Post-Graduation Outcomes for College Students, More than Numbers: A Mixed Methods Study

By

Ashley A. Forsythe

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Written under the direction of:

Benjamin Justice

And approved by

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ABSTRACT OF THE DISSERTATION

Post-Graduation Outcomes for College Students, More than Numbers: A Mixed Methods Study

by ASHLEY FORSYTHE

Dissertation Director:

Dr. Benjamin Justice

Students are attending college increasingly with a focus on future job placement and salary expectations. Since higher education stakeholders look to colleges and universities for successful employment and career outcomes after graduation, it is imperative that these institutions collect and analyze post-graduation outcome data consistently. Post-graduation outcomes of recent college alumni have been evaluated in many ways, but this data is often missing key demographic information that can help institutions to better understand the recent alumni experience in successful post-graduation outcomes including employment, graduate school enrollment, military service and volunteer experience. This dissertation explores the literature on post-graduation outcomes while applying social capital theory, career development theory and critical whiteness analysis to analyze the post-graduation outcomes of a graduating class broadly and including ethnicity (race and ethnicity) and gender. A pragmatic, mixed methods approach was implemented to explore the post-graduation outcomes of the Class of 2018 for a small, Research 1 university near Philadelphia, Pennsylvania. The overall outcomes for these graduates (N=1,375) and their outcomes in terms of ethnicity/race, gender, birth date
(age), veteran status and GPA were explored using t-tests, ANOVAs and linear regression analysis. The quantitative analysis was enhanced with semi-structured qualitative interviews (N=26) to highlight the lived experience of graduates from all majors, including their cultural/ethnicity and gender identity(ies). Barriers to the job search and ways to overcome these barriers were also explored in these interviews. Critical whiteness analysis is used to explore systematic oppression of students of color through colorblindness in post-graduation outcome measures and rankings. Over 90% of the Class of 2018 at Institution X secured full-time employment or enrolled in continuing education (positive outcomes) within a year after graduation, as shared by both the quantitative (N=632) and qualitative (N=26) data. Age, GPA, ethnicity and major were found to be significant in terms of survey completion. Major, gender, graduation date and age were significant in relation to positive outcomes. Once major was considered, gender no longer showed significance due to the multicollinearity between gender and major. Women were less likely to have a full-time job and were more likely to enroll in graduate school or have part-time employment. Men were more likely to have a full-time job and to be seeking employment. Ninety-six percent of interview participants shared at least one barrier to the searching process. Career Centers were mentioned as a key resource to assist students in overcoming barriers to the search. Asian and White graduates were more likely to respond to the survey. Business majors were most likely to complete the survey. Participants were also more likely to respond if they were younger (age) and had a higher GPA. Higher GPAs were also found when looking at graduates that responded to interview requests. STEM majors were less likely to respond to interview requests.
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DEDICATION

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To my students:

Audrey Hepburn said it best, “Nothing is impossible. The word itself says I’m possible.” Never stop believing in yourself- you will reach your goals. Thank you for teaching me as much as I (hopefully) teach you!

To the voices absent from the current system of higher education:

Your voice deserves to be heard! My hope is that this research will assist in highlighting the need of supporting and listening to all students of all backgrounds, in an effort to make systemic change in higher education in the United States. I commit to continuing my work to help your voices be heard and celebrated. I commend those that work fearlessly to support these voices and hope to spread the passion for helping all of our current and future students to succeed and to provide an equitable experience toward education.
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DEFINITIONS OF RELEVANT TERMS

In alignment with the NACE (2019) Class of 2018 First Destination Survey and the NACE (2014) First Destination Survey Guidelines, the following definitions will be used for the purpose of this research.

**Post-graduation Outcomes.** Post-graduation outcomes capture the experiences that students have with employment, continuing education, military service, and volunteer service (e.g. AmeriCorps, mission work) for a college graduating class. It also measures individuals seeking employment and/or continuing education, individuals not seeking employment and/or graduate school, and individuals that the institution was not able to find information on (i.e. no information available) (NACE, 2014). When evaluating a graduating class, graduates may or may not secure positive outcomes.

**Positive Outcomes.** “Positive outcomes” include employment, continuing education, volunteer service, or military service (NACE, 2019, p.118).”

**Negative Outcomes.** “Negative outcomes” of a graduating class can include still job/continuing education seeking and not seeking a job/continuing education (NACE, 2019, p.118).

**Full-Time Employment.** Full-time employment is defined as working 30 hours or more per week (NACE, 2019).

**Other Employment.** Other employment is defined as working less than 30 hours per week (NACE, 2019).

**Volunteer Service.** A possible positive post-graduation outcome is participating in a voluntary civil service program, which are often supported by the United States federal government.
Volunteer Service is defined as being employed with an agency that is providing assistance to groups or individuals in the public interest. Examples are employment with AmeriCorps/VISTA, the Peace Corps, and Teach for America. This employment is generally for a limited duration and is assumed to be full time but paid at limited levels not on par with traditional employment categories (NACE, 2019, p. 118).

**Military Service.** Military service is defined as “Military is employment with a branch of the United States Armed Forces. It is assumed that this employment is regular, fulltime duty and is not as part of a reserve unit (NACE, 2019, p.119).”

**Post-graduate Fellowships and Internships.** Another type of employment is post-graduate fellowships and internships. For the purpose of this research, this outcome is defined as graduates who are performing a function, such as research or teaching, that is supported by a stipend provided by a university or an outside agency, such as the Fulbright programs sponsored by the U.S. State Department, or who are engaged in an experiential learning activity with any type of employer. These activities are for a limited period of time and do not contain the promise of continued employment after the fellowship or internship period expires (NACE, 2019, p.118).

**Continuing Education.** “Students who are actively engaged in pursuing another degree completion or certificate that may be required for their profession, e.g., a certified public accountant (NACE, 2019, p.118)” will serve as the definition of continuing education for this research. Continuing education may also be articulated by identifying graduate or professional school enrollment.

**Response Rate.** In context of post-graduation outcomes, the response rate is defined by the number of graduates that responded to the Class of 2018 Outcomes Survey via electronic or paper formats (NACE, 2019).

**Knowledge Rate:** The knowledge rate of the Class of 2018 Outcomes Survey is defined as the number of graduates that an outcome is known for (NACE, 2019). This information is gathered from the direct survey responses (response rate) and outcomes.
that were inputted by the Institution X Career Center after searching on LinkedIn and other social media sources to find information about post-graduation outcomes.

*Post-graduation Outcomes Measures.* For the purpose of this research, post-graduation outcomes measures are defined as ways to measure the outcomes of a graduating group of students (e.g. surveys, interviews). In other words, it is how the post-graduation outcomes of graduates are identified, analyzed and reported.

*Post-graduation Outcomes Findings.* For the purpose of this research, post-graduation outcomes findings is defined as the types of populations, programs or sub-sections of groups that are assessed in post-graduation outcomes research. This can include programs, special populations, practices, and other ways of exploring a group graduates’ experiences with finding post-graduation outcomes.
Chapter 1: Introduction

Problem Statement

Colleges and universities recognize that job placement and salary expectations fall amongst the top reasons that students attend college. Over 87% of students share that the leading reason they are attending college is to get a job and over 71% of students share that they are attending college to increase salary potential (Pryor et al., 2012). Evolving post-graduation standards put a large emphasis on employment, earnings, and ultimately on return on investment in a time that higher education “is now a necessity, not a luxury (Powers & MacPherson, 2016, p.1),” (WICHE, 2017). According to the National Association of Colleges and Employers (NACE), post-graduation outcomes measures capture the experiences that students have with employment, continuing education, military service, and volunteer service (e.g. AmeriCorps, mission work) for a college graduating class. Post-graduation outcomes reporting can also measure individuals seeking employment and/or continuing education, individuals not seeking employment and/or continuing education, and individuals that the institution was not able to find information on (i.e. no information available). Individual salary data is also collected through post-graduation outcomes reporting and due to the sensitivity of this information, it is often reported in aggregate as salary ranges by program or school of attendance (NACE, 2014). For the purpose of this dissertation, the NACE (2014) definition of post-graduation outcomes is used, as it is the most comprehensive.

The NACE post-graduation outcomes report shares valuable information with key higher education stakeholders about post-graduation plans, successes, and room for improvement. In the context of this study, higher education stakeholders are those who hold an interest in higher education, which include students, parents, faculty, staff, administrators, the Board of Governors/Directors, the state, local and/or federal
government, and prospective families. Much of this post-graduation outcome information is reported individually on college websites, through state ranking organizations and through national reporting measures (Laguilles, 2016). These reporting measures often compare institutions based on the post-graduation outcomes, especially on salary. Post-graduation outcomes are also important for institutions of higher education in terms of reputation, attracting students and families and employer connections (Selingo, 2016). It is imperative to have consistent post-graduation outcomes measures to assist stakeholders in understanding the successes and challenges of graduating students, to make better informed decisions about programming and financial support for students and academic programs.

Literature on post-graduation outcomes is vast in terms of definition of outcomes, purposes of study, populations being evaluated, and post-graduation outcome measurement methods. Many scholars use case studies to report post-graduation outcomes by studying and reporting on a specific population of students or a specific institution's graduates using either qualitative or quantitative research. The amount of literature available on post-graduation outcomes using program or population specific data is immense, but the majority of these evaluations focus on either a quantitative or qualitative approach. Therefore, there is a gap in post-graduation outcomes literature in regard to utilizing mixed methods research (Creswell, 2007; Creswell, 2015; Creswell & Plano Clark, 2018; Patton, 2002; Saleem Parvaiz et al., 2016). This approach is particularly important to look beyond a specific major or program to provide insights to a full graduating class. Utilizing a mixed methods approach allows for post-graduation outcomes data to be explored by breadth (quantitative) and depth (qualitative) to better understand a full graduating class and the lived experiences of the students from multiple
majors. Using a mixed methods approach will allow for a bridge between the conversations happening in solely quantitative or solely qualitative contexts.

For the purpose of this dissertation, the literature on post-graduation outcomes was divided into two main areas: types of post-graduation outcomes measures and post-graduation outcomes findings. As post-graduation outcomes become more of an emphasis in higher education, the ways organizations/institutions report post-graduation outcomes becomes increasingly important (Selingo, 2016). As this becomes strengthened in importance, so does consistency in those measures. Reporting of post-graduation outcomes has traditionally been completed by an individual institution (college or university) (Powers & MacPherson, 2016). Most of the literature on post-graduation outcomes takes this approach, when researching post-graduation outcomes in the United States and internationally. Federal policies may vary across countries, so this research is limited to post-graduation outcomes in the United States.

Although institutional self-reporting was a primary form of measurement of post-graduation outcomes, a larger emphasis on state and federal level governmental reporting is now prevalent in the evaluation of post-graduation outcomes (Powers & MacPherson, 2016). Despite the increased emphasis on governmental reporting for post-graduation outcomes, there were few peer-reviewed articles on types of post-graduation outcomes measures. Since this other central area was not easily found in the literature, the search was broadened to include Inside Higher Education, The Chronicle of Higher Education, and government websites. Types of post-graduation outcomes had six areas of focus: institution self-reporting, the National Association of Colleges and Employers (NACE) First Destination Survey, United States Department of Education, College Scorecard,
U.S. News and World Report, and global rankings. Each of these types of post-graduation outcomes had multiple articles to review.

Post-graduation outcomes data in both the individual institution assessment and from the larger measures of post-graduation outcomes across institutions are not currently examining gender, race and ethnicity, creating a colorblind approach to reporting when looking at a graduating class. Data on post-graduation outcomes looks specifically at a graduating class at a specific institution that is entering the workforce, while labor market data looks at overall data trends for the workforce at large. The literature for the labor market data shares clearly that there are long-term employment and salary disparities, especially for women and people of color (The White House, Office of the Secretary, 2016). Identifying these disparities during the initial job search is important in understanding overall labor market data trends, and specifically the experience of a new graduate during their first career-oriented job search. In addition, the qualitative data in this research identified impacts of the COVID-19 pandemic on graduates approximately two years after graduation. Prior to this research, the impacts of this pandemic had not yet been studied and can provide insights into short and long-term effects that the pandemic had on recent college graduates. This can also inform future career trajectory and labor market trends.

Statement of Purpose

The purpose of this dissertation is to understand the post-graduation outcomes of college students at a small, Research 1 institution, Institution X, overall and then in terms of gender, race and ethnicity. The host institution for this dissertation research requested that the research be confidential. To honor the institution’s request, “Institution X” is used as the name of the institution to blind it for this research.
This is a case study approach to align with previous work on this topic. The definition of a case study used for this research was that of Simons (2009):

Case study is an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, programme, or system in a ‘real-life’ context. It is research-based, inclusive of different methods and is evidence-led. The primary purpose is to generate an in-depth understanding of a specific-topic (as in a thesis), programme, policy, institution or system to generate knowledge and/or form policy development, professional practice and civil or community action. (p. 21)

This research explores the bounded system of post-graduation job and/or continuing education searching by the undergraduate Institution X, Class of 2018 using multiple sources of information from a pragmatic, mixed methods perspective. Using case study methodology to explore the “how” (Yin, 2014, p. 14) of the job/graduate school searching process illuminated the lived experience of this graduating class. This lived experience of the Class of 2018 provides a mixed methods analysis of the post-graduation outcomes for a full graduating class (all majors/programs). The diversity of Institution X provided a strong dataset to serve as the foundation of this work. The institution itself was not important to share as part of the analysis. The demographics of the graduating class served as an opportunity to understand the graduating class of a Research 1 institution while exploring gender, race and ethnicity from a critical whiteness analysis and while considering career development and social capital theories.

Research Questions

RQ1. Do undergraduate students of Institution X find employment and/or enroll in graduate school within a year after graduation? As colleges and universities realize the necessity of post-graduation outcomes reporting, it is necessary to understand what students are engaging in post-graduation (therefore looking at recent alumni of a graduating class). The Institution X Career Center collected data on the 1,375 graduates
of the Class of 2018 using the *Class of 2018 Outcomes Survey*. This survey yielded results for 46% of the Class of 2018 (N=632) through data collection efforts from April 2018 to February 2019. The Career Center reports outcomes survey data for each class annually through reports by academic school (i.e. School of Arts and Sciences, School of Business, and School of Nursing). Evaluating this served as a baseline of understanding the Institution X recent graduate and their pursuits after graduation.

As the emphasis on post-graduation outcomes increases across higher education, it is imperative that we look beyond the basics of whether graduates have secured a position or enrolled in graduate school to provide more information on how graduates are successful in obtaining their goals and to assist colleges and universities in supporting graduates of all backgrounds toward their post-graduation in positive outcomes. Exploring what the graduate is pursuing, where the student learned about the opportunity, salary information for the position accepted, length of time after graduation that the position/enrollment was secured, and the impact that the institution was making on the search was valuable to investigate. The success of specific majors and programs should be considered, although this is often reported in the aggregate by school or department at most institutions.

**RQ2. What barriers do Institution X recent undergraduate alumni face when seeking employment and/or graduate school enrollment opportunities after graduation?** Although the plan was to use quantitative and qualitative data to explore this, the quantitative data that was expected to be used was not provided by Institution X. The interviews were more informative in determining what challenges graduates had in securing their experience(s) after graduation. Questions including:

- “How did you secure this/these experience(s)?”
• “When did you secure this/these experience(s)?”
• “Overall, how would you describe your job/graduate school searching process?”
• “Did you experience any barriers to the search process?”

shared the graduate’s lived experiences including successes and barriers to achieving their goals.

**RQ3. How can Career Centers decrease the barriers that recent undergraduate alumni face in seeking employment and/or graduate school enrollment post-graduation?** The Class of 2018 graduates were asked “Did you experience any barriers to the search process?” during the interview. Additional prompting questions of “If yes, what were they?” and “(If yes) Do you have any suggestions how Institution X could have assisted in navigating these barriers?” were asked where appropriate. The interviewees were also asked “What could have made your search for a job/graduate school easier?” Using the informational interview transcripts and the Institution X Career Center *Class of 2018 Outcomes Survey* data, themes were coded and evaluated to identify ways to reduce the barriers to securing post-graduation opportunities.

**RQ4. How do the post-graduation employment and/or graduate school enrollment rates differ by gender and across diverse populations for undergraduate Class of 2018 alumni at Institution X, if at all?** Currently, the reporting of post-graduation outcomes for a full graduating class (all majors/programs) within a year after graduation does not explore demographic information which can open doors to conversations about supporting diverse students not just within the institution, but as students enter the workforce to avoid gender and racial disparities in the workforce at the point of entry to the labor market. It is time for higher education to explore gender, race, ethnicity, sexual orientation, and socioeconomic status to better understand our students
and the decisions that they make after graduation. Exploring diversity as graduates enter
the workforce will also assist colleges and universities to tailor programming to support
diverse students as they seek graduate school enrollment and/or employment. Since this
is not available via the NACE First Destination Survey, unique identifiers (student ID
numbers) were used to compare to additional datasets or data not yet being used to
provide information about student gender and ethnicity. This information was evaluated
for themes and trends.

While large datasets are important for generalizability, it is also important that
qualitative methods be employed to better assess unique trends among diverse groups that
have not yet been explored in this way. While survey data provides a sense of general
trends, interview data can provide a more in-depth perspective, which can be particularly
important in assessing how diverse groups are impacted by a particular situation. Because
of this, a mixed methods approach was chosen. It is also important that graduates are
interviewed to have a better understanding of their post-graduation journey. A stratified
random sample of 26 recent graduates from the Class of 2018 were interviewed.
Completion of the survey was not a pre-requisite to being interviewed.

Conceptual Framework

This research contributes to the literature regarding post-graduation outcomes,
utilizing three theoretical frameworks. These theories are applied to better explain post-
graduation outcomes; social capital theory, career development theory and critical
whiteness analysis in relation to race and gender, and the overall problem of social
reproduction. Figure 1 shares a Venn Diagram highlighting the relationship between the
theories and concepts outlined in this research (Luker, 2008).
Each of these theories bring a unique approach at analyzing post-graduation outcomes. While the emphasis of this research is on post-graduation outcomes, this is an emerging area of research. To my knowledge this dissertation is the first research of its kind; evaluating the post-graduation outcomes of a full four-year college, undergraduate degree graduating class, from a mixed methods perspective and utilizing social capital theory, career development theory and critical whiteness analysis. The current literature on post-graduation outcomes is varied but is used to serve as a foundation of understanding existing post-graduation outcomes analysis, measures, and data.

