance or less difference in the pre-treatment conditions between the treated and the controls. After propensity score matching, the difference between the treated and the controls are not significant.

TREATMENT EFFECTS

Table 29 presents the estimated impact of the CF program on NVCC students' academic outcomes, fall 2017 and spring 2018, as well as their fall-to-spring retention rates. The estimated results are based on propensity score matching where the treated and controls are comparable except for their treatment status. Given that NVCC's CF program is only in its first year, the full impact of the program may not yet be manifested. Moreover, there were only 52 mentees in NVCC's CF program; the small sample size may limit the statistical power to detect any significant differences in the outcomes between the treated and the controls. Therefore, results from this evaluation study should be considered with caution.

This study fails to find any significant difference in the academic outcomes between treated and the controls after propensity score matching. The fall to spring retention rate, term GPA, and the quality credits earned in both semesters were not statistically different between the CF mentees and the comparison group. Although the fall to spring retention rate was 6 percentage points higher among the mentees than in the controls, the difference was not statistically significant.

Although propensity score matching results suggest that the average quality credits earned in both semesters were higher among the mentees than the controls, the differences were not statistically significant. The average quality credits earned in fall 2017 was 0.7 points higher among the HF mentees than that among the controls. And the average quality credit earned in spring 2018 was one point higher in the mentees than the controls in spring 2018. However, this study failed to find any of the above differences statistically significant. The term GPA's in both semesters were similar between the mentees and the controls.

TABLE 29. NVCC - HF IMPACT ON NVCC MENTEES' ACADEMIC OUTCOMES

ACADEMIC OUTCOMES	Treatment Group Mean/Proportion	Control Group Mean/Proportion	Mean/Proportion Difference
Fall-to-spring retention	0.78	0.72	0.06
Term GPA fall 2017	2.31	2.34	-0.03
Term GPA spring 2018	2.27	2.31	-0.04
Quality term credits fall 2017	8.05	7.35	0.70
Quality term credits spring 2018	6.76	5.77	1.00

*Level of statistical significance *p<.05, **p<.01, ***p<.001*

B. UNIVERSITY OF CENTRAL FLORIDA (four year)

The inaugural year of UCF's CF program was 2017-2018. The first UCF cohort of mentees included 98 students, all of whom were of Hispanic origin.

DATA

At EERC's request, UCF provided information on the mentee' demographic information (year of birth, gender, race/ethnicity); financial aid status (Pell recipient) at student's UCF entry; school enrollment status in academic year 2017-2018; course registration records; academic performance (credits earned in each term, GPA, grade, cumulative GPA); and degrees. In addition, UCF provided data on the mentees' programs of study.

Fall 2018 data was not available from UCF's data system at the time of EERC's analysis. This section, therefore, only covers summer 2017 through summer 2018.

DEMOGRAPHICS OF CF MENTEES

Table 30 presents the sociodemographic and academic status of the 98 HF mentees. Most mentees were female (n =71 or 72.4 percent). All CF mentees identified as Hispanic. As a four-year university, most UCF mentees were "traditional age" students, i.e., under 25 years old (98 percent). A large proportion (68.4 percent) of mentees received financial aid (Pell assistance) upon entry into UCF.

Most of the 98 mentees (N = 76) were first time college enrollees. The remaining 22 mentees were transfer students. Upon first entry into UCF, most of the mentees were freshman (N=36, 36.7 percent) or sophomore (N= 43, 43.9 percent). Seventeen students were identified as juniors (17.4 percent), and two were senior students[33].

[33] According to UCF, some of the students may have accumulated enough credits in high school (dual enrollment courses) so that they could start from sophomore level. Transfer students usually start their program of study at a higher level as well.

The term of first entry into UCF varied across the cohort of mentees. Just over half of mentees entered UCF fall 2017 (N= 51, 52 percent). Almost a third (N = 28, 28.6 percent) entered summer 2017. However, a few mentees had entered UCF as early as summer 2015. Most of the mentees (N= 86, 87.8 percent) were high school graduates upon arrival at UCF; but 14 percent or 12 mentees had previously earned an associate degree.

The current EERC study at UCF focuses on academic results for the fall 2017 and spring 2018 semesters. Fall 2017, close to ninety-four percent of mentees were full-time students, with only 6 percent registered part time. Of note, CF mentees had a 100 percent fall-to-spring retention rate. Fall 2017, mentees earned on average 10.9 academic credits on courses with grades of C or better (quality credits). Spring 2018, they earned slightly more quality credits of 11.5. The average fall GPA was 3.0; and the average spring 2018 GPA was 3.1. The average cumulative GPA for UCF mentees remained the same from fall 2017 to spring 2018 at 3.2.

TABLE 30: UCF - CREAR FUTUROS MENTEES

UCF HF Mentee Characteristics		
SOCIODEMOGRAPHIC VARIABLES	**N**	**%**
Gender		
Female	71	72.4%
Male	27	27.6%
Age		
Non-traditional student	2	2.0%
Traditional student	96	98.0%
Financial Aid Status		
Financial aid recipient/Pell	67	68.4%
No financial support	32	31.6%
BASELINE ACADEMIC INFORMATION		
Student Type		
Transfer student	22	22.40%
First time in college student	76	77.60%
Student Level		
Freshman	36	36.7%
Sophomore	43	43.9%
Junior	17	17.4%
Senior	2	2.0%
Starting Term		
Summer 2015	9	9.2%
Fall 2016	7	7.1%
Spring 2017	3	3.1%

Summer 2017	28	28.6%
Fall 2017	51	52.0%
Previous Degree		
Associate degree	12	12.2%
High school graduates	86	87.8%
Registration Status		
Full-time student in fall 2017	92	93.9%
Part-time student in fall 2017	6	6.1%
ACADEMIC PERFORMANCE		
Retention rate		
Fall to spring retention rate	98	100.0%
Credits gained	**N**	**Mean**
Average total good quality credits earned in fall 2017	98	10.9
Average total good quality credits earned in spring 2018	98	11.5
Term GPA		
Average fall 2017 term GPA	98	3.1
Average spring 2018 term GPA	98	3.0
Cumulative GPA		
Average fall 2017 cumulative GPA	98	3.2
Average spring 2018 cumulative GPA	98	3.2

EVALUATING PROGRAM EFFECTS

In this section, EERC presents analytical results from a quasi-experimental analysis of propensity score matching to evaluate the impact of the CF program on fall to spring retention and on academic performance (student's GPA and credits earned) of UCF's FTIC Hispanic mentees enrolled fall 2017 through spring 2018. Given that UCF only launched its CF program fall 2017, it is still too early to examine the program completion rates for mentees.

Sample

The treated (CF Mentees)

In order to avoid the potential influence of a mentee's prior college experience on current academic performance, EERC's analysis includes only UCF mentees who had not previously been enrolled in any college program. The treatment group for the following analysis therefore consists of only 76 mentees who first enrolled at UCF fall 2017.

Controls (Non-Mentees)

UCF provided data on other UCF FTIC students first enrolled fall 2017. These students serve as controls in the evaluation analysis. Given all CF mentees identified as Hispanic all control students were Hispanic students. Moreover, the UCF mentees were freshman, sophomores, and juniors, EERC confined the comparison sample to students at these three levels. Information on the non-CF mentees' demographic characteristics, financial aid status, school enrollment, course registration history, and academic performance were also provided by UCF. The final controls include 3,267 FTIC UCF students in academic year 2017.

Covariates

In this evaluation, the variables used for propensity score matching are those that have been demonstrated in the educational literature that are associated with college student's academic outcomes (Stanfiel 1972; Strayhorn 2006; White 1982). They include students' sociodemographic characteristics[34] such as gender and financial aid status using Pell as a proxy. EERC also includes the students' registration status - full-time or part-time students as of fall 2017.

To control for academic status – freshman and sophomore, EERC created categorical variables of freshman and sophomore. The reference category was junior. Student's previous degree is also controlled with those receiving associate degrees serving as reference category to those who were only high school graduates.

These variables are all categorical variables with 1 indicating endorsing the item. Demographic information was self-reported while financial aid, and academic information were tracked by the administrative database.

OUTCOMES OF INTEREST

As indicated above, the quasi-experimental analysis focused on three academic outcomes: fall-to-spring retention, term GPA and cumulative GPA, and the number of course credits earned with grade C or better. Except for the measure of fall-to-spring retention, all the other measures of GPA and quality earned credits were separately analyzed for fall 2017 and spring 2018 term. Since fall 2017 is the first term UCF implemented the CF program, mentee academic outcomes presented an immediate impact of the program while spring 2018 measures showed a longer/cumulative effect of the treatment of one-year.

[34] Variable of age/traditional student is excluded because all the students in the control group were traditional students, i.e., 25 or younger, which perfectly predict the treatment status. Variables that perfectly associate with treatment or non-treatment status are not included for lack of variance.

Results

Sample descriptive analysis:

Table 31 presents the distributions of baseline covariates used for propensity score matching prior to matching mentees and control cohorts.

Three fourths of the HF mentees were female (76.3 percent) which is a much higher rate than that in the school's FTIC control group. Among the controls, the proportion of female student was a little higher than the male students (53.6 percent vs. 46.4 percent).

Except for one mentee who was 28 of age, all the mentee students in this study were within the age range of 17 to 19. In the controls, all the students were between age 17-19, traditional students.

The students' financial aid status was based on records at the time of UCF enrollment. If a student received Pell grant, he/she is considered as from economic disadvantaged family. A greater proportion of HF mentees had financial aid upon first entry (63.2 percent) than their counterpart controls (42.1 percent).

TABLE 31. UCF - DISTRIBUTION OF COVARIATES AND OUTCOMES FOR MENTEES AND CONTROLS BEFORE MATCHING

	UCF Mentees (N=76)		**UCF Controls (N=3,267)**	
SOCIODEMOGRAPHIC VARIABLES	**N**	**%**	**N**	**%**
Gender				
Female	58	76.3%	1751	53.6%
Male	18	23.7%	1516	46.4%
Age				
Non-traditional student	1	1.3%	3267	100.0%
Traditional student	75	98.7%		
Financial Aid Status				
Financial aid recipient/Pell	48	63.2%	1374	42.1%
No financial support	28	36.8%	1893	57.9%
BASELINE ACADEMIC INFORMATION				
Student Level				
Freshman	36	47.4%	1387	42.5%
Sophomore	35	46.1%	1430	43.8%
Junior	5	6.6%	450	13.8%
Previous Degree				
Associate degree	2	2.6%	99	3.0%

High school graduates	74	97.4%	3168	97.0%
Registration Status				
Full-time student in fall 2017	75	98.7%	3089	94.6%
Part-time student in fall 2017	1	1.3%	178	5.5%
ACADEMIC PERFORMANCE				
Retention Rate				
Fall to spring retention rate	76	100.0%	3151	96.5%
Earned Credit	**N**	**Mean**	**N**	**Mean**
Average total good quality credits earned in fall 2017	76	11.4	3267	11.0
Average total good quality credits earned in spring 2018	76	11.9	3151	11.4
Term GPA				
Average fall 2017 GPA	76	3.2	3267	3.0
Average spring 2018 GPA	76	3.1	3151	3.1
Cumulative GPA				
Average fall 2017 cumulative GPA	76	3.3	3267	3.2
Average spring 2018 cumulative GPA	76	3.2	3151	3.2

Most of the UCF mentees were freshman and sophomores when they first enrolled at UCF (47.4 percent and 46.1 percent respectively). Only 7 percent of them were juniors at entry. The proportions of freshman and sophomore students among the controls were a little lower than the mentee sample (42.5 percent and 43.8 percent respectively). These statistics suggests that a higher proportion of freshman and sophomore FTICs enrolled in the CF program.

Almost three percent of the mentees had an associate degree at entry, which was comparable to that of the controls.