Since post-graduation outcomes research in this context is new, it is important to draw from other areas of research as well, including social capital theory and career development theory. Career development theory shares the decision-making process for determining career goals which is important when evaluating the lived experience of a graduate (NCDA, 2015). In the context of this research, it will also relate to the changing needs of students and the importance of Career Services on college campuses (Castellano, 2014).
Social capital theory explores social structures and the relationships within those structures that develop capital (Coleman, 1988). Granovetter (1995), focuses on these relationships in the context of finding a job. This work had led to a strong intersection of social capital and labor market research which situates this research in context of longer-term research trends, broad analysis, and long-term labor market impact.

All of this research is rooted in the overarching lens of the importance of diversity in higher education using critical whiteness analysis to explore the negative impact not including race, ethnicity and gender have in reporting and perpetuating systemic oppression (DiAngelo, 2018). By ignoring whole groups of people in analysis of what stakeholders view as a success measure is inappropriate, ineffective and racist. All students of all backgrounds deserve to be represented accurately so that as educators we can support of all our students as they work toward reaching their goals.

Conclusion

The majority of literature on post-graduation outcomes provides either a quantitative approach or a qualitative approach, not both. Combining these two methodologies portrays the best understanding of post-graduation outcomes and incorporates gender and ethnicity into the conversation. Adding gender and ethnicity/race to the data from a quantitative perspective, laid the groundwork for this new consideration for the field and the qualitative data will assist in learning about the lived experiences of these graduates from their perspectives. This research also illuminates successes and challenges of diverse recent alumni experiences as they enter the workforce and as we consider societal norms and the impact of those norms for specific gender and cultural identities.
This dissertation highlights post-graduation outcomes literature in Chapter 2, especially in relation to measuring outcomes and current findings in post-graduation outcomes research. In addition, literature on social capital theory and career development theory are used to provide a theoretical and practical understanding of choosing careers and the importance of social capital in that process. The dissertation is situated in the analysis of critical whiteness to provide a lens of systemic oppression through the inequity of systems and processes in higher education.

Chapter 3 describes the methodology of this research on post-graduation outcomes of the Class of 2018 at Institution X using quantitative (N=632) and qualitative (N=26) data. The findings are shared in Chapter 4. Overall, over 92% of the Class of 2018 at Institution X secured full-time employment or enrolled in continuing education (positive outcomes) within a year after graduation.

The quantitative data, survey responses, were analyzed using descriptive statistics, t-tests, chi squares, one-way ANOVAs and multinomial logistic regressions. Age, GPA, ethnicity and major were found to be significant in terms of survey completion. Asian and White graduates were more likely to respond to the survey. Business majors were most likely to complete the survey. Participants were also more likely to respond if they were younger (age) and had a higher GPA. Higher GPAs were also found when looking at graduates that responded to interview requests. STEM majors were less likely to respond to interview requests. Once major was considered, gender no longer showed significance due to the multicollinearity between gender and major. Women were less likely to have a full-time job and were more likely to enroll in graduate school or have part-time employment. Men were more likely to have a full-time job and to be seeking employment.
The qualitative data, interviews, shared the lived-experiences of the graduates of the Class of 2018 during their searching process. This illuminated the goals, decision-making and complexity of the search that added to the quantitative data. In addition, 96% of interview participants shared at least one barrier to the searching process. Career Centers were mentioned as a key resource to assist students in overcoming barriers to the search. Discussion of these findings in relation to each of the four research questions, the literature and limitations will be found in Chapter 5. In addition, Chapter 5 shares the implications for future practice and research, as well as concluding thoughts.
Chapter 2: Literature Review

The purpose of this chapter is to highlight the scholarly literature related to post-graduation outcomes. This post-graduation outcomes literature is explored in context of post-graduation outcomes measures and post-graduation outcomes findings. In addition, social capital theory and career development theory are explored and tied to post-graduation outcomes. This literature is situated in the context of diversity and explores post-graduation outcomes from a critical whiteness analysis perspective.

General Overview of Post-Graduation Outcomes for College Students

There are many ways that higher education stakeholders are assessing the value of an undergraduate degree. Alumni as stakeholders are some of the most important because of the investment that they are making in their educational experience and their concrete expectations of gainful employment and ultimately in their career goals (Gallup Inc, & Purdue University, 2015). One way that alumni are increasingly assessing the value of the higher education degree is through access and availability of paid job(s) or internship(s) (paid or unpaid) throughout their undergraduate experience (Gallup, Inc. & Perdue University, 2015; NACE, 2017). This is important because jobs and internships provide students with increased opportunities for employment after graduation (Gleason, 1993; Knouse et al., 2011). Alumni are not the only stakeholders assessing worth; undergraduate students are also expressing concern with this as they enter college and throughout their collegiate experience. A study of approximately 193,000 undergraduate students, entering a wide variety of higher education institutions in the United States, identified that the leading reason the students attended college was for employment outcomes (87.9%) and to increase salary potential (71.7%) (Pryor et al., 2012).
As stakeholders scrutinize higher education, they demand accountability and transparency (Coughlin et al., 2016). This push for transparency began under the Obama Administration with initiatives like College Scorecard, experienced increased attention during the Trump Administration, (U.S. Department of Education, 2019) and is already being discussed as priority in the Biden Administration. Post-graduation student outcomes data provides valuable information that is shared with key higher education stakeholders about post-graduation plans, successes, and room for improvement. Colleges report this individually on their websites, through state ranking organizations, and through national reporting measures. Institutions are often compared based on the post-graduation outcomes, especially on salary (Cowan, 2015; Executive Office of the President of the United States, 2017; Fain, 2018; Laguilles, 2016; NACE, 2014; O’Shaughnessy, 2012; Powers & MacPherson, 2016; U.S. Department of Education, 2018; U.S. News & World Report, 2017).

Literature on post-graduation outcomes is vast in terms of definition of outcomes, purpose of the study, population being evaluated, and post-graduation outcome measurement methods. Post-graduation outcomes data has been explored widely in relation to topics including; the effects of finances/student loans (Velez et al., 2016), employability skills (Fletcher et al., 2017), career trajectories (Patterson et al., 2017), high impact practices (Miller et al., 2017; Schatschneider, 2014; Wolniak & Engberg, 2019), and internships (Neimeyer et al., 2001; Nunley et. al, 2016; Nunley et al., 2017). Special populations have also been discussed in relation to post-graduation outcomes including; students with disabilities (Grigal et al., 2019; Huber et al., 2016; Kim & Williams, 2012; Madaius, 2006; Nardone et al. 2015; O’Mally & Antoinelli, 2016), international students (Campbell et al., 2018; Jiang, 2018), first-generation students...
(Eismann, 2016; Hirudayaraj & McLean, 2018; Krieger Cohen & Turner Johnson, 2018; Olson, 2016; Tate et al., 2015) and student athletes (Baraban, 2018); typically by studying specific programs or small groups. However, most analyses of post-graduation student outcomes evaluations are missing an assessment of outcomes broken-down by race and gender, unless it is being used to broadly describe participants.

The first year after graduation is a unique period where students are making or attempting to make the transition from student to an employee or graduate student. Race and gender are increasingly important to analyze as we already know that these are factors for securing employment and negotiating salaries (The White House, n.d.; The White House, Office of the Secretary, 2016). In 2016, on National Pay Equity Day, President Obama stated, "a typical woman, working full-time, year-round earns only 79 cents for every dollar earned by a typical man" (The White House, Office of the Secretary, 2016). This statistic did not improve from 2014. Women of color see a more extreme gap with 64 cents per dollar for African American women and 56 cents per dollar for Latinx women (The White House, n.d.). Identifying any potential disparities of work or pay by race, ethnicity and gender for our graduates, as they enter the workforce, is critical to help avoid these future disparities.

Research suggests that the “unemployment rates of Black teens and young adults is about twice as high as it is for Whites (Eberhardt, 2019, p. 263).” Eberhardt (2019) identifies the timeframe of teen and young adults as critical in establishing work habits and developing life skills. The inability to find work and develop these work habits and life skills affects how a person experiences the world. It can impact long-term opportunities and financial resources, such as lower investment in retirement, longer time to be able to pay off debt or delay in securing housing (Eberhardt, 2019). A further look
at this statistic shows that the unemployment rate of Blacks is 6.3 percent, while Whites and Asians have unemployment rates of 3.0-3.2 percent. Hispanics fall in the middle with an unemployment rate of 4.3 percent (Jones, 2018, as cited in Eberhardt, 2019, p. 263).

Some may praise the overall unemployment rates of the United States due to the decrease of the unemployment rates to post-recession levels. However, Blacks are historically “less likely to be employed than Whites; they have worse jobs and earn less money” (Eberhardt, 2019, p. 263). These disparities in unemployment rates, types of positions and salary highlight a bigger issue known as social reproduction.

Social reproduction is defined as the “process by which a society reproduces itself from one generation to another and also within generations” (Burton, 2014, p. 1). Understanding of an individual and society is evaluated for critical understanding and how people act perpetuates the social system (Burton, 2014). Social reproduction was originally posed by Karl Marx and his broad idea of reproduction and capital. Marx’s research from the 1800s analyzed the process of production and the consumption of commodities between the classes of the bourgeoisie/capitalists and the laborers/working class. His theory saw capitalists as those with more resources and the laborers as those that were exploited by capitalists to provide labor in exchange for a percent of the proceeds of the product in the form of a wage. Laborers never receive full compensation for their labor. Capitalists capitalize on the surplus value (Lin, 2001). Access and distribution of wealth remain and are reproduced as capitalists produce generations of capitalists and laborers produce generations of laborers.

When applied to higher education in the United States, it becomes clear that social reproduction extends beyond the production of products and into the accessibility of commodities like education. Schooling in all forms is seen as the primary means that
values, power and ideologies are transferred from one class to another (Serna & Woulfe, 2017). Higher education is seen as important to economic mobility and social mobility (Tsui, 2003). Education is designed for the dominant class to impose values, ideologies and power those in attendance, historically this has created a landscape in for inequality and inequity. While institutions talk about attracting and retaining diversity, measures of institutional success rarely include diversity measures. This disjuncture, which has been termed a colorblind and genderblind approach, uses diversity for performance and tokenization, but further perpetuates inequality and inequity (Cabrera et al., 2016; O’Neill & Gidengil, 2006). In practice this looks like many different things. For example, Cabrera et al. (2016) note that, “No institution of higher education in the country has a zero-tolerance policy for racism…a zero-tolerance policy for overly racist actions that are caught on camera, are posted on YouTube, and embarrass the institution in the national news” (p. 17). Such a statement clearly highlights the disconnect between racism and what is considered, allowed and perpetuated in society and within higher education. The same can be said for sexism, homophobia and transphobia.

**Review of Post-Graduation Outcome Measure Literature**

Within the United States, scholars addressing post-graduation outcomes have explored topics including the effects of finances/student loans (Velez et al., 2016), employability skills (Fletcher et al., 2017), career trajectories (Patterson et al., 2017), high impact practices (Miller et al., 2017), extracurricular activities (Kim & Bastedo, 2017) and internships (Neimeyer et al., 2001; Nunley et al., 2016; Nunley et al., 2017). Special populations have also been discussed in relation to post-graduation outcomes including; students with traumatic brain injuries (Nardone, et al., 2015), students with varied forms of disabilities (Huber et al., 2016; Grigal et al., 2019), students with
physical disabilities (Kim & Williams, 2012), students with learning disabilities (Madaus, 2006), students considered legally blind (O’Mally & Antonelli, 2016), international students (Campbell et al., 2018; Jiang, 2018) first-generation status (Eismann, 2016; Hirudayaraj & McLean, 2018; Krieger Cohen & Turner Johnson, 2018; Olson, 2016; Tate et al., 2015), and student athletes (Baraban, 2018). Post-graduation outcomes have been explored at the certificate (National Center for Education Statistics, 2013), associate’s degree (Futch, 2014; Hidle, 2011) bachelor’s degree (Jiang, 2018; Klobes, 2018; Palocsay & Wood, 2014; Saunders & Stivason, 2010; Schalk, 2013), master’s degree (Choi et al., 2015; Patterson et al., 2017; Ruth et al., 2015; Way et al., 2016), and doctoral degree levels (Kamimura-Jimenez & Gonzalez, 2018; McFall et al., 2015; Morrison et al., 2011; Platow, 2012; Stock & Siegfried, 2014). They have also been explored by mode of delivery of education (i.e. online education) (Oguz & Poole, 2013). This research has been conducted by looking at specific majors and/or programs; business (Klobes, 2018; Litzler et al., 2005; Palocsay & Wood, 2014; Schalk, 2013), accounting (Saunders & Stivason, 2010), arts (Martin & Frenette, 2017), STEM (Buffington et al., 2016; Campbell et al., 2018; Litzler et al., 2005), MSW or MSW/MPP (Choi et al., 2015; Ruth et al., 2015), MBA (Patterson et al., 2017; Way et al., 2016), and the Gates Millennium Scholars Program (DesJardins & McCall, 2014).

Post-graduation outcomes have been explored much more widely outside of the United States. The emphasis on outcomes post-graduation have been regarding immediate employment after graduation (Poon, 2016) and the more long-term career pathway (Shah et al., 2004). The complexity of post-graduation outcomes has been analyzed in many ways and with many different populations (Tomlinson & Holmes, 2017). It is often tied to capital and the labor market (Tomlinson, 2017; Tomlinson &
Holmes, 2017). Due to the focus of this dissertation, global perspectives are not included due to the differences in cost of higher education, the value and social meaning of higher education, the value associated with work, the cost of living, and the value of wages being seen differently amongst different cultures and different economic environments. These differences make the comparison outside of the United States difficult to make a unified measure. Instead, this research focuses on the most common forms of measuring post-graduation outcomes of college graduates in the United States.

The post-graduation literature based on individual studies have varied results, methods, findings, and limitations. A lack of standardized information about post-graduation outcomes remains, with the exception of high impact practices such as experiential learning, resulting in post-graduation outcome success (Miller et al., 2017). In the United States, it seems that the approach taken by higher education institutions is to conduct quantitative or qualitative analysis on a group of students (either those within a specific program, with a specific affiliation within the institution, and/or with specific experiences) to determine if conclusions support or contradict the findings of other similar studies in the field. In the early 2000s, an effort to nationally look at employment data for graduates called the Comprehensive Alumni Assessment Survey (CAAS) was distributed and researchers evaluated this data to explore alumni perceptions and experiences after graduation (Brint, 2002). After much research, it seems that CAAS is no longer being distributed, as the literature on this is all prior to 2008. Measures like this were not found in the literature of post-graduation outcomes in the United States.

Through this research, a complete overview of the types of post-graduation outcomes was unable to be found. However, human capital is the “stock of expertise accumulated by a worker- knowing how to do something” (Halpern, 2005, p. 4). This
understanding of human capital can be used to identify areas of inequality and inequity in the labor market and therefore the need for analysis of human capital and employment/graduate school outcomes (Olson, 2012). Employer needs and wants when hiring which can be described through social, human and cultural capital can also be considered (Bills, Di Stasio & Grxhani, 2017). Since this is a new approach to this research, the current literature was used to identify and understand future research and implications.

**Types of Post Gradation Outcome Measures.** Post-graduation outcomes can be measured in many ways. This section explores the ways that post-graduation outcomes are measured and reported.

*Institutional self-reporting.* In an American Council of Education article it states, “Across the spectrum of higher education— including private liberal arts campuses and community colleges— institutions know more than ever about what their graduates do after graduation. Proactively tracking student outcomes and making their outcomes data widely available, these institutions are documenting their successes and demonstrating the broad impact that colleges and universities have on their graduates’ lives (Cowan, 2015, p. 1).

This has been true for institutions of higher education for many years. “Over a period of five years, the data-collection process evolved from being the responsibility of a single office to its current state as a multi-office collaboration” (Laguilles, 2016, p. 25). Each institution of higher education has been responsible for collecting their post-graduation outcomes for years. Prior to the NACE First-Destination Survey, post-graduation data collection methods of each institution had their distinct differences, which they worked to align with the NACE First-Destination Survey standards (Forsythe, 2016).

Prior to the creation of the NACE First Destination Survey, each institution collected data using their own methods, analyzed the data using their own parameters, and reported the data to different stakeholders and through different means. For example,
a small liberal arts college collected data through hard copy surveys at graduation, emailed distribution of the survey, phone-a-thon phone calls for data collection, and through searching for students via social media, specifically LinkedIn (Forsythe, 2016). All data collected was manually inputted into an Excel spreadsheet and lists of missing data were pulled regularly to avoid duplication. At the end of the data collection period, results were hand calculated to determine the number of graduates that were employed and those that were attending graduate school. When reporting the data, employment and graduate school outcomes were measured separately and therefore double counted in the aggregate number of post-graduation outcomes if a graduate was employed and attending graduate school. Names of employers and graduate schools, as well as location information was included in the report that was shared with the Board of Trustees, the President and the Senior Leadership Team (Forsythe, 2016; Koc, 2018).

Some Career Services offices utilize a third-party vendor to complete data collection and others use electronic survey data collection methods, completed by college/university staff in the Career Services office or in the Institutional Research office (Koc, 2018). The way data was analyzed was often different for each institution; each individual institution counted employment part-time, employment full-time, graduate school outcomes, volunteer experience, and military experience in different sections of results and through different methods of counting. Some institutions never published a report. Others never collected data (Koc, 2018).

The National Association of Colleges and Employers (NACE). The National Association of Colleges and Employers (NACE) is the largest national organization for career counselors in higher education and recruiting employers in the United States (NACE, 2017). NACE is the “leading source of information on the employment of the
college educated, and forecasts hiring and trends in the job market; tracks starting salaries, recruiting and hiring practices, and student attitudes and outcomes; and identifies best practices and benchmarks” (NACE, 2017, p. 1). It publishes best practices and core competencies for career counselors in higher education, including; career coaching; connecting to students, alumni, faculty, employers, and community members; information management; connection to resources; analysis of data, trends, and events/programs; marketing, promotion and outreach regarding resources and events; execution of events; development of learning outcomes and assessment of these; educating students of all backgrounds and abilities; and office management (NACE, 2016).

The First Destination Survey Standards by NACE were implemented in 2014 as an attempt to make this self-reported information more uniform across campuses to be used for national data. After much debate over the validity of individual institutions reported post-graduation data and lack of ability to compare this information across institutions (Laguilles, 2016; O’Shaughnessy, 2012). The NACE First Destination Survey implemented a survey and data collection guide to ensure institutions aligned with this professional organization are utilizing the same set of institutional standards to aid in state and federal reporting as well as national trend and comparison data (Laguilles, 2016). One of the early adopters of the NACE First-Destination Survey standards, Starek, shared that some of the positives of these protocols included consistency in process, finding data to help students seeking employment, communication of outcomes to stakeholders, and consistency in data collection (NACE, 2014).
Some of the biggest areas that NACE assisted in aligning institutions’ reporting were in terms of defining the class population, knowledge rates and career outcomes rates. A consistent July 1 to June 30 data collection period assisted institutions in data collection consistency with colleague institutions. Knowledge rates aimed to calculate student self-reported data from multiple sources. This data was often difficult to gather, yielding in approximately 40% response rate (Laguilles, 2016). To gain better response rates, many institutions had been seeking this information via LinkedIn and other social media, which became part of the knowledge rate allowed through the new data collection standards (Koc, 2018). Career outcomes rates assisted in painting a clearer picture of the type of experience graduates are engaged in post-graduation; employment, graduate school, military service, volunteer work, etc. (Koc, 2018; Laguilles, 2016). Demographic information is not captured in this form of measurement. Major choice, however, is included (NACE, 2014). Three hundred-and-fifty-eight higher education institutions reported outcomes data to NACE for the Class of 2018 (NACE, 2019). The NACE First Destination Report for the Class of 2018 shared information about almost 700,000 students at the associate degree, undergraduate (bachelor’s degree), graduate and doctoral level (NACE, 2019). This NACE (2019) report shared that 54.5% of Class of 2018 graduates from undergraduate programs were employed full-time (p.4). The next largest outcome for the Class of 2018 nationally was enrollment in continuing education (19.2%), followed by seeking (14.1%), “employed other (p.4)” (9.1%), and volunteer service/military involvement (1.7%) (NACE, 2019). The overall knowledge rate for this sample was 64.8% of graduates from the institutions that reported their outcomes, including Institution X (NACE, 2019, p. 5). NACE (2019) also shared this information
by region, public vs. private institution, Carnegie Classification, school size and academic discipline.

**State-Level Reporting.** In the United States, some post-graduation outcome reporting is being done at the state-level. States determine if and how they will collect and share their data. For example, in Minnesota, the Minnesota Office of Higher Education post-graduation outcomes data is paired with salary data from the Minnesota Department of Employment and Economic Development. They report on statistics of employed alumni at various points after graduation, and on salary data (Minnesota Office of Higher Education, 2017). Indiana has developed an effort to link data across all educational levels to provide longitudinal data on student success, educational outcomes and workforce outcomes through the Indiana Network of Knowledge (Indiana Network of Knowledge, n.d.). Iowa uses community college outcomes data in the aggregate for their interactive resources (Iowa Department of Education, 2020).

In the geographic area near Institution X, efforts on post-graduation outcomes reporting by state is varied. Pennsylvania did not clearly have college-level post-graduation outcomes reporting at the state level. However, they do track transition to school and work (workforce and military) for high school graduates (Pennsylvania Department of Education, 2021). Similarly, Delaware evaluates high school outcomes by using the College and Career Preparation Metric (Delaware Department of Education, n.d.).

In an effort to evaluate trends and overcome issues stemming from the COVID-19 pandemic beginning in 2020, New Jersey partners with the John J. Heildrich Center for Workforce Development at Rutgers University to track graduates from high schools in New Jersey, their enrollment in college and the employment and earnings data for
students that have completed college in New Jersey and remain in New Jersey after graduation (State of New Jersey, 2020; New Jersey Education to Earnings Data System, 2020b). They use Student Unit Record (SURE) Enrollment Data, HESAA financial aid information and SURE Completion Data to evaluate higher education information and pair it with labor and workforce development data including Unemployment Insurance Wage Data, Workforce Investment Opportunity Act Case Data, Vocational Rehabilitation Program Case Data, and Consumer Report Card Private Training Provider Data (New Jersey Education to Earnings Data System, 2020a).

Each state has a different approach to their reporting of post-graduation outcomes at the aggregate level. Resources like EducationData.org have been developed to try to digest some of this state level data, pull it together, and report more national level statistics from the state-level data (EducationData.Org, n.d.).

**Multi-State and Federal Reporting.** As stakeholders place an emphasis on unified data and measures of post-graduation outcomes, many initiatives spanning multiple states and/or at the federal level been implemented. This national movement toward employment and/or wage data has transcended many state and federal government agencies. Some of the largest projects developed to aid in these efforts are being conducted by the White House, the United States Department of Labor, the United States Department of Education, the National Center for Education Statistics and the National Science Foundation.

An initiative under President Obama, College Scorecard, was developed to “provide prospective students and their families comparative college costs and outcomes” (Coughlin et al. 2016, p 12) and boasted the “first-ever comprehensive and reliable data on post-college earnings” (The White House Office of the Press Secretary, 2015, p.3).
Data that supports these efforts stemmed from student completion, debt and repayment, cost, access/aid, and earnings information compiled from many sources including the Integrated Postsecondary Education Data System (IPEDS) and the Department of Treasury and the National Student Loan Data System (NSLDS), paired with institution attended and major (Coughlin, et al., 2016; Executive Office of the President of the United States, 2017; Heffernan & Porterfield, 2016; U.S. Department of Education, 2018). College Scorecard served as an effort toward research on success of students post-graduation in a transparent, outcomes-driven format (Heffernan & Porterfield, 2016).

Some of the limitations of the College Scorecard include classification issues and earnings data being used as the only datapoint to represent the labor market/post-graduation outcomes (Coughlin et al., 2016; Koc, 2016). In addition, College Scorecard states, “improving outcomes and reducing costs is especially important for disadvantaged students” (Executive Office of the President of the United States, 2017, p. 78). IPEDS shares information about income and Pell Grant status. However, race is not a measure of College Scorecard (Executive Office of the President of the United States, 2017). Koc (2016) critiques College Scorecard’s focus on the institution, rather than the student because the demographic information of the graduate(s) may highlight populations of focus. In addition, the salary earnings (the only place demographics are mentioned in College Scorecard) are calculated 10-years after graduation (Kahn, 2015). Kahn (2015) argues that this is the time that many women are having children and need to take care of family responsibilities. She critiques College Scorecard, sharing “it fails women.” While it has its concerns, Heffernan & Porterfield (2016) shared that it is a way to explore current trends and concerns in higher education.
The United States Department of Education developed very strict guidelines on data collection procedures and placement regarding "gainful employment" of that information on the institution's website. Earnings data from the Social Security Administration is paired with information from the National Student Loan Data System to evaluate gainful employment into pass, fail, or zone categories using income two to three years after graduation (Fain, 2018). The United States Department of Education requires that institutions of higher education pass, highlighting a conscious effort by the government to have post-graduation outcomes in the forefront of higher education. Data collection for this post-graduation outcomes measure is completed by Institutional Research for a given college/university utilizing data and context for reporting from various campus partners (Powers & MacPherson, 2016; Shireman, 2017). However, the Trump administration halted these efforts in January 2018 and proposed a change to “acceptable” and “low-performing” instead of the pass/fail system previously utilized (Fain, 2018, p.1). In the Employment and Earnings Outcomes Report of the Department for Education (2016), demographic information including sex, ethnicity, home location, and age were measured in relation to longitudinal education efforts.

The Workforce Data Quality Initiative (WDQI), a joint initiative between the United States Department of Labor and the United States Department of Education “supports the development of, or enhancements to, longitudinal administrative databases that integrate workforce and education data” (U.S. Department of Labor, n.d.b). Unemployment insurance wage records and benefit claims, and training and employment services data are utilized to combine data from multiple sources to develop a longitudinal data source with the long-term goal of improving the quality of workforce data (U.S. Department of Labor, n.d.b). In addition, an objective of these efforts are to provide
accessible, user-friendly information to customers (U.S. Department of Labor, n.d.b). Kentucky, Iowa, Mississippi, and Rhode Island have been highlighted for their efforts with contributing to WDQI (U.S. Department of Labor, n.d.b). These efforts seem to build upon the National Center for Education Statistics Statewide Longitudinal Data System (SLDS) developed originally for the K12 education system (Institute of Education Sciences, n.d.). The SLDS offers grants for state-level participants for collaboration from K12 through workforce (National Center for Education Statistics, n.d.).

This national data sharing has also been used to develop a K12, higher education and labor agency data source called the Multistate Longitudinal Data Exchange (MLDE) (McKay, Haviland & Michael, 2020). Another Department of Labor initiative, the State Wage Interchange System (SWIS) was developed to share wage data between states (U.S. Department of Labor, n.d.a). This data system is called the Wage Record Interchange System (WRIS) (U.S. Department of Labor, 2019).

Surveys at the national level are also conducted to capture information about education and career trajectories of college graduates. The National Science Foundation distributes the National Survey of College Graduates (NSCG) every two or three years to provide information on science and engineering graduates nationwide (U.S. Census Bureau, 2021).

*U.S. News and World Report.* In higher education there are many standards that are important in determining the reputation and/or success of institutions of higher education. This is especially important when considering the comparison of law schools (Morriss & Henderson, 2008). There are many mixed reports on the value of each of these measures/standards; *U.S. News and World Report* is no exception. Many
institutions, including Institution X boast their *U.S. News and World Report* status on their website and share this information on many publications and brochures handed out to key stakeholders, prospective students and their families, and alumni (J. Sime, personal communication, October 14, 2017). Every year, information about post-graduation outcome data in terms of employment rate, continuing education outcomes, Career Center Services and salary information for the previous graduating class is reported to contribute to *U.S. News and World Report* data. This requested information often comes through initial Institutional Research efforts to gather the information from key knowledge holders on campus (J. Sime, personal communication, October 14, 2017).

This information is used in *U.S. News & World Report*, factored into comparison and now shared as salary information (*U.S. News & World Report*, 2017). The main categories used to determine these rankings have been studied in many ways, including ranking indicators of academic reputation, graduation/retention, faculty resources, student selectivity, financial resources, and alumni giving (Ding et.al, 2007). *U.S. News and World Report* has come under scrutiny from many sources including Monks & Ehrenberg (1999), who highlight that there is no empirical evidence that this report has any impact on application, admission and enrollment data. This criticism is echoed by Kim (2017) who focuses on the “dysfunctions” (p.1) of these rankings.

**Global rankings.** In 2003, global rankings, similar to *US News and World Report* were introduced to provide “cross-national comparisons” of higher education institutions (Hazelkorn, 2014, p. 12). The idea of these surveys were to create competitiveness across the very different institutions of the world. Geo-political positioning allows the top developed nations and US and UK well-established colleges and universities to rank highly on this measure (Hazelkorn, 2014). Since 2003, ten global rankings have been
developed and used to measure post-graduation outcomes using varying measurement criterion. The most prevalent of these ranking are the Academic Ranking of World Universities (ARWU), THE World University Rankings, and QS World University Ranking are now considered the top three global ranking systems. Diversity is measured only by that of international student and international faculty data and ratios in three of the ten rankings: QS (Hazelkorn, 2014).

Post-Graduation Outcomes Research Findings.

Research on post-graduation outcomes has been conducted using quantitative and qualitative methods, but typically not both using the lens of critical whiteness analysis, with the theoretical perspectives of career development and social capital theories. The findings of post-graduation outcomes are typically regarding a specific program, population of students, or specific topic of exploration.

Programs. In a qualitative study of 74 elite university men and women, post-graduation outcomes after an MBA program were used to determine the type of career pathways followed; those that left the workforce, “exit;” those that were in transition between three or more employers, “transitory,” and those that had stable employment, "lockstep” (Patterson et al., 2017, p 317-318). This study found that for both men and women, transitory was very common. Those that had stable employment did not have as many gender disparities, meaning that differences were not found in terms of gender. Careers with building blocks to promotion and within specific industries were more comparable to men across levels, whereas those outside of this scope had more disparity (Patterson et al., 2017). Koc (2016) shares the importance of demographics on post-graduation outcomes of college students using regression analysis when analyzing salary including gender, socioeconomic status and major. While the importance was mentioned,
but it was not presented in a way that shared meaningful data and analysis. In terms of graduate school enrollment, the impact of parents’ level of education was not significant for MBA students post-graduate outcomes (Mullen et al., 2003). However, parents’ educational level was found significant in relation to graduate school enrollment (Mullen et al., 2003). “Family educational background affects enrollment in post-graduate programs even after the receipt of the baccalaureate degree, suggesting that a college degree does not equalize opportunities to attend graduate school among those of different family backgrounds” (Mullen et al., 2003, p.159).

Completion of internships, GPA, and specializations were found to be significant in terms of predicting the attainment of a full-time job (Schalk, 2013). Palocsay & Wood (2014) also used regression to explore entry-level positions, starting salaries and recruiter satisfaction with candidates in business-related majors. Similarly, Saunders & Stivason (2010), found that over 90% of graduates in their study secured a position within three months of graduation (over half already having offers of employment before they officially graduated). While parent education assists in getting into graduate school and there are known identity related barriers in graduate school in obtaining internships and other opportunities, career development events and resources have a positive impact on post-graduate outcomes for business students specifically (Morgan et al., 2017).

STEM student post-graduate outcomes have been heavily researched, had some of the largest amounts of research in terms of post-graduation outcomes. Quantitative analysis of post-graduation outcomes was explored by using Census Bureau data to conduct labor market regressions in terms of gender (Buffington et al., 2016), international student status/visa considerations (Campbell et al., 2018), and engagement with Career Services offices during their degree (Litzler et al., 2005). STEM students that
engaged in student professional organizations and with their Career Services office were more likely to feel confident about their skills and to secure employment (Litzler et al., 2005). International students in STEM were found to have similar or better employment rates and salaries than those born in the United States (Campbell et al., 2018). Overall, women earned less wages, and were less likely to enter into the STEM industry, finding more positions in academia and government (Buffington et al., 2016). A study of male African American Engineering students identified a relationship between experiential learning opportunities (like internships) with post-graduation outcomes; alumni that completed an experiential learning opportunity had more positive outcomes after graduation in terms of employment (Johnson, 2018). In addition to exploring whether or not a graduate secured employment and/or continuing education after college, it is important to explore salary. Overwhelmingly, women in STEM have been found to be underrepresented in the field overall, but also in fields with higher salary potential (Tsang, 2017a). Tsang (2017a) found that women in STEM have a larger concentration in Biology which have a lower earning potential than Engineering or Computer Science, where women are strongly underrepresented.

Research on liberal arts and social sciences degrees have also explored the early career trajectories of recent graduates. Choi et al. (2015) studied 6 years of graduates (2002-2007) of the MSW program at a specific institution using quantitative data. Participants were emailed a survey approximately a year after graduation which explored how quickly graduates secured employment after graduation, employment fit with area of concentration, and salary (Choi et al., 2015). The first job and subsequent jobs between first job and time of the survey were explored using chi squares and t-tests to evaluate its primarily White, female sample; 86% of graduates had secured a position within three
months of graduation (Choi et al., 2015). While dual-degree MSW/MPH graduates from a single graduating class felt a lack of appreciation in the workforce regarding their dual-degree, yet earned higher salaries and found roles in macro-oriented social work positions (Ruth et al., 2015). Conversely, Martin & Frenette (2017) found that women and non-White graduates experienced longer job searches, less resources in college, and were less likely to find employment aligned with career goals for art majors. Theater arts graduates experienced a disconnect with their expected plans for after graduation and their actual post-graduation outcomes and salary (Darg, 2018).

**Special populations.** Huber et al. (2016) evaluated the factors that contribute to the disparities of graduates with disabilities and nondisabled college graduates. Career Center support and events including resume writing assistance, mock interviews, internships, networking opportunities and career fairs, in addition to accommodations from the Office of Disability Services assisted students with disabilities in finding employment post-graduation. These findings were common in many of the studies on students with disabilities that evaluated factors and supports (Grigal et al., 2019; Huber et al., 2016; Kim & Williams, 2012; Madaus, 2006; Nardone, et al., 2015; O’Mally & Antonelli, 2016).

International students at the bachelor’s level had comparable earnings and employment rates as domestics students (Campbell et al., 2018). They were found to have positions more closely aligned with their major after graduation, and their region of origin had significant impact on this alignment (Jiang, 2018). Visa requirements though USCIS may have impact on major alignment for our international students, as international students must find work in relation to their major to be in visa compliance. Acculturation is important for international students when seeking their first job after
college (Flores, 2014; Sangganjnavanich et al., 2011). Frustration with cultural and language barriers, as well as concerns about immigration can impact acculturation and ultimately the job search (Sangganjnavanich et al., 2011).

First-generation college students from a White, rural community experienced an impact of family dynamics after graduation on their successes and challenges in transitioning to the workforce (Olson, 2016). In a phenomenological study of undergraduate and graduate students with 50% of the sample identifying as African American, the family impact was also found to be significant in the job search process (Hirudayaraj & McLean, 2017). Hirudayaraj & McLean (2017) also found that first-generation college students were more likely to work in positions after graduation that did not require the bachelor’s degree that they earned. This mismatch was attributed to a lack of understanding and knowledge of corporate culture, preparedness, and lack of connections (Hirudayaraj & McLean, 2017; Tate et al., 2015). These areas of mismatch were also highlighted by Krieger Cohen & Turner Johnson (2018), who highlighted first-generation college students are “ill-prepared to transition from college to the professional workforce (p.21).” First-generation college student post-graduate outcomes were also found to be much lower than college students that have had a family member attend college at a four-year institution for these reasons and also self-concept (Eismann, 2016; Tate et al., 2015).

Student athletes gain unique set of skills that help them to stand out in their sport and in the job market. Baraban (2018) found that 82% of graduates that were student athletes when enrolled in college felt that their athletic involvement helped them in the job market. Although this was the perception of former student athletes, they often felt a
disconnect between athletics and career planning when they were an athlete (Baraban, 2018).

**High impact practices.** High impact practice is a commonly used term in higher education today as higher education institutions continue to show evidence of their effectiveness. This study used the National Survey of Student Engagement (NSSE) 2015 data to evaluate if these high impact practices like internships, service learning, leadership, study abroad and living learning communities have an impact on post-graduation outcomes. This study evaluated each form of high impact practice individually. Senior capstones, service learning and internships had the most positively associated relationships with post-graduation outcomes (Miller et al., 2017). Kim & Bastedo (2017) also found that extracurricular activities have labor market/employment benefits for graduates. Study abroad did not have a significant impact on post-graduation outcomes (Goldblatt, 2019). Greek membership was found to have an increase in post-graduation outcomes of self-employment and in salary for men involved in fraternities (Routon & Walker, 2018). Graduates that experienced high likelihood of heavy drinking had an approximately 10% decrease in post-graduation employment outcomes (Bamberger, 2018).

Both paid and unpaid internships lead to increased employment outcomes for graduates as well as higher salaries (Domholt, 2018; Hora et al., 2017; Saltikoff, 2017). Internships can assist in securing employment and higher paying salaries, but graduates may or may not feel confident in their personal fit with the role they secure (Callanan & Benzing, 2004). Hope, confidence, self-efficacy, and grit have been found to impact employability and post-graduation outcomes (Kasler et al., 2017; Killough, 2016). Internships lead to a higher likelihood of securing employment in the graduate’s field of
interest (based on career goals) (Blau et al. 2016; Neimeyer et al., 2001; Nunley et al., 2016; Nunley et al., 2017). Work experience also increases post-graduation outcomes of graduates including federal work study positions (Muramoto, 2013).