Almost ninety-nine percent (98.7 percent) of the mentees were registered as full-time students in fall 2017. This rate is higher than that for the controls (94.6 percent).

In terms of outcomes, 100 percent of fall 2017 mentees enrolled spring 2018. This was slightly higher than the fall-to-spring retention rate of the controls (96.5 percent). The average earned quality credits was also marginally higher among the mentees than controls. Thus, fall 2017, mentees earned 11.4 credits and controls earned 11.0 credits. Spring 2018, mentees again earned slightly more quality credits than the controls, 11.9 credits vs 11.4 credits

Mentees also did slightly better than the controls in respect to term and cumulative GPAs in fall 2017. The average fall 2017 term GPA for mentees was .2 points higher than the controls (3.2 vs. 3.0). The cumulative GPA for fall 2017 for the mentees was 0.1 points higher than that of the

controls (3.3 vs. 3.2). However, the average term GPA and cumulative GPA were the same for mentees and controls in spring 2018.

In sum, based on the pre-matched data, the major descriptive differences between the mentees and the controls are in the gender and financial aid status. Mentees also marginally out-performed the controls in respect to rates of retention rate, number of quality credits, and term and cumulative GPAs in fall 2017.

Matching results

EERC used the 1:3 nearest neighbor matching procedure with caliper of .05. The results on matching balance check for fall 2017 and spring 2018 are presented as Appendix Tables E & F. For the fall 2017, the retention analysis is based on 3,343 students. However, given student attrition, academic outcomes for spring 2018 used a smaller sample, 3,227 students.

In general, logistic regression results suggest that students who received Pell and were female were more likely to have participated in CF and thus in the treatment group. (The significance level is $p = 0.05$). Propensity score matching helped reduce the difference in the CF mentee and the non-mentee samples on these covariates. The reduction in difference toward zero after matching suggests better balance or less difference in the pre-treatment conditions between the treated and the controls. After propensity score matching, the difference between the treated and the controls are not significant.

TREATMENT EFFECTS

Table 32 presents the estimated impact (retention and academic outcomes) of participation in UCF's CF program for FITC students. Note, since UCF's CF program was only launched fall 2017, the program's impact may not yet be fully manifested. The results therefore should be considered with caution.

Of the three types of academic outcomes (retention rate, term and cumulative GPA, and quality credits), fall-to-spring retention is the one only measure that is significantly higher among CF mentees as compared to non-CF students. All HF fall mentees continued their study in spring 2018. Although the fall-to-spring retention rate of the controls is also high at 96 percent, the difference between the HF mentees and controls are significant, suggesting the HF program was effective in helping students stay engaged in school to complete their study program.

Although in the pre-cohort matching comparison, CF mentees' GPA and quality earned credits were higher than the controls (see Table 31 above); after the matching, the controls almost always had higher GPA; and earned more quality credits than the CF mentees. However, these differences were not statistically significant.

The term GPA in both terms were slightly higher among the controls than the mentees: 0.14 points higher among the controls in fall 2017 and 0.15 points higher among the controls in

spring 2018. The controls also earned slightly higher cumulative GPAs than the mentees in both fall 2017 and spring 2018: 0.13 points higher in the controls in fall 2017; and 0.12 points higher among the controls in spring 2018. However, these differences are not statistically significant.

The mentees on average earned 0.54 points higher quality term credits in fall 2017 than the controls. However, the controls achieved 0.20 points higher quality GPA in spring 2018. However, these differences are not statistically significant.

TABLE 32. UCF - TREATMENT EFFECTS ON ACADEMIC OUTCOMES FALL 2017 AND SPRING 2018

ACADEMIC OUTCOMES	Treatment Group Mean/Proportion	Control Group Mean/Proportion	Mean/Proportion Difference
Fall-to-spring retention	1.00	0.96	0.04***
Term GPA fall 2017	3.17	3.30	-0.14
Term GPA spring 2018	3.09	3.24	-0.15
Cumulative GPA fall 2017	3.26	3.39	-0.13
Cumulative GPA spring 2018	3.24	3.36	-0.12
Quality term credits fall 2017	11.36	10.82	0.54
Quality term credits spring 2018	11.96	12.16	-0.20

*p<.05, **p<.01, ***p<.001

In sum, UF's CF has in its inaugural year some positive impact on student's retention. A higher proportion of CF mentees remained in school than the controls. However, EERC's analysis failed to find significant impact of the CF program on students' GPA and credit earning.

PART VIII: PROGRAM CHALLENGES & RECOMMENDATIONS

This section discusses the challenges of CF program implementation and sustainability identified by liaisons, mentors and mentees, as well as by EERC. For each challenge we follow with strategies, suggested by either or both interviewees and the EERC team, to address or resolve the issues.

While there were some campus specific issues and concerns, this section focuses only on those challenges which existed across multiple campuses. The shared experiences suggest the need for some modifications in the CF program model structure (see also below under Logic Model), and/or for some refinement of policies, program expectations, and resources as the Hispanic Federation works to sustain and scale Crear Futuros.

A. INSTITUTIONAL COMMITMENT

Challenges: For the CF program to work on any campus there is need for consistent campus leadership and resource commitment. Currently all campus liaisons, but one (Lehman), are assigned to lead CF on a part time basis. On paper this is between 30-60 percent of the work week, which means balancing multiple responsibilities. As a result, "*there's a tension between the amount of work and responsibility that these coordinators put in on all campuses."* The liaisons, while very invested, often feel stretched, unable to dedicate the time they believe is needed to meet the needs of mentors and mentees, and to be able to respond to HF on a timely basis.

With the sole exception of HF paying faculty release time at CitiTech, colleges do not receive any staff or administrative funds to pay the salaries of campus liaisons. With shifting college priorities, the availability and tenure of liaisons therefore remains vulnerable, and endangers the institutionalization and sustainability of CF at colleges.