**Online Education.** Taking classes online 25 to 100 percent of the time in a MLIS degree program found that networking contacts from peers were less impactful in a job search than existing employment networks (Oguz & Poole, 2013). Oguz and Poole (2013) found that MLIS students were mostly seeking employment/networking contacts in their program, but the online nature of the program and lack of peer interaction compared to the classroom did not provide this for these students. They suggested establishing an opportunity to connect with peers to assist in developing networking/contact opportunities for students in this program (Oguz & Poole, 2013). As the COVID-19 pandemic changes the look of education during the 2019-2020 and 2020-2021 academic years (and possibly moving forward), it is imperative that educators consider that students will have less opportunity to network for future opportunities for employment and mobility in the online/virtual classroom environment. This makes providing opportunities for networking inside and outside of the classroom increasingly important and echoes the need for evaluation of post-graduation outcomes measures to ensure graduates are successfully obtaining positive outcomes after graduation and to assist them if they are not.

**Finances.** Salary is a common topic of consideration when selecting employment opportunities. Hilmer & Hilmer (2012) found that students that are more concerned with salary after graduation tend to attend public universities with top rankings and major in Business or Engineering. Women are not as commonly represented in these majors (Bloom, 2012; Hilmer & Hilmer, 2012) “Disciplines promising increasing returns
(salary) also demonstrate reduced numbers of female majors” (Bloom, 2012, p. 15). Gender differences in salary also transcended all races and ethnicities of graduates that completed doctoral degrees; women were paid less (Webber & Gonzalez Canche, 2014).

Velez et al. (2016) analyzed 2007-2008 graduates in a longitudinal study. They found that graduates that had taken more loans during their undergraduate education were less likely to enroll in graduate school and more likely to be employed, spent less time finding that employment and have higher salaries (Velez et al., 2016). Student debt was found to have significance in relation to confidence; confidence in securing employment and debt management skills were related to the amount of debt that graduates carried (Kuzma et al., 2010). These results differed from an older study of Class of 1998 graduates which found that students were not influenced by their debt (Monks, 2001). This could be due to the Great Recession and its impact on graduates in the late 2000s.

**Labor Market.** The post-graduation outcomes of a graduating class have long-term impacts on the United States labor market. This long-term impact was felt after the Great Recession in the United States from 2007 to 2011. The U.S. Department of Education (2014) explored post-graduation outcomes of the Class of 2008 in comparison with other pre-recession graduating classes within one year of graduation. The unemployment rate of the Class of 2008 was nine percent higher than the other graduating classes in the study (U.S. Department of Education, 2014). This study found that unemployment was slightly higher for males, people identifying as Black or Hispanic, and graduates under the age of 24 within the Class of 2008 (U.S. Department of Education, 2014). The long-term effects of the Great Recession on new graduates during that time include decreased salary earnings especially depending on the major/career field that the graduate found employment in (Tsang, 2017b). Many of the graduates in this
class enrolled in graduate school due to lack of employment options and/or found opportunities outside of their field of interest, or experienced underemployment (Abel et al., 2014; Cunningham, 2015; Gardner, 2012; Oreopoulous et al., 2012; Tsang, 2017b). These outcomes also have long-term implications on the graduate and overall labor market.

Aligning labor market trends with higher education goals and outcomes is important in providing an overall picture of the labor market, including recent graduates (Cleary et al., 2017). Labor market trends are often used in career development practices; using resources like O*Net and the Occupational Outlook Handbook (U.S. Bureau of Labor Statistics, 2021a; U.S. Bureau of Labor Statistics, 2021b). Analyses of labor market outcomes are often explored through aggregate level data (Bahr et al., 2015). Some aggregate level findings in terms of the labor market are that college graduates tend to earn more (Bahr et al., 2015). Bahr et al. (2015) found the return on the investment of a college degree regarding salary is significantly related to college major/field of study. Field of study was also an important consideration when looking at the impacts of the Great Recession on salary. Graduates that found positions in higher paying careers (due to career-trajectory from major) experienced fewer pay cuts than those in lower paying careers, widening the pay gap between these majors/career paths further (Altonji et al., 2016).

In 2018, unemployment had decreased nationally to below Great Recession levels, but unemployment was still found to be higher for people of color (Jones, 2018). Jones (2018) found that African American workers had the highest unemployment rate nationally in 2018 at an average of 6.3 percent, followed by Hispanic (4.5%); compared to 3.2 percent unemployment rates for White workers. Asian workers had slightly less of
an unemployment rate (3.0%) (Jones, 2018). State-specific unemployment is also important to consider. Washington, Pennsylvania, Arizona, Connecticut and Nebraska had the highest Hispanic unemployment rates at 5-6 percent, while the highest unemployment for African American workers were found in New York, Alabama, Louisiana, Illinois and the District of Columbia at rates of 7-12 percent (Jones, 2018).

Abel et al. (2014) found that “relatively high rates of unemployment and underemployment are not uncommon among college graduates just beginning their careers, and those rates can be expected to drop considerably by the time the graduates reach their late twenties (p. 7).” Some majors are significantly more at risk for underemployment, or a mismatch between education and skill level and the job being done (Bahr et. al, 2015). A “mismatch” between the requirements for a given position and the amount of education being acquired by the candidate can cause this phenomenon of underemployment (Vedder et al., 2013, p.30). Internship completion as an undergraduate student can assist in combating underemployment (Nunley et al., 2017). Diversity of candidates is an important consideration when looking at this mismatch. Gaddis (2015) found that Black graduates from elite universities were offered the same positions as White graduates from less selective institutions. In addition, lower pay and positions with less prestige were offered to Black graduates than that of their White counterparts (Gaddis, 2015). The wealth gap is concerning, as these disparities should not exist. It is also even more concerning when considering that Black college graduates are more likely to support other family members in their household (Meschede et al., 2017; Taylor & Meschede, 2018). This means that not only do Black graduates make less money, but they also have more financial considerations that result in a lower net worth.
In addition, Vedder et al. (2013) identifies an “overinvestment” issue, meaning that there are more college graduates than the supply of jobs that need that level of education (p.30). This overinvestment may not be seen as a barrier by hiring for employers (Osoian & Zaharie, 2013). Providing information on the labor market can assist college students in having a better understanding of the job market and earning potential (Ruder & Van Noy, 2017). More recently, there is labor market a concern with:

Sustainable work force development, particularly in regard to career-oriented degree programs that prepare students for fairly specific occupations, ensuring that the ongoing supply of workers matches up with long-term demand projections... vital to preventing labor shortages and skill gaps (Tsang, 2017c, p. 1).

In general, graduates from higher-ranked doctoral programs find better success in the job market (Smeets et al., 2006). It is important that higher education anticipate these needs, assist students in understanding the job market in relation to their career goals, and assisting them in preparing for their post-graduation success.

**Theory & Discussion**

This research contributes to the literature regarding post-graduation outcomes by describing three theoretical frameworks to explain post-graduation student outcomes; social capital theory, career development theory and critical whiteness analysis in relation to race and gender, and the overall problem of social reproduction. Figure 1 re-shares a Venn Diagram highlighting the relationship between the theories and concepts outlined in this research (Luker, 2008).
Social Capital Theory. Social capital theory is a research area that has a large buzz, that will continue, due to the interest in social capital from politicians and academic researchers (Halpern, 2005). Social capital theory has multiple definitions that differ, like much of sociological research. Despite the varied definitions and approaches to social capital theory, three overall dimensions of the theory can be identified. Halpern (2005) identified networks, norms and sanctions as the main components (first dimension) of social capital theory in which the second dimension, analyses are conducted at individual-, meso-, and macro- levels (varying levels). Bonding, bridging and linking to explain character is the third dimension (Halpern, 2005). Other approaches to social capital theory are provided by James Coleman and Robert Putnam, two prominent theorists of social capital theory.

Putnam (1995) describes social capital as “features of social life- networks, norms, and trust- that enable participants to act together more effectively to pursue shared objectives… Social capital, in short, refers to social connections and the attendant norms
and trust (p. 664-665).” He identifies a connection of educational attainment and social capital, a loss of social capital and organizational membership overall, resulting in a loss of community (Putnam, 2000). A central view of social capital as a public good formed as a by-product of a social event is indicative of Putnam’s (1993) approach to social capital theory. He relies on thick and thin trust described by the levels of trust between acquaintances (thin trust) and those in a network (thick trust) (Putnam, 1993). This concept of trust is later used to draw his conclusions of the loss of community in the United States (Putnam, 2000). Putnam (2000), identifies four important functions of social capital theory; resolving collective problems more easily, greasing the wheels that allow communities to advance smoothly, widening awareness of the ways fates are linked, and serving as a conduit for the flow of helpful information used to achieve goals.

The definition of social capital theory developed by James Coleman is the most widely accepted definition of this theory. Coleman (1988) defines social capital theory as such:

Social capital is defined by its function. It is not a single entity, but a variety of different entities, with two elements in common: they all constitute of some aspect of social structures, and they facilitate certain actions of actors- within the structure. Like other forms of capital, social capital is productive, making possible the achievement of certain ends that in its absence would not be possible (p. S98).

His view of social capital is contingent upon the actor and how an embedded structure works specifically for that actor, as the actor holds the determination of if something is considered social capital, or not (Coleman, 1990). Understanding the meaning of social capital and the creation of social capital are equally important to Coleman (Coleman, 1998). The core of social capital is identified in the networks, or ties between people, which starts with the family network (Coleman, 1990; Coleman, 1998).
Three forms of social capital include obligations/expectations, information channels, and norms/sanctions (Coleman, 1998). Coleman (1998) describes obligations/expectations in terms of credit slips where “people are always doing things for each other (p. S102),” leaving these favors or credits outstanding on both sides of the relationship. In this credit slip system, trustworthiness that obligations will be repaid and the extent of the obligation(s), serve as the backbone (Coleman, 1998). Information channels are described by the way they help people to find, collect, and share information. Coleman’s (1988), social norms refer to the shared expectations of behavior for a given social circumstance. Norms are reinforced by social support and rewards or punishments (i.e. sanctions) (Coleman, 1990; Coleman, 1998).

**Social capital theory and the relation to post-graduation outcomes.** As we explore social capital in relation to post-graduation outcomes, interconnected relationships and networking inform post-graduation outcomes. Networking is one of the most successful tools for positive employment outcomes (Owens & Young, 2008). When considering networking as a means for gaining employment, it is helpful to explore the impact social reproduction has on this process. One interpretation of social reproduction is defined as the symbolic violence by a dominant class on an oppressed class (Lin, 2001). This notion of symbolic violence as a systematic social issue characterized by the dominant class’ values are seen, or misrecognized, as the values of all classes, while the true values of all classes are ignored, then perpetuated by social reproduction (Lin, 2001). This misrecognition and its reinforcement in the education system can also be connected to the social reproduction of the labor market.

The labor market in the United States can be described across three levels: national, state and local. The United States Department of Labor releases multiple reports
on labor market trends including employment, unemployment, underemployment, hours of work, salary and demographics (U.S. Bureau of Labor Statistics, 2021a). This national data is helpful in evaluating the overall labor market by race, ethnicity and gender. It is necessary to consider the unemployment rate when evaluating post-graduation outcomes, as the unemployment ratio of recent college graduates is not yet considered in the same context as the overall labor market unemployment rates. The Current Population Survey by the United States Department of Labor reports on employment and unemployment by age, gender and race which can identify issues of social reproduction but does not yet clarify if these social reproduction issues are in the broad population or specifically at educational levels (U.S. Bureau of Labor Statistic, 2021b). However, state-specific data can take this one step further and look at educational attainment with these demographics (State of New Jersey Department of Labor and Workforce Development, 2016).

Employment and unemployment statistics of the labor market in the United States have been under extreme scrutiny since the recession that began in December of 2007. It took almost 10 years for the economy to bounce back with record job growth and unemployment rates. Wage growth, poverty and inequity are at the forefront of the issues that are of concern after the recession. A swing in the labor market to a gig economy has shifted recruitment efforts of employers and the skills they seek of their future and current employees (Allegretto, 2018). It has also increased concerns of stakeholders and policymakers regarding the role of higher education in employment and its alignment with the labor market (Cleary & Van Noy, 2014). Trends in the 21st Century labor market include a decrease in the rate of population growth and therefore amount of the eligible workforce and a decline in an educated workforce (Castellano, 2014). The COVID-19 pandemic, compounds these concerns and the role of higher education’s impact on the
labor market. Higher education’s alignment with the labor market is reciprocal in nature as both influence each other and can impact the resource allocation of institutions due to the connection to the labor market outcomes. This complexity is interdependent on many different trends converging at once (Castellano, 2014).

Lin & Erikson (2010) expanded on this complexity by sharing that social capital theory is both structural and relational in nature. Positions of individual people, or groups, can utilize their positions in a social network to access resources (Lin et al., 2001; Lin & Erikson, 2010). Individual characteristics of people, ties and networks create multilevel influences which can relate these networks to employment (Lin et al., 2001). Granovetter (1995) focuses on the network of an individual in the relation to employment. He identified both strong ties (relationships with those in an immediate circle) and weak ties (relationships of colleagues and acquaintances). Weak ties were found to be more important for personal advancement, including finding employment (Granovetter, 1995). This research mentioned a need to evaluate race and gender. While race and gender were important to consider, a person’s position in a social network was viewed as the most informative (Granovetter, 1995). Social capital is important for career success (Siebert et al., 2001). Siebert et al. (2001) found that social capital had a positive relationship with salary, promotions, and career satisfaction. It is imperative for educators to keep in mind that “young workers, whose careers are just taking shape, have not yet acquired as large a number of professional colleagues who can be of assistance (Granovetter, 1995, p. 42).” Granovetter (1995) shares that “careers are not made up of random jumps from one job to another, but rather that individuals rely on contacts acquired at various stages of their work life, and before (p.85).” College creates a
platform for connections and networks to be formed. These connections, or lack thereof, serve as the foundation for future career success.

O’Neill & Gidengil (2005) criticize the literature on social capital theory for being gender-blind. Gender-blindness can be defined as the “ignoring of the socially determined gender roles, responsibilities and capabilities of men and women (World Health Organization, n.d., p 194).” Putnam’s (2000) emphasis on bonding is considered sex exclusion, highlighting that his study of the Progressive Era did not include the power differentials and therefore social, economic and social capital disparities for women (Arneil, 2006). Bridges & Nelson (2018) found that education and seniority in the workforce, human capital concepts, were not the reasons for the gender gap. Social capital is seen positively for the group that holds the power, which further emphasizes systemic violence. Since traditionally men have been the group that holds the power, gender-blindness is extremely problematic, as is the impact of gender-blindness on policies. The World Health Organization (n.d., p. 194) stated, “gender-blind policies, though they may appear unbiased, are often, in fact, based on information derived from men’s activities and/or the assumption that women affected by the policies have the same needs and interested as men.”

Hero (2007) explores the juxtaposition between social capital theory and racial diversity theory, arguing that “the social capital thesis… essentially overlooks the role of race in American history and politics (p. 69).” Social capital is often viewed positively in terms of macro-level (aggregate) analysis, but Hero (2007) asserts that social capital theory is negatively related when studying racial minorities. Patterns of lower diversity and higher social capital have resulted in better social outcomes; far better than the patterns of higher diversity and lower social capital (Hero, 2007). Arneil (2006) adds to
this argument by furthering the argument of sex exclusion during the Progressive Era to race, identifying further accounts of power differentials. She notes differences of black and White women within the same social organizations due to the disparities of power of both race and gender (Arneil, 2006). It is necessary to understand race and gender in context of social capital as identities bring inherent connections and barriers to connections that are determined by the dominant society of that time. By addressing identities in, this will assist in “build(ing) strategically on the experiences, resources, and knowledge of families and children, especially those from low income neighborhoods (Kiyama & Rios-Aguilar, 2018, p.3),” or funds of knowledge, to assist students of diverse backgrounds.

**Career Development Theory.** Although career development theory can be described by many different approaches and concepts, the focus for this research was on the definition from the National Career Development Association (NCDA). NCDA is the professional association for career development, which is seen as the governing body for training, development and theoretical approaches for all types of career counseling (NCDA, 2015). NCDA (2015) describes an overarching seven-step process to career development:

- Step 1: Become aware of the need to make career decisions
- Step 2: Learn about and/or reevaluate self
- Step 3: Identify occupational alternatives
- Step 4: Obtain information about identified alternatives
- Step 5: Make tentative choices among available occupations
- Step 6: Make educational choices
- Step 7: Get a job (p. 6-7)

This process assists in understanding the overall career development process and how career development theories complement each other, although they may differ in the perspective, theory, or approach used (NCDA, 2015).
Career development theories can be broken into type; trait-oriented theories, social learning and cognitive theories, learning theories, and developmental theories (Zunker, 2006). Each of these theories have different core principles, perspectives, and ways to explore career planning and career development. However, “a single career development theory cannot fully account for all needs for all clients” (Zunker, 2006, p.264). Holistic approaches to career development are most effective when working with diverse student populations (Neault, 2012). Empowering diverse students to embrace their unique skills and backgrounds, assisting and educating them in understanding the legality of the job search and their rights, and serving as an advocate and social justice warrior are important for serving students well, from a holistic and individualized approach (Fickling et al, 2016). Career counselors also need to be mindful of “outdated models that may not account for the economic reality students face today” (Schlesinger, 2018, p.25). Schlesinger (2018) suggests using Chaos Theory of Careers to account for the flexibility needed to understand the complexity, chance, and change of factors related to career development. Students must have their physiological needs met to be able to explore career goals (NCDA, 2015). When exploring post-graduation outcomes considering the varied career development theories and their possible implications on the job/graduate school search are important.

While career development theory is lacking inclusion of race and gender, practitioners have increasingly made diversity a component of career development practice and techniques (Zunker, 2006). Scott et al. (2011) highlight the importance of career counselors educating themselves on the unique student populations that they work with and the intersection of identit(ies) of students in relation to transgender student career development. Dries & Inselman (2018), share the importance of disruption of
gender norms for women and trans people, stating “our job is to eliminate long-held biases and dismantle the structures in place that do not accommodate all of our students and staff” (p.32). Career development professionals need to advocate for all populations they are working with to overcome social barriers to effective career development which can include gender, race and ethnicity, religion, socioeconomic status, disability, and sexual identity and orientation (Tang, 2019). Cultural and group contexts can bring different needs to the job search (Flores, 2014; Tang, 2019).