Many colleges have identified a dedicated space for the mentors and mentees to use. These spaces have been an important factor in creating community for the CF program participants – who often just "*hang out*" together. Several colleges, however, do not have a separate CF campus space. This means mentors and mentees are forced to use the cafeteria, library, hallways and/or empty classrooms for their meetings. Mentees at such colleges complain that without a space to call their own – they infrequently or never meet other mentees or mentors; and feel homeless on campus.

Suggested Recommendations: As a prerequisite, and as part of the HF-college program affiliate contract, colleges need to commit multi-year funding for a full-time liaison; and a dedicated space for the CF program.

B. MENTORS

Challenges: As indicated above, most mentors valued their participation in CF, reporting significant satisfaction in their work with mentees, as well as personal growth. However, mentors also spoke of feeling overwhelmed by the size of their required caseloads. Initially, HF required mentors to serve 20 mentees. This was reduced to 15, a more manageable number but still hard for some mentors. Several colleges reported that when a mentor left the CF program midyear or even midterm other mentors picked up their mentees. This occurred at John Jay during the 2017-2018 academic year when two out of six mentors left. The remaining mentors ended up with caseloads of 30 to 50 mentees.

Even with caseloads closer to 15, some mentors felt they did not have enough time to regularly interact with their mentees; plan workshops; attend training workshops; benefit from more frequent supervisory sessions with their liaisons; and/or submit consistent and timely online interaction logs to Rutgers. In their interviews with EERC, several mentors shared that they often felt stressed. They really wanted to be available to their mentees, but they were not sure how to do that while balancing their own studies and having time for themselves.

Mentors also reported that they were not always sure how to deal with the issues/crisis mentees brought to them. They wanted to help but did not feel they were equipped.

Some mentors spoke about the ambiguity of their roles – were they tutors, counselors, coaches, big sisters/big brothers? All the above? They said that they needed a better definition of expectations and better clarity about the parameters of their roles – and then how to effectively set boundaries around these parameters.

Finally, mentors and their campus liaisons felt that the stipend provided by HF was far too low to reflect the actual time they put in (way above the 20 hours stipulated by HF). The CF stipend was often not competitive with other student stipends at their college or with work-study wages, e.g., at CUNY $13.50 per hour. The low stipend required some mentors to find additional employment outside of college, adding further strain on their time. In addition, the CF stipend has only been paid out for 9 months when, in fact, many mentors are working throughout the summer – recruiting and interviewing potential mentees and engaging in preparatory training.

Suggested Recommendations: Each college should employ a senior mentor to assist the liaison; provide support to the mentors; and if needed, offset the strain of redistributed mentees. John

Jay has used such a model and it has been very helpful to both the campus liaison and the mentors.

HF should consider limiting mentor caseloads 12 to 15 mentees. When feasible in terms of time of year, training and supervisory support, when a mentor leaves a CF program, a new mentor should be recruited.

To recognize and affirm all the work that mentors do, often 24-7 during the academic year plus time during the summer, HF should provide a higher rate of pay. This could be either through the current stipend system or through a grant to the college to be distributed through the college's payroll department.

C. TRAINING

Challenges: HF has historically hosted a three-day intensive training in August followed by monthly meetings at the HF office in lower Manhattan. While mentors from the Florida and Connecticut CF programs have been able to come to the August training it has been impossible for them to be present during the subsequent monthly trainings. Attempts to include them via video conferencing have not worked well.

Several liaisons and mentors observed that HF did not develop a baseline assessment tool that measured the level of the mentors' knowledge and skills. As a result, they felt the curriculum did not always build on strengths and address identified needs.

Further, mentors and liaisons commented that the August training retreat and some of the monthly trainings did not sufficiently clarify the parameters of their role, and how to set boundaries. Training sessions were thought by some liaisons and mentors to be "*too broad-brush stroke*." Mentors stated that they needed more content on creating community, and on academic and career pathways. They also identified the need for more training about interview techniques; and how to effectively respond to mentees dealing with stress, social anxiety, depression or other crises including financial and/or food insecurity. Several mentors and liaisons also said that the sequence of topics did not always track well with the academic calendar - recruitment, engagement, and/or exams periods when many mentees looked to their mentors for extra guidance.

Suggested Recommendations: A common recommendation was for HF to establish an advisory group made up of current and former mentors to guide the development and refinement of CF curriculum content and its sequence. That way it "*might be more relevant to what is happening on campus and on the academic calendar.*" Mentors and liaisons also suggested that there be better coordination between campus level workshops and HF trainings to reduce duplication of focus and ensure that critical topics got covered. In this regard, given the geographic spread of CF, it was suggested that that non-CUNY colleges hold their own trainings that followed the basic CF

training modules but also were tailored to the specific populations and needs of the non-NYC campuses.

Trainings also need to more explicitly address the boundaries of the mentor role, and how to help mentees "*without doing for them.*" Further, it would be important to expand current content about self-care and how to effectively balance the demands of mentoring, being a student and having a life out of college.

D. MENTEES

Challenges: Some colleges found that the recruitment of mentees was not always easy. There were competing campus programs, some which offered students incentives for participation such as Metro-cards or stipends. At some colleges, mentors could not easily access mechanisms for marketing or could only access them after the term began. This reduced timely recruitment, and reducing the number of students who might otherwise be interested in CF.

The liaisons and mentors also observed that many potential mentees were *already* balancing multiple demands on their time including travel to their respective campuses. Without a more defined campus CF program, including a physical location on campus, it was harder to engage students.

Different class schedules and commuting time, on top of family and work demands, made it difficult for some mentees to coordinate schedules with their mentors. This resulted in some mentees dropping out of their colleges' CF program. Liaisons spoke to EERC about their mentors' frustration. They were "*putting themselves out there and students are not engaging."*

In respect to the mentees who "*disappeared,*" there was often little follow up to learn why a student left the CF program. In fact, given inconsistent completion of the EERC online interaction logs, Rutgers was not able to track the number of students who left the program, and at what point in the term. Lack of this critical data affected EERC's ability to track the length and intensity of the mentees' engagement in their college's CF program

Suggested Recommendations

As indicated above, mentors need to be able to work (and be compensated) prior to the start of the fall terms so they can better recruit potential mentees. To foster more widespread knowledge about CF programs - beyond classroom presentations, colleges need to provide their CF programs a wider array of mechanisms for publicizing the program.

HF should explore with their partner colleges the possibility of mentee stipends or at least Metro-cards or beyond NYC, their equivalent.

In the spring of 2017, to help clarify program expectations and to encourage more active engagement of mentees, EERC suggested that all mentees sign a contract about their CF participation. This contract developed with HF was instituted fall 2017. EERC also recommended that HF review instruct how best to use the contract during recruitment, as well as during their ongoing interaction with mentees. It is not clear, however, if and how individual colleges used the mentee contract as part of their respective programs.

In addition to a mentee contract, EERC suggests that at the beginning of the fall term, mentors help their mentees identify specific goals – academic, social, personal - for the academic year and write these down. Then, during the year, these goals become the focus of their work together. Goal setting has been found to facilitate engagement and may provide another means to capture program success.

E. COMMUNITY BUILDING & SOCIAL CAPITAL

***Challenges*:**[35] The importance of a community of care and social capital has been discussed elsewhere in this report. For many mentors and mentees their experiences with both have been the glue and marker of CF success on their campuses. At the same time, EERC heard a fair amount of concern from mentors and mentees about participating in HF sponsored events; or in a social action event that HF or their colleges had identified. The concerns include being notified too late to make arrangements to participate; not having the carfare; and feeling they lacked the proper clothe for corporate events.

A number of mentees also shared their interest in getting to know their CF counterparts at other colleges – to grow a wider CF community – through social and collaborative community action events.

Suggested Recommendations: Mentees and mentors suggested that CF sponsor community action days during which mentees and mentors across the CUNY campuses could volunteer together, on a project sponsored by HF or another organization, e.g., clean a community space. They also suggested convening some public discussions that addressed an important issue such as DACA that would be planned by CF partner cross the city and would be open to the public – this would also help put CF on the map beyond individual colleges.

> *…keeps coming up in my head is like a group effort project. Group volunteering or group showcase. We would definitely bond more if we…. doing some communal effort.*

While some colleges established a Facebook for their program others did not – one suggestion was to have a Facebook page for each college; and also, one Crear Futuros page for all participating colleges.

[35] Note, we did not get feedback about these areas from NVCC mentors and did not interview UCF mentors. This section is therefore only focused on the NYC-CUNY experience.

Facebook page would be pretty useful because it will be also information for people that may want to join but don't know, or do not have enough information to get to know what this program is about.

Another idea was to have some badge or article of clothing, e.g. cap or T-shirt that identified CF participants to help them find each other among the crowds on campus. Lehman has created a graduation stole for its students – more widespread use of such symbols of community should be considered by other colleges.

F. EVALUATION

Challenges: As discussed, measuring the impact and the success of CF is a multi-layered and involves the intersections of multiple factors. It also is predicated in the ability to identify what success means to whom; and to collect accurate data about program activities, and most critically mentor-mentee interactions.

The seven colleges included in this report are very different and thus even the initial context in which the CF program is located affects structure, resources and activities, hence potential outcomes. Further, in part because of the differences of context, the CF program has had somewhat different forms on each campus – this includes the five CUNY colleges.

The online surveys EERC developed in consort with HF provide some but not comprehensive or consistent data about the frequency and nature of mentor-mentee interactions. We can therefore not infer to what extent frequency or mode of interactions affected outcomes. Further, academic outcomes, as mentors and mentees both stated may not reflect the true effect of CF participation on a student.

EERC developed an end of the year survey to capture mentees experiences and to identify what program participation meant to them. Unfortunately, the return rate of the mentee surveys in the spring of 2017 and 2018 was extremely poor.

Finally, the focus of outcomes analysis has been far more about mentees, when in fact, participation in CF made a significant difference in the lives of many mentors.

Suggested Recommendations:

To continue to assess the academic, social and personal impact of CF participation on mentees, HF needs to refine (with the help of mentors and liaisons) and commit to an online log that captures the frequency of contact, mode of contact and subject matter for all mentor-mentee interactions. Completion of such logs on a weekly basis need to be a requirement for all mentors, and failure to do so must have *real* consequences.

To better capture the less tangible results of participation in CF – HF should work to find better ways to field an academic year survey for both mentors and mentees that includes questions about academic, social and personal changes during the year. Building from the EERC surveys, these surveys could include check off boxes in respect to skill sets for mentors as well as scales related to sense of identity, level of self-confidence, communication and leadership skills. It may be worthwhile to incentivize students to increase participation rates.

Lastly, CF should ask the colleges to encourage mentors and mentees to write about their experience and the affect CF has had on their lives. These testimonials could be posted on the HF and college websites, as well as on any established Facebook pages. While far more subjective, such documentation could be used for both recruitment and fund-raising activities.

PART IX: PROGRAM MODEL, SUSTANABILITY & EXPANSION

As discussed above in Part III Section C – the initial implementation of Crear Futuros varied considerably by CUNY campus; and at NVCC and UCF. The variations were in part of the result of differences in campus populations, administrative and student service structures, as well as the colleges' use of existent (internal and community) resources. They also reflected HF's desire to be flexible and sensitive to the need for colleges to take ownership of their campus program, a first step towards institutionalization.

During the first 15 months of our evaluation activities, the EERC team expressed concern about the variability of CF's CUNY program models,[36] especially in terms of the frequency of mentor/mentee interactions and the potential impact of that variability on establishing a signature program model that was Crear Futuros. To facilitate the development of such a model and to begin to address some of the challenges identified, EERC worked closely with HF staff to develop a working logic model. The logic model that was created identified resources and activities, plus anticipated outcomes and impact (see Appendix Table G). Work on the logic model resulted in refinement of the parameters of mentors' roles; clarification of expectations about the frequency of mentor/mentee interactions; the development of mentor and mentee contracts; and the further development of a core CF mentor curriculum. These have been critical for building a CF program model. However, even today as we prepare this report, the CF program model and how it integrates with a college's structure and student life remains somewhat unclear. While variability can be a strength – EERC is concerned that too much variation may affect long term sustainability at some colleges and may affect HF efforts to expand the program at other colleges.