Understanding the unique needs of each student is imperative for career counselors. Increasingly, scholars are finding that how racially diverse bodies are treated impacts career development outcomes Racism-related stress was found to negatively impact career goals for African American college students (Tovar-Murray et al, 2012). Cultural mistrust was also found to have a negative impact on career goals (Bullock-Yowell et al., 2011). If we are not developing new theories that take diverse identit(ies) into account whole groups of people remain silenced and marginalized.

While John Holland’s Typology, or Vocational Choice Theory, and Donald Super’s Lifespan, Life Space Approach do not specifically approach career counseling from diverse perspectives, there has been a lot of research on how these theories can be used with diverse populations, due to their individualized and/or holistic approaches (Tang, 2019). Holland’s Typology is rooted in the expression of an individual’s personality and how their personality relates to career interests, which is another important consideration when exploring post-graduation outcomes (Holland, 1997). Holland (1997), developed six personality types (RIASEC); Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. These personality types identify the characteristics of the personality type compared to types of career choices and are
developed through environment and are inherited (Holland, 1997; Zunker, 2006).

Holland (1997) emphasizes that the four basic concepts of Vocational Choice Theory are that people can be a combination or two or more of the personality types, environments can be described with the personality types (congruence), people with the same types seek the same environment, and if the individual can find an environment to match the personality type, they will be satisfied and productive.

Super’s career development theory provides some exception to this generalization, as socioeconomic level is considered in the nature of career pattern (Super, 1957; Super et al., 1963; Super & Sverko, 1993). Gender is also considered to an extent in Super’s Lifespan, Life Space approach, sharing:

if women are struggling to balance life roles, their overall satisfaction is diminished…to give voice to and validate feelings of women who may feel overwhelmed, or even fatigued, by juggling multiple life roles during one or more segments of their life span (Flora, 2018, p.10).

It is important for career development practitioners to keep the bias of career development theory in mind as they work with advocate for students.

*Career development theory and the relation to post-graduation outcomes.*

Career development theory takes a holistic approach while considering diverse needs (Zunker, 2006). These theories approach a specific individual and their backgrounds, learning and/or development. Despite this individualized approach to career development theory, NCDA (2015) notes an underrepresentation of minority groups in these theories.

Schlossberg’s Transition Theory can be helpful in exploring the transition of college students to post-graduate employment and/or graduate school enrollment. Transition theory focuses on an event that results in change; graduating from college is absolutely a change for students (NCDA, 2015). Schlossberg describes situation, self (inner strength and experience), supports and strategies as the four parts to a transition
(Zunker, 2006). Assisting each person to navigate this transition will take an individualized approach.

Hansen (1997) explores the importance of including gender role theory in career development theory, identifying gender stereotypes, segregation of work duties and higher values on family responsibilities. Career development of men and women have different considerations (Hansen, 1997). It is important to understand that many of the career development theories that exist were developed based on very different gender roles than those in today’s society (Patton & McMahon, 2014). Hansen (1997) also explored multiculturalism (race) in terms of career development theory, highlighting a need to consider racial identity and how this impacts choice of career. Hofstede (1984), identified differences in the work-related values; power distance, uncertainty avoidance, individualism/collectivism, and masculinity of different cultural backgrounds of people from 50 different countries (as cited in Zunker, 2006).

Post-graduation student outcomes are just starting to consider class, race and gender in regard to successful employment and graduate school enrollment of college graduates. The research that has included race and gender has not yet found generalizable findings. However, it is extremely important to consider race and gender in post-graduation outcomes research and how these graduates are selecting and maintaining careers to better understand and support diverse student populations.

Many of the occupations that women typically choose, registered nurses, accounting clerks, teachers, aides, customer service representatives, receptionists, administrative assistants, managers, waitresses, accountants, retail workers, and financial managers result in a sexual division of labor, and women make at 10 to 37 percent less than the overall median pay scale (Democratic Staff of the Joint Economic Commission,
2016; Shauman, 2016; Wharton, 2012; Whitmarsh & Wentworth, 2012). Wharton (2012) defines sex segregation as “the concentration of women and men into different occupations, firms and jobs (p. 190).” Although women are earning their college degrees, they are significantly underrepresented in fields like STEM (Eddy & Ward, 2017).

On the one hand, women are making strides in attending and graduating from college in greater numbers than men. On the other hand, what they study and what these early educational roots allow them to pursue for leadership positions results in different outcomes as men continue to dominate leadership roles (Eddy & Ward, 2017, p. 15).

It is integral to see the intersection of higher education/goals and decisions regarding work and family on the planned career ladder (Eddy & Ward, 2017). Women attending women’s colleges have been more inclined to explore traditionally male-dominated careers and pursue leadership roles (Wisner, 2013). Wisner (2013) shares this may be because of mentoring and opportunities to develop confidence.

It is also worth noting that women's choices may not actually be a choice. Lack of unbiased information about jobs and harassment in male-dominated careers could affect decision-making (Hartmann et al., 2016; Steelfisher et al., 2019). In addition, “other careers, traditionally dominated by men, particularly math-based careers (e.g., finance), continue to be more invisible and unavailable to young women (Whitmarsh & Wentworth, 2012, p.57).” It is possible that personality traits like empathy have significant impact on selecting career paths and that some fields focus on eliminating empathic responses (Kamas & Preston, 2020). Kamas & Preston (2020) found that both men and women who were empathetic chose more socially oriented positions and therefore were paid less in salary. Women are often seen as empathetic, socialized to be empathetic, and are also significantly underrepresented in leadership positions (Dominici et al., 2009).
Even when a woman chooses a career in a field that is dominated by women, their male counterparts are still often paid more for the same work. For example, teaching and nursing, careers are heavily dominated by women and typically have a union, yet on average men still earn more than women in these professions (Institute for Women's Policy Research, 2016). Issues of pay inequality have always been a concern in the United States, but have only been seen as a problem in the last 50 years. In 1963, the Equal Pay Act was passed to eliminate gender disparity amongst people doing equal work, with the same employer (U.S. Equal Employment Opportunity Commission, n.d.a.). Despite these efforts and other laws to minimize gender and pay inequality, the gap in pay, valutative discrimination, or "gender gap," still exists and is further widened by disparities amongst racial groups (The White House, n.d.; U.S. Equal Opportunity Commission, n.d.b.; Wharton, 2012). The effects of the COVID-19 pandemic and the implications that it has on career trajectories, pay inequality and the gender gap are important areas of future research.

The pay gap that women experience is not just in terms of salary. It is also in terms of other benefits offered by employers. Salary, bonuses, overtime pay, profit sharing, travel expenses, and benefits like medical insurance, dental insurance, vacation and holiday pay, and stock options are all considered compensation under the Equal Pay Act (U.S. Equal Employment Opportunity Commission, n.d.a.). A retirement income gap, exhibited by lower Social Security wages and lack of pension or significantly lower pension due to lower salary also exists. When a woman does receive a pension, it is typically 57% of a man’s pension earnings (Institute for Women’s Policy Research, 2016). Since 1963 the number of single mother households have more than tripled, this increase has further highlighted the pay inequality (Institute for Women’s Policy
Research, 2016). The Institute for Women’s Policy Research (2016) found that almost half of children raised by a single mother experience poverty.

This disparity may also be intersected with cultural considerations, due to intersectionality. Whether or not a person is experiencing gender bias, they may also be experiencing occupational stereotyping (Tang, 2019). Occupational stereotypes are characterized by over representative numbers or perception of numbers of minorities in specific career-paths (Tang, 2019). Tang (2019) also highlighted the realities of occupational discrimination, microaggressions in the workplace and the glass ceiling for diverse populations.

Unfortunately, even as salary and education levels increase for a woman, the pay gap still exists; the estimated lifetime loss of pay for a typical Caucasian woman is $464,000 (Institute for Women’s Policy Research, 2016). This loss is even more staggering for women of color. African American and Latinx women are estimated to lose $875,000 to over one million dollars in pay over their lifetime compared to White males (National Women’s Law Center, 2015).

**Critical Whiteness Analysis.** The research goal of critical whiteness analysis is to “critically examine what lies at the center for racial institutional power: whiteness” (Warren, 1999, p. 185). Ultimately, exploring whiteness examines the social constructs of social reproduction by the dominant group on non-dominant groups. Critical whiteness analysis avoids “speaking for others without first critically understanding the power and privilege embedded in the cultural center of whiteness (Alcoff 1991-1992 as cited in Warren, 1999, p. 186).” Warren (1999) identifies general ways in which the literature is discussing whiteness research; a method of social critique and a push for antiracist social practice; as a lens for reading, critiquing or deconstructing text; in context of privileged
power, and how whiteness is understood. Two examinations of whiteness in academic works are typically neutral/invisible/unmarked and a power differential of whiteness being framed in privilege, while most White people don’t think of whiteness in terms of privilege or as a culture. Most research is framed in racial oppression while whiteness frames in privilege. Critical whiteness analysis “focuses on problematizing the normality of hegemonic whiteness, arguing that Whites deflect, ignore, or dismiss their role, racialization and privilege in race dynamics (Matias et al., 2014).”

Whiteness “rests upon a foundational premise: the definition of Whites as the norm or standard for human, and people of color as a deviation of that norm (DiAngelo, 2018, p. 25).” DiAngelo (2018) also describes white supremacy as the “overarching political, economic and social system of domination (p.28).” White supremacy is at the cornerstone of critical whiteness analysis (Warren, 1999). When discussing critical whiteness analysis, it is essential to recognize the fragility associated with defensiveness when white supremacy is interrupted (DiAngelo, 2011; Matias & Allen, 2013). DiAngelo (2011) describes white fragility as “a state in which even a minimum amount of racial stress becomes intolerable, triggering a range of defensive moves (p.57).” When white fragility is experienced, it often shows in negative emotion and silent or argumentative behaviors (DiAngelo, 2011). White fragility is often built on segregation, universalism (i.e. seeing everyone as the same), individualism (i.e. seeing oneself as an individual person rather than a racialized group), entitlement to racial comfort, racial arrogance, freedom from racial burden and messaging enforcing white dominance (DiAngelo, 2011). It is critical for educators to understand the implications of whiteness and white fragility in relation to higher education practices, policies and theory to acknowledge implicit bias and advocate for change (Eberhardt, 2019). It is not only important to recognize our own
biases, but to listen to others’ stories to understand their lived experiences so that as educators, we can advocate for all our students and shatter the system that perpetuates oppression, especially for students of color.

**Critical Whiteness Analysis and the relation to post-graduation outcomes.**

DiAngelo’s (2018) definitions of whiteness and white supremacy situate social reproduction as a preexisting social stratification. Critical whiteness analysis evaluates race at its core. In higher education, we are often focused on assisting our students of color, but it often feels that the institutions are approaching policies and procedures from a colorblind approach. Critical whiteness analysis would call this colorblind approach racism because race, gender and ethnicity should be included in the discussion and ultimately the policies and procedures of higher education. Higher education notoriously is ignorant to or avoidant of racism and the acknowledgement of racism within the academy. Ladson-Billings (2013) quotes Hochschild “American society as we know it exists only because of its foundation in racially based slavery and thrives because racial discrimination continues (p. 5).” Higher education was built on that same racism and slave labor. We know that many policies and traditions within higher education, and the entire education system, are built from racism as well; not allowing students of color to attend college, requiring specific areas of study for students of color if they were able to attend college, and White rules for students of all backgrounds (Fuentes & White, 2016; Geiger, 2015; Wilder, 2013).

As we think about higher education being from a historical White perspective, it is important to evaluate what programs, resources, services, and forms of measurement will provide substantive value to students of color. Historically, higher education and the predominantly White leadership, deflect, ignore, or dismiss their role, racialization and
privilege in race dynamics (Matias, et al., 2014). Higher education administrators, especially senior leadership must acknowledge their whiteness, evaluate their White racial development and understand the role they are playing in White racial production so that they can push back against it and make changes to fight whiteness across campus and to evaluate the measures that are being used in academia (Matias, et al., 2014; Tatum, 1992).

**Conclusion**

As "colleges and universities are under extraordinary pressure not only to produce more and better-trained, skilled graduates but also do so with decreasing revenues” (Soares et al., 2016, p. 1), post-graduation outcomes measures and rankings that include post-graduation measures benefit resource-intensive institutions. This is even more imperative after the economic downturn (Koc & Tsang, 2015). Without credible measures that could be seen as a substitute, productivity and therefore primarily post-graduation outcomes becomes the foundation for many decisions and while leaning more toward productivity than the traditional educational mindset of autonomy (Hazelkorn, 2014).

Although higher education and state/local/federal government agencies are spending a lot of time and energy on gathering post-graduation outcomes, some government agencies including the Department of Education, are not using job/employment data as the measure because agencies and states measure this information differently causing this information to be seen as unreliable and inaccurate (Shireman, 2017). We need to figure out a way to have a consistent form of measurement of this information since post-graduation outcomes are being seen as the future (Cowan, 2015). Implementation of NACE’s First-Destination Survey Standards and Protocols has
allowed career services offices to align their survey to national standards and have a consistent form of measure. This may be the start of standardized measures, but there is a long way to go. At an institutional and a more national post-graduation outcome survey data perspective, it is important to realize that the data collected from post-graduation outcomes research can be utilized in many ways, with many populations, to understand the data, assist particular groups, and advocate for resources within different areas and programs. This can assist in understanding the implications of social capital and how individuals from non-White groups may have less access to capital, thus resulting in inequality and/or inequity.

As of now, differences in race are not considered in post-graduation outcomes. This color-blind approach negates the realities that people of color experience when seeking opportunities and employment post-graduation. We must recognize this White Institutional Presence (WIP), “the ways that whiteness is embedded in the epistemological, ideological and cultural fabric of institutions of higher education, which services to marginalize the views and experiences of students of color (Gusa, 2010, p. 119-120, as cited in Cabrera et al., 2016)” and shed light on the ways that whiteness is evident in and impacts higher education. Currently, students are placed in one of three categories; successfully secured a job/enrolled in graduate school, unsuccessfully secured a job/enrolled in graduate school, or no response. They are counted as a statistic with the assumption that the alumni have equal access to resources (which they do not), since we are not considering data points like amount of time spent to secure the outcome, methods used to secure the outcome and goals compared to the outcome.
The assumption that post-graduation outcomes are generalizable across institutions and are inclusive of all students without recognition that social identities matter, exhibits the unconscious White habits that are detrimental to our students of color. We must work through our tradition of whiteness to better serve all students (Matias, et al., 2014). At the institutional level it is not difficult to compare post-graduation outcome data with other surveys that collect data on race and ethnicity so that this information can be better and more appropriately interpreted. For national post-graduation measures and rankings, those collecting the data could easily include social demographic information already collected from sources like IPEDs, the Social Security Administration and other national sources. The impact that could be made from some very small changes could help students of color to see outcomes that are representative of people like them rather than the historical White viewpoint. Looking at data to support our most marginalized students could be a hugely effective foundation for supporting all of our students. We must challenge the status quo.
Chapter 3: Data & Methods

The purpose of this chapter is to highlight the research methodology for this mixed methods case study of post-graduation outcomes for college students. This mixed methods approach provides a deeper understanding of post-graduation outcomes data in terms of gender, race and ethnicity. It also tells the stories of recent graduates of Institution X to provide a deeper understanding of the job and graduate school search/application process from a qualitative perspective. The research plan is found in this chapter, including, research questions, methodology, participants, analysis, ethical considerations and positionality.

Research Questions

This study used a mixed methods design to explore student success in their post-graduation endeavors and potential barriers inhibiting their success. This mixed methods design evaluated post-graduation outcomes data and utilized qualitative data to highlight the voices behind the statistics. This study answered the following questions by applying social capital theory, career development theory and critical whiteness analysis:

RQ1. Do undergraduate students of Institution X find employment and/or enroll in graduate school within a year after graduation?

RQ2. What barriers do Institution X recent undergraduate alumni face when seeking employment and/or graduate school enrollment opportunities after graduation?

RQ3. How can Career Centers decrease the barriers that recent undergraduate alumni face in seeking employment and/or graduate school enrollment post-graduation?

RQ4. How do the post-graduation employment and/or graduate school enrollment rates differ by gender and across diverse populations for undergraduate Class of 2018 alumni at Institution X, if at all?
**Methodology**

A mixed methods approach to the exploration of post-graduation student outcomes using pragmatism as a methodological framework allowed for post-graduation student outcomes to be studied both by breadth (quantitative) and depth (qualitative) through collecting data on numbers and words (Creswell, 2007; Creswell, 2015; Creswell & Plano Clark, 2018; Patton, 2002; Saleem Parvaiz et al., 2016). Mixed methods research has historically needed the justification of ontology and epistemology (Saleem et al., 2016). However, the past few decades have led to a larger acceptance of pragmatism as a methodological framework (Creswell, 2007; Patton, 2002; Saleem Parvaiz et al., 2016). Pragmatism is described as "matching concrete methods to specific questions, including the option of tactically mixing methods as needed and appropriate (Patton, 2002, p. 69).” This methodological framework avoids a narrow, one-sided approach to the conceptual framework by looking at many approaches for collecting and analyzing data (Creswell & Creswell, 2018; Patton, 2002). Instead, the intended purpose, methods, resources and approach are evaluated by the scholarly community through the specific context of the work (Patton, 2002). It allows for the researcher to ask the pertinent questions for a given study from a practical rather than theoretical approach (Creswell & Creswell, 2018; Patton, 2002). In addition, a core element of this research is social justice. Morgan (2014), shares “pragmatism provides a strong match with the advocacy of social justice (p. 1050).” This lens of social justice is comprised of many contexts; social, historical, and psychological (Creswell & Creswell, 2018). Pragmatism was the strongest methodological framework for this research and work toward eliminating colorblindness in data in higher education.
Pragmatism takes shape differently for each researcher (Creswell, 2007). The focus for this research was on the problem being studied, the questions being asked and the solutions i.e. "what works" for this area of research (Creswell, 2007, p.22). The "what," “why,” and "how" of post-graduation outcomes for college students were identified to allow for a more analytical stratified and in-depth analysis of the job and/or graduate school search through a combination of case study research and survey research (Creswell, 2007, p. 23; Yin, 2014, p. 9). This study begins to fill gaps in the literature to highlight recent college graduates across all undergraduate majors at a specific institution using an embedded design. An embedded design is described as a design where “one data type is nested within the other data type (DeCuir-Gunby & Schutz, 2017, p. 93).” Figure 2 highlights the embedded design model (Creswell & Plano Clark, 2011 as cited in Curry et. al, 2013).