In the above section on challenges, EERC identified some of the components that we feel are critical to a more defined model, that can be adapted but retains its integrity as Crear Futuros. These components included a) a caseload of no more of 15 mentees per mentor; b) mandated frequencies of mentor/mentee interactions by week, month and term which is essential for developing a mentoring process and relationship; c) at least 75 percent availability by a campus liaison to meet with mentors on a weekly basis and supervise all aspects of the campus CF program; d) dedicated, not shared space, on campus space the CF program; e) a standard mentor training curriculum that focuses more on interviewing skills and work with students who are experiencing some difficulty – academic, social, emotional, familial – that can also be adapted to specific campus needs. Further, as time goes on, and HF no longer provides mentor stipends, colleges will need to commit to securing funds for mentor stipends/wages; and for an 75-100 percent time liaison.

In its multifaceted and multimethod evaluation of 7 CF programs, EERC has clearly found that CF has made a big difference in the lives of many mentees and mentors. CF's creation of a community of care and the related experience of support have helped participating students develop more self-confidence, push themselves beyond what they thought they were capable of, and strengthen their academic skills. The signs of such impact were found in our propensity

[36] This was prior to the launch of NVCC and UCF's programs.

score matching of mentees and controls: CUNY's CF mentees' better retention rates, greater accumulation of quality credits, better three-year graduation rates, and higher rates of reenrollment subsequent to earning an academic degree. Given the single year of study – and the challenges of qualitative data collection at NVCC and UCF – it is too early to know the full potential impact of CF programs at these colleges.

However, as HF moves forward to sustain its current programs and launch new ones – EERC believes it is critical to not only to continue to track impact – but also to drill down and investigate what elements of the CF model (mindful of its variability) appear to result in the most positive academic, social, and personal student outcomes. And then affirm these as the core components and requirements of the CF model.

This will help create model clarity wherein all stakeholders have a shared definition of the CF model and all its components, e.g., institutional commitment; leadership roles; mentor roles; operationalization of "mentoring" including frequency and nature of mentor-mentee interactions or "touch;" as well as encourage model fidelity.

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APPENDICES

APPENDIX TABLE A: Variables Used in The Data Analysis and Their Definition

VARIABLE	CUNY	NVCC	UCF	DEFINITION
SOCIODEMOGRAPHIC VARIABLES				
Gender				
Male	X	X	X	Male
Female	X	X	X	Female
Race/Ethnicity				
Asian or Pacific Islander	X			Asian or Pacific Islander
Black/African American	X	X		Black/African American
Hispanic	X	X	X	Hispanic
White	X	X		White
Current Age				
Non-traditional	X	X	X	Age 25 or older
Traditional	X	X	X	Age less than 25
Disability Status				
Yes	X			Having disability condition
No	X			Not having any disability condition
Financial Aid Status				
Financial aid recipient/Pell	X	X	X	Pell recipient
Not financial support	X	X	X	Not receiving Pell
BASELINE ACADEMIC INFORMATION				
Student Type				
Advanced standing transfers				Transfer with advanced standing status
First-time freshmen	X	X	X	First time in college
Starting Term				
Prior than the CF program	X	X		In college before CF program
Same term as the CF program	X	X		Starting college in the same term as the first CF term
Enrollment Type				
Continuing Student		X		Student already in school
New Student		X		First time student
Transfer Student		X		Transfer student
Student level				
Freshman		X	X	Freshman student
Sophomore		X	X	Sophomore student

Junior			X	Junior student
Developmental Education Required				
Yes, dev edu		X		Post assessment, required to take one or more DE courses
No, dev edu		X		Post assessment, not required to take DE
Registration status at start of term				
Full Time	X	X	X	School reported registration status as full time
Part Time	X	X	X	School reported registration status as part time
Previous Credential				
Associate degree			X	Associate degree
High school graduates/GED			X	High school graduates
Degree of Interest				
Associate degree		X		Pursuing associate degree
Certificate		X		Pursuing certificate
ACADEMIC PERFORMANCE				
Retention Rate				
Fall to Fall Retention	X			Proportion of students in the fall term who remained in school in the next fall
Fall to Spring Retention	X	X	X	Proportion of students in the fall term who remained in school in the immediate spring term
Earned credit				
Average cumulative credits increase	X			Credits earned in 3-years during or after participation in CF
Average total good quality credits earned fall 2017		X	X	Credits earned on courses with grade C or better in fall 2017 term to fulfill degree requirement
Average total good quality credits earned in spring 2018		X	X	Credits earned on courses with grade C or better in spring 2018 term to fulfill degree requirement
GPA				
Average cumulative GPA	X			Average cumulative GPA earned as of the last available term of data
Average cumulative GPA in fall after 3-year	X			Average cumulative GPA earned as of the fall term after 3-year

Average cumulative GPA in spring after 3-year	X			Average cumulative GPA earned as of the spring term after 3-year
Average cumulative GPA in fall 2017			X	Average cumulative GPA earned by the end of the fall 2017 term
Average cumulative GPA in spring 2018			X	Average cumulative GPA earned by the end of the spring 2018 term
Average fall 2017 term GPA		X	X	GPA for only courses taken in a specific – fall 2017
Average spring 2018 term GPA		X	X	GPA for only courses taken in a specific – spring 2018
Graduation				
Overall graduation rate	X			Proportion of students who graduated in the observational period
Graduation in 2 years	X			Proportion of students who graduated within 2 years since initial CF participation
Graduation in 3 years	X			Proportion of students who graduated within 3 years since initial CF participation
***Transfer*s**				
Transfer from CUNY CC to SC	X			Transfer from CUNY community college to senior college
Transfer from CUNY CC to SC with degree	X			Transfer with degree from CUNY community college to senior college
Transfer from CUNY CC to SC with no degree	X			Transfer without degree from CUNY community college to senior college
Enrolled after graduation				
Enrolled	X			Enrolled after completing a degree program
Not enrolled	X			Not enrolled after completing a degree program