**Figure 2**

![Embedded Design Diagram](image)

*Note: (p.121).*

Case studies are a central research method used in pragmatic research (Mills et al., 2012). To explore the complexity of post-graduation outcomes of college students of a graduation period (i.e. the Class of 2018), case study was the most appropriate research method to provide an in-depth understanding of the quantitative and qualitative data (Simons, 2009). This research was constructed and conducted to “collect, present, and
analyze data fairly (Yin, 2014, p. 3),” a cornerstone of good case study research. Using real-world context, the case study used both quantitative and qualitative evidence to answer the research questions and to explore the Class of 2018 at Institution X’s experience entering the job market and/or continuing education after graduation (Yin, 2014).

Case studies have been used commonly in student affairs and higher education research (Jones et al., 2014). The work of student affairs and higher education lends well to identifying a group of students, organizations or other stakeholders that make up what is considered the case in this research (Jones et al., 2014). The graduation of the Class of 2018 at Institution X is the case, or group, for this higher education research.

Methods

Prior to conducting research for this study, approval from the Institutional Review Board (IRB) was sought and obtained from Rutgers University, the researcher’s home institution. Once approval was given and cooperation of the site was secured (Appendix D), the mixed methods research was employed.

Institutional Context. Institution X is a 40-acre campus in Southern New Jersey/Greater Philadelphia area (Institution X, n.d.a). With approximately 5,000 undergraduate students in 38 undergraduate majors/programs and 1,600 graduate students in 29 programs, it can be considered a small institution where students can receive individualized attention, although it is a part of a much larger university system (Institution X, n.d.a). Institution X is known for its diverse student body. Institution X was chosen for this research, as the student body is diverse with approximately 56% of students not identifying as White (18% African American, 17% Hispanic, 11% Asian, and three percent international) (The Princeton Review, n.d.). Approximately 60% of the
population at Institution X is female and approximately 40% is male (The Princeton Review, n.d.). The majority of students are commuters, living in this urban area and the surrounding Southern New Jersey area predominantly (Institution X, n.d.a). The goal of this research was to include race/ethnicity and gender to post-graduation outcomes data. This site provided a strong diverse pool of participants for this research. The Class of 2018 was composed of 1,375 undergraduate students from 35 majors and 291 graduate students from 20 programs. The Career Center of Institution X collected data on post-graduation outcomes for all of the Class of 2018 graduates from Institution X (undergraduate and graduate).

Participants. This study focused specifically on the 1,375 undergraduate Class of 2018 graduates from 35 majors for the quantitative portion of this study. Three of the 38 undergraduate majors/programs were not represented in this research, as these majors/programs did not produce graduates during the 2017-2018 academic year. Graduates in the Class of 2018, completed their undergraduate degree at Institution X in August 2017, October 2017, January 2018 or May 2018. Undergraduate students were targeted for this study, as they are traditionally seeking their first career-oriented position. This assists in contributing to the literature about the unique experience of an undergraduate student entering the workforce. While there are some outliers to this traditional job seeking approach, it is more informative for this period than the graduate student data, as the graduate student career lifecycle and reasoning for enrolling in graduate school varies immensely.

Data collection. The Career Center at Institution X collects post-graduation outcomes data for college students through the Outcomes Survey, annually. This survey was aligned with the NACE First-Destination Outcomes Survey criteria (NACE, 2014).
The Institution X Career Center collected the *Class of 2018 Outcomes Survey* data from April 2018 to February 2019. The entire Institution X Career Center staff assisted in the data collection for this survey, as they do annually. The Registrar at Institution X provided a list of expected graduates to the Career Center in April 2018. This list included personal email addresses rather than institution affiliated email addresses that may not be checked by the graduates, after finishing their degree(s). Expected graduates were emailed the electronic version of the *Class of 2018 Outcomes Survey* (Appendix A) by the Institution X Career Center in April 2018. Data collection began in April 2018 with this email and continued through December 2018 through emailed survey efforts. As surveys were returned electronically, recent graduates were removed from the contact list for the next batch of emailed surveys. A hard copy letter and paper version of the *Class of 2018 Outcomes Survey* were also sent to the recent graduates in October 2018 (Appendix B). Any hard copy/paper versions of the survey results were manually entered into the Symplicity database (where the electronic results were collected) (Appendix B), by the Institution X Career Center student workers. Direct responses from graduates were considered the response rate for this study. Unfortunately, Institution X was unable to share the response rate of this secondary data set. Instead, they provided the data for the knowledge rate (the combination of response rate and efforts to find missing data) (NACE, 2014).

Starting in January 2019, the Career Center staff searched for additional employment and continuing education information on resources including the National Student Clearinghouse, LinkedIn, and other social media platforms to contribute to the knowledge rate, as outlined by the NACE First Destination Survey Standards (NACE, 2014). The knowledge rate for this survey was 632, or 46% of the overall graduating
Class of 2018. In collaboration with the Office of Data Analytics and Campus Planning at Institution X, the *Class of 2018 Outcomes Survey* data was shared through reports by academic school; Business, Arts & Sciences, and Nursing, including statistics on the number of employed/enrolled in continuing education and the locations of employment. In addition, information about salary ranges, selected employers and selected graduate schools were reported (Appendix C). Evaluating this information served as a baseline of understanding the Institution X recent graduates and their pursuits after graduation.

To assist with categorizing the mixed methods data by major, majors were grouped into content areas known as career clusters. Career clusters became popular approximately 20 years ago to group work interests or skills that are similar in nature (Miller, 2008). O*Net OnLine (n.d.) defines career clusters as groups that “contain occupations in the same field of work that require similar skills (p. 1).” This assists in better defining the current job market which is often less linear that the job market earlier in United States history and with previous generations (Hamilton, 2012). Frantz (1973), one of the early scholars on career clusters, attributed the foundations of this work to other career development scholars including Holland, Super and the United States Department of Labor regarding categorization of careers. After reviewing the 35 majors at Institution X, it was most valuable to align majors based on Holland’s RIASEC codes: Realistic, Investigative, Artistic, Social, Enterprising, Conventional (Holland, 1997). Institution X does not have many majors like Engineering or Botany that would account for Realistic careers, so this code was not used for the purpose of this research. Holland (1997), describes the RIASEC codes as being able to be combined. Due to the array of School of Business majors, Conventional and Enterprising careers were combined to one Business career cluster, as they seemed closely aligned, per Holland’s Typology. The
majors at Institution X, that aligned with Social careers were grouped in a Public and Human Services career cluster. Artistic careers were accounted for in the Arts and Liberal Arts career cluster. Investigative careers aligned nicely with the STEM majors at Institution X, so they were included in the STEM career cluster. Due to the significant number of healthcare related majors at Institution X, healthcare was originally considered a fifth career cluster. However, when collecting and analyzing the data, healthcare was merged with STEM-related careers, resulting in a total of four career clusters in this research: Arts and Liberal Arts, Business, Public & Human Services, and STEM. Table 1 highlights the majors included in each career cluster, for the purpose of this research.
**Table 1**

**Career Cluster by Major**

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<td>Marketing</td>
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<td>Music</td>
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<td>Philosophy</td>
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<td>Student Proposed Major</td>
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<td>Theater Arts</td>
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<td>Urban Studies</td>
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<td>Biology</td>
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**Quantitative.** The institutional reporting of post-graduation outcomes, including that of Institution X, did not explore the impact of demographic information on post-graduation outcomes. The Institution X Registrar provided information about demographic information for each graduate of the Class of 2018 when providing the list. This list was used by the Institution X Career Center to send surveys, as it included permanent email addresses. In an effort to explore gender, race, ethnicity, sexual orientation, and socioeconomic status to better understand students and the decisions that they make after graduation, to better support these students as they enter the workforce, the Institution X *Class of 2018 Outcomes Survey* data (three spreadsheets; one for each school) and the data from the Registrar were combined using unique identifiers (student ID numbers) for the 1,375 undergraduate students of the Class of 2018 from 35 majors. Independent variables (IVs) of ethnicity/race, gender, birth date (age), veteran status, and GPA from the Institution X Registrar was paired with the *Class of 2018 Outcomes Survey* data, using VLOOKUP, to provide the missing demographic information for each graduate. Data from the Institution X Registrar combined race and ethnicity into one data field, “ethnicity.” After realizing that some common race and ethnicity responses were in this column, consultation with Institution X leadership resulted in receiving confirmation that “ethnicity” encompasses both race and ethnicity at Institution X (Confidential, personal communication, October 15, 2020). This data field was used for this research.

Honors College enrollment was considered for this research. However, this IV needed to be excluded, due to missing data (the data showed only one of the 1,375 graduates as enrolled in the Honors College, despite many with GPAs that meet the qualifications for enrollment). In addition, zip code was in consideration as an IV of socioeconomic status, but due to the nature of the dataset; providing both permanent zip
code (permanent address zip code) and diploma zip code (an alternative zip code where the diploma was mailed at the time of graduation), the true zip code was not discernable from the dataset. There were also too many permanent zip codes to group the IV in a meaningful way. For this reason, zip code was excluded from this research. Unfortunately, other areas missing information included sexual orientation and true socioeconomic status, as they were not included in this dataset. These datapoints could not be explored in this research.

**Qualitative.** The full list of 1,375 Class of 2018 undergraduate degree graduates, representing 35 majors, were emailed the recruitment email for participation in interviews, by the Institution X Career Center, per Rutgers University IRB requirements (Appendix E). As part of this recruitment strategy, a $25 Amazon gift card incentive was offered to each graduate, if selected for participation. Recruitment emails were sent bimonthly, on Wednesdays, by the Institution X Career Center to continue soliciting for participants for interviews in this research. The researcher removed the contact information of graduates that responded to Round 1 of the recruitment emails from the email distribution list before Round 2 of recruitment emails were sent. The updated list of the email addresses for Round 2 of recruitment emails did not share whether or not the graduates missing from the list were participants, declined the research or were on the waitlist for an interview to ensure confidentiality of responses. The Institution X Career Center shared the Round 2 recruitment email (Appendix F). This same process was followed for the third and final round of recruitment emails, Round 3 (Appendix G).

Interested graduates emailed the researcher directly regarding their interest in participating in the research. Stratified random sampling was employed to ensure graduates from different majors were strategically selected to provide a clear
understanding of the job/graduate school searching process across multiple majors, industries and career interest areas. As graduates responded that they were interested in participating in the interview, they were placed into the appropriate career cluster for their major. The goal for each career cluster was to complete five to seven interviews. The exact number of interviews for a career cluster was determined by saturation of the responses provided by participants. Lincoln and Guba (1985) describe saturation as when participant responses are redundant. This does not mean the responses were the same, but close enough that the key concepts or points were clear and no new information was being provided in terms of the research (Lincoln & Guba, 1985).

One graduate per major was selected to participate in the interview until five interviews were completed for a given career cluster. Once five interviews were completed, saturation was evaluated to determine if additional interviews were needed for a given career cluster. Where needed, additional interviews were completed for a career cluster, to assist with meeting saturation and to ensure all career clusters were represented accurately. For this reason, there are varied numbers of participants in each career cluster. Some of these additional interviews were with majors previously interviewed, due to a unique circumstance. For example, two Psychology majors were accepted as participants, as they had different goals and one was a dual major. This was also to assist with determining if saturation in responses was met.

As graduates responded to the recruitment email, they were sent an email thanking them for their interest, a link to schedule the interview using Calendly, and the consent form, if they were selected as a participant (Appendix H). Participants were provided with an informed consent form that outlined the rights and responsibilities as a research subject (Appendix I). As part of the consent, only alumni that agreed to
participate and to complete a recording (for transcription only) were invited to participate in the interview (Weiss, 1994). Once the major spot was filled for a cluster, graduates interested in participating in the research were sent an email explaining that the major spot was full and inquiring if they would like to be considered in Round 2 of interviews (Appendix J). Before taking a graduate off of the Round 2 list, graduates that were selected for Round 1 interviews that had not responded were sent an email to follow-up about interest and scheduling that included a deadline for response (Appendix K). If a graduate selected for Round 1 did not respond by the deadline, a graduate from Round 2 from the same or a similar major (i.e. in the same career cluster) was contacted to participate (Appendix L).

The original interview target was 20-30 (Creswell, 2007; Yin, 2016). Twenty-six, 30-45-minute semi-structured interviews focusing on career decision making, the job searching and/or graduate school searching experiences, successes and barriers to searching and the graduate’s post-graduation story were completed for this research (Yin, 2016). Graduates were also asked how they identify in terms of demographic information so that self-identification with the most appropriate group(s) was shared, as demographic information from a form is not always how a person identifies (Patton, 2002). Prior to starting the interview, participants were asked if they had any questions about the informed consent and/or the research and they were reminded about the recording (Creswell, 2007; Patton, 2002; Weiss, 1994). All 26 participants agreed to be recorded and to participate in the interview. Due to the timing of this study and the possible implications from COVID-19, these interviews were conducted using Rutgers University IRB approved virtual communication tools, WebEx and Zoom (25 of the interviews were conducted via WebEx and one interview was conducted via Zoom due to participant
technology issues). Recordings were completed using WebEx/Zoom and the interviewer location for the interviews was a location free from other people, with a shut door, to ensure confidentiality was kept to the upmost degree (Creswell, 2007; Creswell & Plano Clark, 2018; Weiss, 1994). Identifying information was removed from the recording by the interviewee and/or by settings in WebEx/Zoom. Open-ended interview questions and sub-questions were used to allow for graduates to tell their full stories about their experiences (Creswell, 2007; Leavy, 2017; Patton, 2002, Weiss, 1994). Groups of similar topics of questions were communicated to participants during the interview to assist in providing understanding and a pattern of questions (Luker, 2008). The interview style used was conversational to assist in establishing rapport quickly and to help the interview flow while engaging and showing strong listening skills to the participants, so they felt comfortable and listened to (Creswell, 2007; Jones et al., 2014; Patton, 2002; Simons, 2009; Weiss, 1994; Yin, 2014; Yin, 2016). The interview protocol was used to serve as the foundation of the interview, rather than a script (Creswell, 2007; Patton, 2002; Remler & Van Ryzin, 2011). Please see Appendix N for the interview protocol. Probing, or clarifying questions were used to dive deeper into an experience or a response (Patton, 2002; Remler & Van Ryzin, 2011). Interviews were conducted over a two-month period (October and November 2020), after Rutgers University IRB approval was obtained. Note-taking was conducted during the interview to support the interview transcriptions and to provide sign-posts, to capture feelings and non-verbal cues, and to highlight key notes of the interview as it was being completed (Patton, 2002; Simons, 2009; Yin, 2016). After completion of the interview, participants were emailed a $25 Amazon gift card directly from Amazon.com including a thank you message (Appendix O) (Weiss,
The procedure for transcribing, coding and analyzing will be explored in the next section.

Graduates that responded with interest to be considered in part of Round 2 interviews remained on the Round 2 list until the qualitative research reached saturation. Once saturation was reached, those on a Round 2 list were contacted to thank them for their interest in participating and to inform them that the research was complete, and an interview was not necessary (Appendix M).

Data Analysis

Quantitative. The Class of 2018 Outcomes Survey secondary dataset was recoded appropriately to be analyzed using SPSS. The Dependent Variable (DV) of primary outcome status was coded to highlight full-time employment, other employment, continuing education, and still seeking. Although graduates may have more than one of these outcomes concurrently, the survey asked for the primary outcome status so there will not be duplicates in this category. For example, although a graduate may have been attending graduate school and working, the participant selected which was their primary focus, for example work. While NACE (2014), also includes military service and volunteer service, this information was not able to be used, as it could not be provided by Institution X.

Descriptive statistics were used to evaluate the dataset and to communicate the results (Healey, 2012). T-tests, chi squares, one-way ANOVAs and multinomial logistic regression analyses were conducted using SPSS. SPSS was chosen as it is commonly used in social science research and for to accessibility (Darlington & Hayes, 2017). Chi squares were used to evaluate the nominal IVs in relation to the sampling distribution; completed survey, responded to interview request and completed interview (Healey,
2012). Independent samples t-tests were used to determine significance between the means of two groups, GPA and age, in relation to survey/interview response and completion (Healey, 2012). One-way ANOVAs were used to analyze this amount of variance between the DV categories; full-time employment, other employment (i.e. part-time), continuing education and still seeking for primary outcome status of the Class of 2018 at Institution X (Healey, 2012). The logistic regression was used to explain the relationship between a dependent variable (DV) and one or more nominal or ordinal variables (Diez, Barr & Cetinkaya-Rundel, 2014; Healey, 2012). A multinomial logistic regression is a logistic regression with multiple outcomes. In this case, the logistic regressions were explaining the relationship between the DV, primary outcome status, and multiple IVs (Healey, 2012). The data from these analyses were reviewed and the sample sizes were considered. Decisions were made about additional testing to remove variables and/or recode the data (Creswell, 2007).

The IVs included the demographic information that was added through the Institution X Registrar data; ethnicity, gender, GPA and Honors College enrollment (individual level characteristics). The Pearson $r$ was evaluated to determine if the variables give predictions of the impact gender and ethnicity on post-graduation outcome success (Creswell, 2007). An f-test was also used to compare variances (Creswell, 2007). A one-way multivariate analysis of variance was used to determine any differences between groups on the DV (Healey, 2012).

**Qualitative.** The interviews were transcribed using the transcription service, Rev.com. The interview recordings were sent to Rev.com, a paid, approved service to ensure confidentiality, within 72 hours of the interview. Each transcription and interview recording was reviewed by the researcher to ensure the accuracy of the
transcription service (Weaver-Hightower, 2019; Weiss, 1994; Yin, 2016). Adjustments were made as necessary to fix the nonverbal and verbal components of the transcription. Notes were also taken and written by hand, as interviews were conducted. These notes were used to support the interview transcriptions and add where necessary (Patton, 2002; Simon, 2009). For example, if a participant was exhibiting noticeable non-verbal cues, they would be included in the field notes, but not be seen in the transcription of the interview.

Notes and pre-coding were completed to draw attention to key areas of reference that may have served as codes for the data (Saldana, 2009; Yin 2016). Raw data, preliminary codes and final codes were utilized (Patton, 2002; Saldana, 2009). The number of codes varied as the key concepts and ideas were identified, as an objective approach to coding was used (Harper & Kuh, 2007). NVivo was explored as a coding resource, but the researcher decided hand-coding the data was most useful for this research. Nelson et al. (2017) and Saldana (2014), suggest that mastery of qualitative research and coding software is needed to be efficient in the process. The researcher self-taught NVivo but found hand-coding more efficient, as a beginner researcher. After coding was complete, analytic memos were created to reflect on the coding choices that were made, to identify key areas of themes, and to capture thoughts during and after the interview (Saldana, 2009; Weaver-Hightower, 2019; Yin, 2016). A theme is an “outcome of coding, categorization and analytic reflection (Saldana, 2009, p.13).” Once no new categories/themes emerged from the code, saturation was considered to be reached (Creswell, 2007; Glaser & Strauss, 1967). After codes and themes were identified for all 26 interviews, recordings of each interview were destroyed by deleting each interview from the hard drive/computer, in accordance with IRB protocols. Interview participants
were notified that recording of the interviews were destroyed and thanked again for their participation (Appendix P) (Creswell, 2007).