APPENDIX TABLE B. Summary of Balance for CUNY Students: Mean difference, independent t-test, and standardized mean difference before and after match

Covariates	Mean before Match (N = 6321)				Mean after Match (N = 1696)				Standardized mean difference	
	Mentee	Control	t	p-value	Mentee	Control	t	p-value	Before	After
Gender (male)	0.44	0.34	7.18	0.000	0.37	0.32	2.2	0.028	0.12	0.11
White	0.17	0.12	4.84	0.000	0.14	0.17	-1.88	0.061	0.07	0.09
Black	0.28	0.14	12.77	0.000	0.19	0.17	1.07	0.286	0.04	0.05
Hispanic	0.39	0.66	-17.98	0.000	0.56	0.52	1.46	0.144	0.04	0.07
Asian	0.15	0.08	7.51	0.000	0.11	0.13	-1.42	0.157	0.11	0.07
Non-traditional	0.29	0.13	13.89	0.000	0.17	0.2	-1.49	0.137	0.39	0.07
Disability (yes)	0.03	0.04	-1.66	0.097	0.05	0.06	-1.06	0.289	0.08	0.05
Financial aid status (yes)	0.74	0.7	3.08	0.002	0.74	0.66	3.41	0.001	0.09	0.17
BMCC	0.29	0.11	17.51	0.000	0.19	0.17	1.21	0.226	0.07	0.06
John Jay	0.18	0.42	-16.25	0.000	0.28	0.33	-2.22	0.026	0.22	0.11
LaGuardia	0.22	0.2	1.61	0.107	0.28	0.23	2.07	0.039	0.12	0.1
Lehman	0.13	0.21	-6.29	0.000	0.15	0.16	-0.74	0.459	0.23	0.04
City Tech	0.18	0.07	11.85	0.000	0.11	0.12	-0.23	0.819	0.17	0.01
First-time freshmen	0.77	0.92	-15.89	0.000	0.87	0.88	-0.22	0.825	0.11	0.01
Registration status (full time)	0.65	0.9	-22.91	0.000	0.83	0.85	-0.66	0.507	0.14	0.03
Prior experience (yes)	0.59	0.19	30.92	0.000	0.31	0.3	0.37	0.713	0.42	0.02

APPENDIX TABLE C. NVCC - FALL 2017: Propensity score matching balance check for outcomes measures

	Logistic Regression		Standardized Difference	
Covariates	**Coefficient**	**Standard Error**	**Pre-match**	**Post-match**
Full/part-time student (ref: part-time)				
Full-time	0.49	0.48	0.25	0.20
Gender (ref: male)				
Female	0.39	0.30	0.15	-0.03
Race/Ethnicity (ref: white)				
Hispanic	1.40***	0.41	0.35	0.18
Black	2.09***	0.44	0.49	-0.17
Age (ref: non-traditional student)				
Traditional student	0.73	0.43	0.36	0.07
Pell Status (ref: No)				
Pell Recipient	0.50	0.44	0.05	0.21
Academic background (ref: not required to take developmental edu courses				
Developmental edu	0.36	0.55	0.33	0.13
Student level (ref: Sophomore)				
Freshman	-0.35	0.41	0.21	0.06
Entry term (ref: start earlier than fall 2017)				
Start in fall 2017	0.04	0.74	0.35	0.01
Entry status (ref: continuing students and transfer students				
New student	1.06	0.67	0.49	0.12
Expected degree (ref: certificates)				
Associate degree	-0.57	0.75	-0.03	0.25

Levels of statistical significance
*p<.05 **p<.01 ***p<.001*

APPENDIX TABLE D. NVCC - SPRING 2018: Propensity score matching balance check for outcome measures

	Logistic Regression		Standardized Difference	
Covariates	**Coefficient**	**Standard Error**	**Pre-match**	**Post-match**
Full/part-time student (ref: part-time)				
Full-time	0.22	0.62	0.16	-0.17
Gender (ref: male)[37]				
Female	0.11	0.33	0.03	0.01
Race/Ethnicity (ref: white)[38]				
Hispanic	1.36**	0.45	0.39	0.23
Black	1.87***	0.50	0.42	-0.17
Age (ref: non-traditional student)				
Traditional student	0.58	0.47	0.33	-0.04
Pell Status (ref: No)				
Pell Recipient	1.13*	0.58	0.14	0.10
Academic background (ref: not taking developmental ed courses				
Developmental edu	0.04	0.58	0.24	0.33
Student level (ref: Sophomore)				
Freshman	-0.09	0.47	0.28	0.01
Entry term (ref: start earlier than fall 2017)				
Start in fall 2017	0.51	0.88	0.37	-0.01
Entry status (ref: continuing students and transfer students				
New student	0.95	0.75	0.48	0.16
Expected degree (ref: certificates)				
Associate degree	-0.99	0.76	-0.11	0.23

**p<.05, **p<.01, ***p<.001*

[37] This remains a historic artifact of research protocols – the use of white and male as the standard reference.
[38] See above.