Pre-coding and coding were used to understand the qualitative data in chunks, or segments, allowing for a comprehensive look at the interview responses (Simons, 2009). In addition, coding assisted in developing understanding of the data from individual, career cluster and overall post-graduation outcome perspectives. This data was approached from the ground up to notice patterns and themes (Yin, 2014). Concept mapping assisted in identifying the key themes of the research in the beginning of the analysis. As Simons (2009) describes, this was a very time-consuming process, so this was not completed for every interview. It served as a foundation for coding and once defined, it was used to flush out the concepts identified in the following themes. Data triangulation was used to support key themes and to validate the qualitative research (Patton, 2002; Simons, 2009). These themes were used to build explanations of the lived experience of the Class of 2018 interview participants (Yin, 2014). Methods triangulation was also helpful in providing both qualitative and quantitative validity (Patton, 2002; Yin, 2014).

Limitations

**Limitations to the Data.** By using the Institution X Career Center Outcomes Survey as the data set for this study, the researcher did not have control of data collection. In addition, the data collected in the Class of 2018 Outcomes Survey (Appendices A and B), was not fully provided by the Institution X Career Center due to data reporting issues and missing data. For example, the electronic version of the Class of 2018 Outcomes Survey, which was sent multiple times to the Class of 2018 graduates of Institution X, had over 40 possible response fields. Not all of the questions on the survey were required,
so data on the graduates was expected to have missing data for specific respondents. However, the data received from the Institution X Career Center only provided the responses to 16 questions total. After multiple attempts to retrieve this data, the researcher was unable to gain access to all responses and determined the best course of action was to continue with the datapoints that were shared. The NACE First-Destination Survey guidelines suggest that employment, continuing education, volunteer service, and military service primary outcome status data be collected (NACE, 2014). This information was collected by the Career Center, but volunteer service and military service data was not provided for this research. In addition, data that had originally been considered for this research including how the graduate secured their role/enrollment, use of Career Center resources, transfer status, career goals, position start date, additional offers of employment, job satisfaction, salary and funding information, and comments were not provided for this research. Therefore, these areas could not be explored in the scope of this research. This survey was used as the foundation for this mixed methods research. The limitations in the data were that it was being provided by the institution, including data collection methods and data chosen for sharing are acknowledged. In addition, graduate non-response impacts this research (Fowler, 2009). Race, socioeconomic status and ethnicity are significant in relationship to response and non-response rates (Jang & Vorderstrasse, 2019).

Developing the questionnaire is critical in survey research. To develop the questionnaire, previous well-established, reputable surveys should be used to benchmark the questionnaire after outlining the topics to be covered and fine tuning the wording and placement of the questions (Dillman et al., 2009; Remler & Van Ryzin, 2014). “Crafting good survey questions requires understanding how each component of the question
conveys meaning independently to respondents as well as how all of the parts work together to convey meaning (Dillman et al., 2009, p. 77).” Survey instrument development, data collection processes and survey distribution are all extremely important when conducting survey research (Fowler, 2009). A standardized approach at survey research regarding post-graduation outcomes would allow for uniform comparisons across institutions, to provide national research that organizations like *U.S. News and World Report* and NACE attempt to gather, despite their own limitations. If institutions are creating or using their own measures to evaluate post-graduation student outcomes, concerns arise regarding the soundness of the survey instrument, data collection processes and survey distribution protocols being used.

Survey research can also inherently have issues with validity; face, content, criterion and construct validity (Creswell, 2007; Diez et al., 2014). Validity is the accuracy of a measure. Creswell & Plano Clark (2018), define validity in mixed methods research as “employing strategies that address potential threats to drawing correct inferences and accurate assessments from the integrated data (p. 251).” Construct validity recognizes that constructs exist while face validity concerns recognition (Creswell, 2007). Content validity explores if a study measures what it was intended to. Lastly, criterion validity explores the measurement of how a measure predicts the outcome of a different measure (Diez et al., 2014).

The timing of data collection can also be a limitation to this resource. Some students could have secured a position and/or continuing education acceptance prior to their graduation. If a graduate took the survey in April 2018 and they did not update their survey results, the survey may ultimately report outdated information for that graduate. The qualitative interviews hoped to provide information from respondents about timing
of securing continuing education and/or a job to assist in making this clearer and to account for cultural and gender differences in securing positions and the timing of securing a position.

In addition to the quantitative possible limitations, it is necessary to recognize the possible limitations of qualitative research. Limitations of interviewing include perspectives and articulation of thoughts/opinions of the interviewee, the impact of the researcher bias, and of a researcher on interviewee response (Creswell & Creswell, 2018, Weiss, 1994). To avoid selection bias, participants were selected to participate on a first-come, first-served basis, by career cluster. This created two possible additional limitations. The first was that not all possible participants were able to respond immediately. This could have impacted the responses in the research, as the majority of the participants were very responsive to the interview request email. In addition, socioeconomic status, race and ethnicity have significance in terms of who completes interviews and the responses given (Krysan & Couper, 2003).

Another possible factor of response bias was the delivery of the interview (via WebEx/Zoom). In addition, some of the participants had previously interacted with the researcher through another role. Those participants were not weeded out of the participant sample to avoid selection bias, but this could have attributed to response bias, despite sharing that it was a confidential, safe space to share thoughts during the interview.

Another limitation is the complexity of determining the nature of race and ethnicity in research. While race and ethnicity are some of the most commonly compared demographics, these demographics are complex and often individualized, as experienced in this research (Klass, 2012). A limitation for the Institution X data is that race and
ethnicity, two different ways to identify, were combined in one data measure “ethnicity” in this data set. When interviewed, many of the respondents had varied or more defined ways of identifying their race and/or ethnicity that those represented in the quantitative data. Race and ethnicity are also important in terms of understanding the educational achievement gap and access issues in education (Barnes, 2018; Gumport, 2007; Massey et al., 2003). Klass (2012) highlights the African American disparities in K-12 education, socioeconomic status, wealth, income and concerning parental education. These disparities in the K-12 system are also evident in the higher education system (Barnes, 2018; Gumport, 2007; Massey et al., 2003). We need to recognize the funds of knowledge associated with students of diverse and low-income neighborhoods (Kiyama & Rios-Aguilar, 2018).

Limitations of case study research are also an important consideration. The largest limitation of case study research is that the complexity of the case being explored can often create large amounts of data which result in difficulty processing the data and lengthy reports that stakeholders may not have the time to read (unmanageable level of effort) (Simons, 2009; Yin, 2014). Other limitations include generalizability, representativeness of the case, unclear comparative advantage, and confusion with case studies in the classroom/teaching setting (Yin, 2014). Some researchers view case study research as less rigorous due to unorganized, non-systematic, lackluster previous research. To avoid this perception, a clear case study structure was followed (Yin, 2014).

In addition, it is necessary to recognize the challenges of mixed methods research overall. There are challenges with researcher skills, time, and the idea that mixed methods is a newer kind of research (Creswell & Plano Clark, 2018). The newness of
mixed methods research points to the need for education of colleagues on this type of research (Creswell & Plano Clark, 2018).

**Positionality.** Jones et al. (2014) describe researcher positionality as “acknowledging one’s own identity and sociocultural history on the research process (p. 41).” It is important to consider my personal role as a well-educated, White, middle-class heterosexual, 34-year-old cis-woman. When evaluating race, socioeconomic status and gender it is necessary to explore how your race, experiences and awareness could contribute to, and impact the analysis (Jones et al., 2014). I recognize the privilege I have as a White person in society as a whole and in the academy. This privilege could impact the interaction with participants in this study and my experiences that serve as the foundation for this research. My goal as a researcher was to explore post-graduation outcomes while considering the experiences and stories of all students; not just White students or from a colorblind approach that ultimately contributes to a systemic racism issue in higher education. I see it as my role as a researcher, educator, scholar, feminist, mentor, friend, colleague and family member to tell others’ stories accurately to share their lived experience from their own words to avoid as much bias as possible in this research (Eberhardt, 2019; Jones et al., 2014). Unfortunately, I also recognize that despite my conscious efforts to eliminate bias, bias can never fully be eliminated (Eberhardt, 2019).

I have done work with post-graduation outcomes for almost 10 years, and I have advocated for consistent measurement efforts of this information to truly make this comparable across institutions. As I continue to do this work, I am extremely upset that we are not considering individual characteristics of our students. On one hand, it is a numbers game when considering post-graduation data (meaning we need to have some
way of measuring these outcomes and reporting the return on investment of higher education); on the other hand, people are not numbers and the people we are talking about are the students that I care about and work with every day. As I unpack these emotions, I will also be unpacking the emotions surrounding critical whiteness analysis and higher education. Although seeing students reach their goals is a happy and exciting thing, it is concerning, disheartening, and infuriating to think about the systematic oppression that surrounds something that could be much more transparent.

Also, since post-graduation outcomes conversations are a large part of my professional position, others’ expectations may or may not agree with my thoughts, feelings and opinions. I recognize that I am challenging the status quo and providing insights to changes that may not be perceived well in the field. This is something I grappled with as I wrote this dissertation and hopefully as I adapt it in the future for publications.

**Reflexivity.** As a researcher it is important to recognize one’s own role in the research and the power that role may have in the research process (Creswell, 2007; Creswell & Creswell, 2018; Leavy, 2017, Patton, 2002; Simons, 2009). I have been a career development professional for approximately 12 years in career counseling, employer relations, and leadership roles. The past five years, I have served as a Career Counselor in the Institution X Career Center, working with undergraduate BA in Business Administration students and BSNs, as well as all graduate students. The benefits to my role include my extensive knowledge of career development and the job/graduate school process, post-graduation outcomes information, and policies at Institution X. Also, I care about my data, the success of my students, and supporting students of diverse backgrounds and identities (Yin, 2016).
My role as a Career Counselor at Institution X, could also provide some challenges to the analysis, since the I am so close to the subject. I am very passionate about assisting students to identify their career goals, to work toward those goals and to find successful outcomes upon graduation. In addition, a recent alumnus may or may not want to talk to a Career Center professional about their searching experience and/or could feel power relations (Jones et al., 2018). In addition, past experiences could have potentially impacted the interpretation of data and/or themes in this research (Creswell & Creswell, 2018). I have been trained in the skills needed to complete the study and find my experience as a career development professional and as a novice researcher an overall benefit to this work due to the unique intersections of these experiences, my passion for the field/topic, and my desire to do the research by proper protocols and standards.

**Summary**

The current literature on post-graduation outcomes is predominantly studied using a single methodological approach as either phenomenological research, case study research or survey research. I continue with the case study approach, but extend it through using quantitative (secondary data from a survey) and qualitative (interviews) data to draw better conclusions. Race and gender have been explored in contexts of post-graduation outcomes, but not regarding a graduating class of a specific institution or through national reporting methods. This pragmatic, case study research explored the unique period between graduation and one year after graduation to determine if race, ethnicity and gender were significant predictors of post-graduate student outcomes for the Class of 2018 at Institution X, the binded case (Yin, 2014).

A mixed methods approach to the exploration of post-graduation student outcomes, using pragmatism as a methodological framework, allowed for post-graduation
outcomes to be studied both by depth (qualitative) and breadth (quantitative) (Creswell, 2007; Patton, 2002; Saleem et al., 2016). This methodological framework avoided a narrow, one-sided approach to conceptual framework. Instead, the intended purpose, methods, resources and approach are evaluated by the scholarly community through the specific context of the work. It allowed for the researcher to ask the pertinent questions for this study from a practical rather than theoretical approach (Patton, 2002). The "what," “why,” and "how” of post-graduation outcomes for college students allowed for a more analytical and in-depth analysis of the searching process through a combination of case study research and survey research (Creswell, 2007, p. 23; Yin, 2014, p.14).

The quantitative data assisted the researcher in understanding the post-graduation outcomes of an entire graduating class, the Class of 2018 at Institution X. This allowed for a “wide range of data from a large number of students (participants)” (Leavy, 2017, p.19). This wide range of data provided the opportunity to look at a representative sample and to draw statistically significant conclusions from that data (Creswell, 2007; Lowhorn, 2007). When using quantitative data, it allows for anonymity, which could increase participation (Leavy, 2017). However, using a large dataset was restrictive in terms of the amount of options that a participant could share and the context in which is it was shared (Creswell, 2007; Leavy, 2017). This quantitative, or administrative data, posed a challenge due to the fact that it’s initial data collection, by Institution X, was not conducted for the purpose of this research. Therefore, the researcher did not have input on the data collection process (Connelly et al., 2016).

Using qualitative data allowed for the context and wide variety of responses through open-ended questions. The open-ended questions allowed for the interview questions to connect directly to this research, made research (Connelly et al., 2016). This
“rich data with descriptions examples” (Leavy, 2017, p.19) provided an opportunity to hear the voices in the searching process of a wide representation of a graduating class. However, the depth of the responses did not allow for generalizability due to the small number of interviews conducted. Mixed methods research was the best way to approach this study to provide statistically significant conclusions as well as the participant voice/story. Understanding the administrative (quantitative) data required the researcher exploring the why/how of the data that was collected by Institution X through the Class of 2018 Outcomes Survey (Connelly et al., 2016). This helped to also set the stage for understanding what data was needed and what to ask in the qualitative (made) data.

When traditionally looking at post-graduation outcomes the emphasis is on the aggregate numbers of post-graduation success. This success is defined by the ability to find a job and/or enroll in continuing education. However, there is a much bigger story to be told. Individual interviews to understand that individuals’ bracketed experience helped to determine the graduates’ experiences in the searching process, and their perceptions of this process. The larger experience, experienced by many of these graduates, helped to determine awareness and perceptions of searching on a larger scale and to share successes and needs for improvement for assisting graduates/students with providing knowledge and access to the internship process, as higher education professionals (Creswell, 2007). We can go beyond the simple question, “did the student get a job? or not?”, asked of most students in higher education institutions, and evaluate how students find their post-graduation opportunity(ies), successes and barriers to those processes, and determine action items to assist future students in navigating their search.
Chapter 4: Results

The purpose of this research was to understand the post-graduation outcomes of college students at a small, Research intensive institution, Institution X, overall and in terms of gender and ethnicity. This mixed methods research utilized chi squares, t-tests and one-way ANOVAs to determine if there was a relationship between the dependent variable (DV), primary outcome status (i.e. if the graduate was employed full-time, employed part-time (other employment), enrolled in continuing education or seeking employment after graduation), and the independent variables (IVs), or predictive variables, at the time that the survey was completed. Multinomial logistic regressions explored the relationships between post-graduation outcomes of recent college graduates from the Class of 2018 graduating class at Institution X and the predictive variables. The relationship of predictive values including (a) gender, (b) ethnicity (race and ethnicity combined), (c) age, (d) degree completion date and (e) major on the post-graduation outcomes is found in this chapter. In addition, interviews were completed with 26 participants from this Class of 2018 graduating class at Institution X to lend the student voice to the searching (job and graduate school/continuing education) process. This mixed methods approach adds breadth and depth to the post-graduation outcomes at Institution X (Creswell, 2007; Patton, 2002; Saleem et al., 2016).

The overview of the quantitative and qualitative methods for this research was described in Chapter 3: Data and Methods. Overall, the Class of 2018 at Institution X consisted of 1,375 graduates, finishing from August 2017 to May 2018 (i.e. the Class of 2018). All 1,375 graduates were surveyed by the Career Center at Institution X via email and paper survey, at multiple points in time after graduation. Institution X was not able to provide information about the total response rate. This secondary dataset did provide the
knowledge rate (i.e. the combined survey responses and Career Center staff outcome findings for the remaining graduates that had not yet responded, on social media including LinkedIn) (NACE, 2014). The Institution X knowledge rate was N=632 for the Class of 2018 graduates. These 632 Class of 2018 graduates were analyzed using, t-tests, chi squares, one-way ANOVAs and multinomial logistic regressions. The 632 knowledge rate respondents were also compared with the overall 1,375 graduating class.

The 1,375 graduates of the Class of 2018 at Institution X were also emailed by the Career Center regarding the opportunity to participate in a 30-45-minute interview. Interested graduates responded directly to the researcher if they wanted to participate. Participants were selected on a first-come, first-served basis, based on career cluster (i.e. a group of majors), by the researcher as the responses were received. The target for each career cluster was approximately five interviews, until the career cluster reached saturation. The four career clusters utilized in this research were Arts and Liberal Arts, Business, Public and Human Services, and STEM. This resulted in 26 interviews for a total of 4 career cluster groups.

The following research questions were examined in this study:

RQ1. Do undergraduate students of Institution X find employment and/or enroll in graduate school within a year after graduation?

RQ2. What barriers do Institution X recent undergraduate alumni face when seeking employment and/or graduate school enrollment opportunities after graduation?

RQ3. How can Career Centers decrease the barriers that recent undergraduate alumni face in seeking employment and/or graduate school enrollment post-graduation?

RQ4. How do the post-graduation employment and/or graduate school enrollment
rates differ by gender and across diverse populations for undergraduate Class of 2018 alumni at Institution X, if at all?

RQ1 and RQ4 were examined through quantitative research. All four research questions (RQ1, RQ2, RQ3, and RQ4) were examined through qualitative research. The results from this research was divided into quantitative results followed by qualitative results. In addition, in this chapter, the results will be explored combining the quantitative and qualitative research. This chapter integrates both the qualitative (words) and quantitative (numbers) results of this research (Creswell & Plano Clark, 2018).

Quantitative Results

The Career Center at Institution X provided a master list of graduates from the Class of 2018 that included demographic information and three Class of 2018 Outcomes Survey data reports that were divided by school at the institution. These spreadsheets were combined using the ID number as a unique identifier. The demographic information was part of the data in the full Class of 2018 Outcomes Survey data file.

Descriptive Statistics. The descriptive statistics for this data are found in Tables 2 and 3.

Table 2

*Descriptive Statistics- Scale Independent Variables*

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<td>GPA</td>
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Table 3

Descriptive Statistics- Nominal Independent Variables

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<th>Independent Variable (IV)</th>
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<th>%</th>
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</thead>
<tbody>
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</tbody>
</table>

Table 2 and Table 3 show the demographic and educational information for the 1,375 Class of 2018 graduates from Institution X. The average age of Class of 2018 graduates at Institution X is M=29.5. The GPA (M=3.3) of these graduates is considered a B (almost a B+) at Institution X, as they do not include A- as part of the grading scale (Institution X, n.d.b). When looking at the frequencies of this dataset, it is important to mention that the gender IV is based on the full 1,375 Class of 2018 graduates, but due to missing data (N=9), ethnicity is based on 1,366 graduates. In addition, the ethnicity IV (which includes both race and ethnicity at Institution X) had two groups with small sample sizes: Hawaiian/Pacific Islander (N=2) and Unknown (N=14). Due to the small
sample sizes of these groups, they were removed from analyses including ethnicity as a variable.