APPENDIX TABLE E. UCF - Balance check on covariates used for fall 2017 outcomes

	Logistic Regression		Standardized Difference	
Covariates	**Coefficient**	**Standard Error**	**Pre-match**	**Post-match**
Full/part-time student (ref: part-time)				
Full-time	1.40	1.01	0.23	0.19
Gender (ref: male)				
Female	0.99***	0.27	0.49	-0.01
Pell Status (ref: No)				
Pell Recipient	0.83***	0.24	0.43	0.00
Previous degree (ref: Associate degree)				
High school graduate	-0.69	0.88	0.02	0.24
Student level (ref: Junior)				
Freshman	-0.12	0.26	0.02	-0.09
Sophomore	0.98	0.58	0.05	-0.20

**p<.05, **p<.01, ***p<.001*

APPENDIX TABLE F. UCF - Balance check on covariates used for spring 2018 outcomes

	Logistic Regression		Standardized Difference	
Covariates	**Coefficient**	**Standard Error**	**Pre-match**	**Post-match**
Full/part-time student (ref: part-time)				
Full-time	1.25	1.01	0.21	0.18
Gender (ref: male)				
Female	0.99***	0.27	0.49	0.01
Pell Status (ref: No)				
Pell Recipient	0.84***	0.24	0.43	0.01
Previous degree (ref: Associate degree)				
High school graduate	-0.70	0.88	0.02	0.23
Student level (ref: Junior)				
Freshman	1.09	0.58	0.11	0.22
Sophomore	0.98	0.58	0.04	-0.19

**p<.05, **p<.01, ***p<.001*

APPENDIX TABLE G. CREAR FUTUROS – LOGIC MODEL (June 2018)

<table>
<tr><th>INPUTS/RESOURCES</th><th>ACTIVITIES</th><th>OUTPUTS</th><th>OUTCOMES</th><th>IMPACT</th></tr>
<tr>
<td>Hispanic Federation
• HF Mission
• National Board of Directors
• Staff
• Umbrella organization with community ties
• Grant funds – DELL
• HF conference space
• Ability to convene key stakeholders from different sectors
• Deep knowledge of NYC's Latino communities</td>
<td>• Contact with senior college staff
• Curriculum development
• Program direction and oversight
• Mentor training
• Network with leaders within the Latino community
• Monthly mentor meetings
• Bi-monthly liaison check-ins
• Sponsor community events
• Process stipends
• Manage basecamp and website
• Develop marketing materials
• CF focused fund raising
• Connect students to internships,* social services and community building
• Work with EERC</td>
<td>• Raise funds for CF
• Develop a CF program model
• Develop mentor training curriculum
• Marketing materials
• Liaison handbook
• Number of networking events
• Number of leadership development trainings with corporate, government and nonprofit partners.</td>
<td>• Operationalize "mentoring" *
• Institutionalize CF at CUNY colleges
• Establish CF at other colleges across the nation</td>
<td rowspan="2">Social Capital
• Building social capital in the Latino and other minority communities
• Increase role models for first generation youth

Academic Capital
• Reduce the achievement gap for Latino and other minority students
• Foster an academic pathway for immigrant and first-generation youth
• Increase graduation rates of Latino and minority students
• Increase enrollment in graduate programs

Economics
• Increase in employment in a variety of fields to earn at least a living wage if not more</td>
</tr>
<tr>
<td>Colleges
• Senior administrative buy-in
• Leveraged college funds
• Campus liaisons
• Other college staff
• Students
  • Mentors
  • Mentees
• College services
• College space
• Office of Institutional Research (IR)</td>
<td>Colleges
• Integrate CF program into college infrastructure*
• Use college funds to support staffing

Campus Liaisons
• Liaison with HF, e.g. monthly calls
• Mentor training
• Weekly mentor supervision
• Administration
• Work with EERC</td>
<td>Campus Liaisons
• Maintain communication with HF
• Supervise mentors
• Contribute to mentor development
• Problem solve campus issues
• Identify new community resources for student supports</td>
<td>Campus Liaisons
• Institutionalize CF within structure of their colleges – including leveraging sustainable funding</td>
</tr>
</table>

INPUTS/RESOURCES	ACTIVITIES	OUTPUTS	OUTCOMES	IMPACT
	Mentors • Sign HF contract • Complete EERC pre and post surveys • Participate in HF training workshop • Participate in campus trainings • Weekly mentor supervision with liaisons • Monthly HF mentor meetings (CUNY) • Mentee recruitment • Regular mentee /mentor interactions • Develop campus mentee workshops • Establish a *community of care* • Complete weekly activity surveys • On/off campus referrals • EERC focus groups **Mentees** • Sign mentee college CF contract Engage in mentor/mentee interactions • Attend campus workshops • Complete EERC Pre and post surveys	**Mentors** • Recruit 13-15 mentees • 15-20 hours /week of CF activities • Twice monthly 1:1 mentee visual/in-person meetings • Weekly individual contact with mentee via email/text • 3 times per month phone contact • 3 times per semester workshops • Number of referrals to campus/community resources **Mentees** • Twice monthly 1:1 visual/in person interaction with mentor • Four times per month email/text/phone contact • 3 per semester on-campus workshops • Increase peer network • Complete needed referrals to campus/ community resources	**Mentors** • New leadership skills • New advising skills • Changes in levels of self-confidence • Increased ability to do public speaking • Expansion of knowledge about campus and community resources • Expanded peer network • Experience a community of care **Mentees** • Clarity about academic pathways • Clarity about career pathway • Credit accumulation • Increased retention • Improved GPA • Graduation • Expanded peer network • Experience a community of care • Growth in confidence and skill sets	
INPUTS/RESOURCES	**ACTIVITIES**	**OUTPUTS**	**OUTCOMES**	**IMPACT**
Rutgers EERC • EERC Evaluation Team	• EERC College Data Agreements • EERC MOAS re IRB	• MOASs with CUNY and all colleges • Analysis of weekly surveys	• Help HF develop a logic model	

	• Data pulls – historic and current academic data • Weekly mentor surveys • Pre and post mentor surveys • Pre and post mentee surveys • Interviews • Focus Groups • Participant Observation • Site visits	• Analysis of college data files- tracking academic progress of participating students • Attendance at least 3+ monthly mentor meetings per year • Analysis of pre and post mentor surveys • Analysis of pre and post mentee surveys • Annual Program Reports (APR) • Demographic and academic summary of mentees • Interim analytic reports • Final report	• Help HF develop replicable CF model with clear and operationalized interventions • Identify trends re impact CF participation/interventions on mentors and mentees	

*Activities and outcomes that are still being developed.