Table 4

Descriptive Statistics - Dependent Variable

<table>
<thead>
<tr>
<th>Dependent Variable (DV)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Outcome Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Time Job</td>
<td>431</td>
<td>68.2</td>
</tr>
<tr>
<td>Part-Time Job</td>
<td>25</td>
<td>4.0</td>
</tr>
<tr>
<td>School</td>
<td>154</td>
<td>24.4</td>
</tr>
<tr>
<td>Seeking Employment</td>
<td>22</td>
<td>3.5</td>
</tr>
</tbody>
</table>

The 1,375 graduates of the Class of 2018 were surveyed multiple times to capture self-reported data from the *Class of 2018 Outcomes Survey*, distributed by the Career Center at Institution X. Table 4 describes this self-reported survey data combined with data acquired by the Institution X Career Center, known as the Knowledge Rate of the *Class of 2018 Outcomes Survey*. The survey included options for primary outcome status to include military service, volunteer service (i.e. AmeriCorps, mission work), and not seeking employment and/or graduate/professional school. The Career Center at Institution X collected the data for these categories, but they did not share this for the purpose of this research. A total number of 743 graduates did not respond to the survey or had missing data for this reason. Therefore, the total graduates counted in the Knowledge Rate is N=632. The DV included two small groups: part-time job (or other employment) (N=25) and seeking employment (N=22). Since these groups are key areas for analysis of post-graduation outcomes, they were included in further analyses, despite their small sample sizes.

T-Tests. T-Tests were used to compare the means of the IVs in order to determine any characteristic differences between respondents and non-respondents. Tables 5-7
describe the multiple t-tests used to determine significance.

Table 5

*Independent Samples T-Test for DV- Completed Survey*

<table>
<thead>
<tr>
<th>Completed Survey</th>
<th>N</th>
<th>M(SD) Complete</th>
<th>M(SD) Not Complete</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
<td>639</td>
<td>3.40 (0.44)</td>
<td>3.26 (0.46)</td>
<td>-5.68</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age</td>
<td>639</td>
<td>29.04 (6.64)</td>
<td>29.95 (7.65)</td>
<td>2.37</td>
<td>0.018</td>
</tr>
</tbody>
</table>

Table 6

*Independent Samples T-Test for DV- Responded to Interview Request*

<table>
<thead>
<tr>
<th>Responded to Interview Request</th>
<th>N</th>
<th>M(SD) Response</th>
<th>M(SD) No Response</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
<td>89</td>
<td>3.47 (0.43)</td>
<td>3.31 (0.45)</td>
<td>-3.35</td>
<td>0.001</td>
</tr>
<tr>
<td>Age</td>
<td>89</td>
<td>29.20 (6.82)</td>
<td>29.55 (7.24)</td>
<td>0.46</td>
<td>0.646</td>
</tr>
</tbody>
</table>

Table 7

*Independent Samples T-Test for DV- Interview Completed*

<table>
<thead>
<tr>
<th>Interview Completed</th>
<th>N</th>
<th>M(SD) Complete</th>
<th>M(SD) Not Complete</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
<td>26</td>
<td>3.47 (0.38)</td>
<td>3.32 (0.45)</td>
<td>-2.0</td>
<td>0.056</td>
</tr>
<tr>
<td>Age</td>
<td>26</td>
<td>28.46 (7.60)</td>
<td>29.55 (7.21)</td>
<td>0.72</td>
<td>0.477</td>
</tr>
</tbody>
</table>

Due to the nature of survey data and interview requests/completion it was not possible to avoid an unbalanced research design. As expected, the largest amount of respondents was found in survey completion (N=632). Eight-nine Class of 2018 graduates responded to requests to participate in interviews (N=89). Twenty-six interviews were completed (N=26). This unbalanced research design could have resulted in an increase likelihood of type 2 errors. For this reason, Welch’s t-test was used to
report the $t$ and $p$ values for survey completion, interview participation response, and interview completion.

Age and GPA were significant in relation to survey completion, $t(df)=-5.68(639)$, $p<.001$ and $t(df)=2.37(639)$, $p=.018$. Those who completed the survey had a higher mean GPA and lower mean age than those who did not. There was also a higher GPA in those who responded to the interview request invitation, $t(df)=-3.35(89)$, $p=.001$. No significant difference was found between those who did and did not complete interviews. However, it is worth noting that GPA is just outside of the significance level; $t(df)= 3.47(26)$, $p=.056$.

**Chi Squares.** Twenty Chi Square Tests for Independence were conducted to determine significance. Gender, major, graduation date, and veteran status had the same about of data points ($N=1,375$). Ethnicity had less data points ($N=1,350$). Although there were different datasets in this analysis, chi square accounts for differences in sample sizes so no adjustments were needed. Table 8 condenses the 20 Chi Squares to one table of key statistics.

**Table 8**

*Chi Square Tests for Independence*

<table>
<thead>
<tr>
<th>IV</th>
<th>N</th>
<th>Primary Outcome Status</th>
<th>Survey Completed</th>
<th>Responded to Interview</th>
<th>Interview Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1375</td>
<td>$\chi^2$ 16.831</td>
<td>$p$ 0.001</td>
<td>$\chi^2$ 0.519</td>
<td>$p$ 0.471</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>1350</td>
<td>$\chi^2$ 9.532</td>
<td>$p$ 0.848</td>
<td>$\chi^2$ 15.781</td>
<td>$p$ 0.007</td>
</tr>
<tr>
<td>Major</td>
<td>1375</td>
<td>$\chi^2$ 134.084</td>
<td>$p$ &lt;0.001</td>
<td>$\chi^2$ 54.425</td>
<td>$p$ &lt;0.001</td>
</tr>
<tr>
<td>Graduation Date</td>
<td>1375</td>
<td>$\chi^2$ 15.800</td>
<td>$p$ 0.015</td>
<td>$\chi^2$ 0.606</td>
<td>$p$ 0.739</td>
</tr>
<tr>
<td>Veteran Status</td>
<td>1375</td>
<td>$\chi^2$ 3.584</td>
<td>$p$ 0.058</td>
<td>$\chi^2$ 0.079</td>
<td>$p$ 0.778</td>
</tr>
</tbody>
</table>

Chi squares for Gender, Ethnicity, Major, Graduation Date, and Veteran Status are shown in the table. The significance levels are indicated with $p$ values ranging from 0.001 to 0.007, indicating strong statistical significance.
Ethnicity was associated with survey completion chi-squared(df)=15.781(5), p=.007 (p=0.007). Graduates that identified as Asian or White were more likely to complete the survey, and Black and Hispanic graduates were less likely to complete the survey.

Major was associated with survey completion, chi-squared(df)=59.425(3), p<.001, and with responding to interview requests chi-squared(df)=12.198(3), p=0.007, but not with interview completion. Business majors were more likely to complete the survey than Arts and Liberal Arts, Public and Human Services, and STEM majors. STEM majors were also less likely to respond to interview requests.

Major was also associated with primary outcome status, chi-squared (df)=134.084(9), p<0.001. Business majors were more likely to have a full-time job and less likely to enroll in continuing education. Arts and Liberal Arts and Public and Human Services graduates were less likely to have a full-time job and more likely to enroll in graduate/professional school.

Gender was also associated with primary outcome status, chi-squared(df)=16.831(3), p=0.001. Females were less likely to have a full-time job and more likely to have a part-time job (other employment) or enroll in graduate school. Males were more likely to have a full-time job as the primary outcome status and were more likely to be seeking employment.

Graduation date was also associated with primary outcome status, chi-squared(df)=15.800(6), p=0.015. Graduates from August 2017 and January 2018 were more likely to have full-time jobs, and May 2018 graduates were more likely to enroll in graduate school.
ANOVA. The scale IVs were explored using one-way ANOVA. Table 9 provides information on the significance of age and GPA.

Table 9

One-Way ANOVA

<table>
<thead>
<tr>
<th>Category</th>
<th>Full-Time</th>
<th>Part-Time</th>
<th>School</th>
<th>Seeking</th>
</tr>
</thead>
<tbody>
<tr>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>28.98(6.50)</td>
<td>31.32(8.29)</td>
<td>28.51(6.41)</td>
<td>31.91 (8.85)</td>
</tr>
<tr>
<td>GPA</td>
<td>3.34(0.44)</td>
<td>3.42(0.40)</td>
<td>3.53(0.40)</td>
<td>3.44(0.45)</td>
</tr>
<tr>
<td>F</td>
<td>2.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.046</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPA</td>
<td>6.97</td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Outcome status was varied by GPA and age. The result of the ANOVA for age, F(df1,df2)=2.68(3,628), p=0.046, indicated that there was a difference among the groups, but a Tukey post hoc test revealed no significant pairwise differences. GPA, F(df1,df2)=6.97(3,68), p<.001 was found to indicate a difference between groups for full-time job and continuing education. The post hoc test also showed that graduates with a full-time job had GPAs that were significantly lower than graduates enrolled in continuing education.

Multinomial Logistic Regressions. The dummy-coding for these regressions can be found in Table 10. The coding for the nominal IVs used in the regression can be found in Table 11.

Table 10

Dummy-Coded Variables Used in Regression Models

<table>
<thead>
<tr>
<th>Category</th>
<th>Dummy Variable</th>
<th>Reference Variable</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome</td>
<td>Part-Time Job School</td>
<td>Full-Time Job</td>
<td>1= Full-Time Job</td>
</tr>
<tr>
<td></td>
<td>Still Seeking</td>
<td></td>
<td>2= Part-Time Job</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3= School</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4= Seeking Employment</td>
</tr>
</tbody>
</table>
Table 11

Nominal Independent Variable Coding Used in Regression Models

<table>
<thead>
<tr>
<th>Category</th>
<th>Variable</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>0= Female</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>1= Male</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Asian</td>
<td>1= Asian</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>2=Black</td>
</tr>
<tr>
<td></td>
<td>Hawaiian/PI</td>
<td>3=Hawaiian/PI</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>4= Hispanic</td>
</tr>
<tr>
<td></td>
<td>Multiple</td>
<td>5= Multiple</td>
</tr>
<tr>
<td></td>
<td>Puerto Rican</td>
<td>6= Puerto Rican</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>7= White</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>8= Unknown</td>
</tr>
<tr>
<td>Major</td>
<td>Arts &amp; Liberal Arts</td>
<td>1= Arts &amp; Liberal Arts</td>
</tr>
<tr>
<td></td>
<td>Business</td>
<td>2= Public &amp; Human Services</td>
</tr>
<tr>
<td></td>
<td>Public &amp; Human Services</td>
<td>3= Business</td>
</tr>
<tr>
<td></td>
<td>STEM</td>
<td>4= STEM</td>
</tr>
</tbody>
</table>

A total of four multinomial logistic regressions were conducted. Two of the four are detailed in Tables 12 and 13. The multinomial regression for Table 12 (Model 1) was conducted using primary outcome status as the DV with IVs of gender, ethnicity, GPA and age. The DV, primary outcome status, began by including full-time employment, other employment, continuing education and still seeking. Sample size was considered when interpreting results for the multinomial regressions, to ensure that sample sizes were not less than 10. The smallest sample size used for this research was 22 (N=22).
Table 12

*Multinomial Logistic Regression - Primary Outcome Status - Model 1*

<table>
<thead>
<tr>
<th>Independent Variables (IVs)</th>
<th>Part-Time Job</th>
<th>School</th>
<th>Seeking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>P</td>
<td>χ²</td>
</tr>
<tr>
<td>Intercept</td>
<td>-4.41</td>
<td>0.018</td>
<td>56.76</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td>-1.11</td>
<td>0.034</td>
<td>-</td>
</tr>
<tr>
<td>GPA</td>
<td>0.21</td>
<td>0.678</td>
<td>-</td>
</tr>
<tr>
<td>Age</td>
<td>0.04</td>
<td>0.117</td>
<td>-</td>
</tr>
<tr>
<td>Ethnicity (White)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>0.30</td>
<td>0.649</td>
<td>-</td>
</tr>
<tr>
<td>Black</td>
<td>-0.20</td>
<td>0.749</td>
<td>-</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-0.36</td>
<td>0.737</td>
<td>-</td>
</tr>
<tr>
<td>Multiple</td>
<td>0.33</td>
<td>0.767</td>
<td>-</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>-0.11</td>
<td>0.919</td>
<td>-</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>0.34</td>
<td>0.269</td>
<td>-</td>
</tr>
<tr>
<td>Black</td>
<td>0.63</td>
<td>0.027</td>
<td>-</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-0.06</td>
<td>0.898</td>
<td>-</td>
</tr>
<tr>
<td>Multiple</td>
<td>0.87</td>
<td>0.097</td>
<td>-</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>0.75</td>
<td>0.071</td>
<td>-</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>0.38</td>
<td>0.567</td>
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</tr>
<tr>
<td>Black</td>
<td>-1.29</td>
<td>0.232</td>
<td>-</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.68</td>
<td>0.398</td>
<td>-</td>
</tr>
<tr>
<td>Multiple</td>
<td>0.89</td>
<td>0.424</td>
<td>-</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>0.18</td>
<td>0.864</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note: Model 1 Reference categories: Gender Female, Ethnicity White, Full-Time Job*
Table 13

Multinomial Logistic Regression - Primary Outcome Status - Model 4

<table>
<thead>
<tr>
<th>Independent Variables (IVs)</th>
<th>B</th>
<th>P</th>
<th>$\chi^2$</th>
<th>R²</th>
<th>p(model)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part-Time Job</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>-19.98</td>
<td>&lt;0.001</td>
<td>181.69</td>
<td>0.25</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>GPA</td>
<td>0.17</td>
<td>0.74</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Age</td>
<td>0.03</td>
<td>0.19</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Graduation Date</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-18</td>
<td>16.93</td>
<td>&lt;0.001</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>May-18</td>
<td>16.99</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public &amp; HS</td>
<td>-1.53</td>
<td>0.036</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Business</td>
<td>-2.15</td>
<td>0.001</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>STEM</td>
<td>-1.06</td>
<td>0.050</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>School</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>-2.57</td>
<td>0.02</td>
<td>181.69</td>
<td>0.25</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>GPA</td>
<td>0.87</td>
<td>0.001</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Age</td>
<td>-0.03</td>
<td>0.088</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Graduation Date</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-18</td>
<td>-0.72</td>
<td>0.118</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>May-18</td>
<td>0.04</td>
<td>0.927</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public &amp; HS</td>
<td>0.73</td>
<td>0.035</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Business</td>
<td>-2.61</td>
<td>0.000</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>STEM</td>
<td>-0.41</td>
<td>0.225</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Seeking</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>-7.74</td>
<td>0.002</td>
<td>181.69</td>
<td>0.25</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>GPA</td>
<td>0.60</td>
<td>0.277</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Age</td>
<td>0.05</td>
<td>0.035</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Graduation Date</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-18</td>
<td>0.16</td>
<td>0.889</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>May-18</td>
<td>0.45</td>
<td>0.677</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public &amp; HS</td>
<td>0.17</td>
<td>0.891</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Business</td>
<td>1.20</td>
<td>0.266</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>STEM</td>
<td>0.22</td>
<td>0.853</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: Model 4 Reference categories: Graduation Date August 2017, Major Arts & Liberal Arts, Full-Time Job
Ethnicity was removed for Model 2 because it was not found to be significant in Model 1. Model 2 included IVs of gender, ethnicity, GPA and age. IVs graduation date and major were added for Model 3 to the IVs in Model 2. Gender was no longer significant after adding major. This is likely due to multicollinearity between gender and major, as gender is also associated with major. For this reason, gender was removed from the final model, Model 4 found in Table 13. Model 4 included IVs of GPA, age, graduation date and major in relation to the DV primary outcome status. There was a decrease in the $R^2$ from Model 3 to Model 4, but on such a small margin that the conclusion was that the multinomial logistic regression in Model 4 was stronger without gender.

Model 4 of the multinomial logistic regressions showed significance for each of the IVs, GPA, age, graduation date and major in relation to primary outcome status. Graduates from January 2018 were much more likely to have a full-time job than part-time job (other employment). Arts and Liberal Arts graduates are most likely to have a full-time job when in the context of GPA, age and graduation date. Public and Human Services majors are more likely to have full-time jobs than part-time jobs.

**Qualitative Results**

The recruitment emails, drafted by the researcher, were shared with the Institution X Career Center for distribution to the 1,375 graduates of the Class of 2018. Eighty-nine graduates expressed interest in completing the interview. Participants were selected first-come, first-served by major/career cluster to provide a structured random sample. Twenty-six interviews were completed. Information about the participants of these interviews can be found in Table 14. Please note that pseudonyms are used for the
qualitative results in this section to maintain confidentiality of the participants (Jones et al., 2014).

**Table 14**

**Participant Information by Name**

<table>
<thead>
<tr>
<th>Name</th>
<th>Gender</th>
<th>Race</th>
<th>Ethnicity</th>
<th>SES</th>
<th>Grad Date</th>
<th>Major</th>
<th>Career Cluster</th>
<th>Primary Outcome Status</th>
<th>Survey Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaliyah</td>
<td>Female</td>
<td>African American</td>
<td>Black; American</td>
<td>Lower</td>
<td>Jan-18</td>
<td>Psychology &amp; Art</td>
<td>Public &amp; Human Services</td>
<td>FT Job</td>
<td>None</td>
</tr>
<tr>
<td>Bushra</td>
<td>Female</td>
<td>Pakistani American</td>
<td>Non-White</td>
<td>Middle</td>
<td>May-18</td>
<td>Biology (BSDO)</td>
<td>STEM</td>
<td>FT Graduate School</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Camille</td>
<td>Female</td>
<td>African American</td>
<td>African American</td>
<td>Lower/ Middle</td>
<td>May-18</td>
<td>Childhood Studies</td>
<td>Public &amp; Human Services</td>
<td>PT Jobs (Multiple)</td>
<td>None</td>
</tr>
<tr>
<td>Dylan</td>
<td>Male</td>
<td>White</td>
<td>Non-Hispanic</td>
<td>Middle</td>
<td>Jan-18</td>
<td>Marketing</td>
<td>Business</td>
<td>FT Job</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Emma</td>
<td>Female</td>
<td>African American</td>
<td>Black; African American</td>
<td>Lower/ Middle</td>
<td>May-18</td>
<td>Social Work</td>
<td>Public &amp; Human Services</td>
<td>FT Graduate School; FT Job</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Fang</td>
<td>Female</td>
<td>Asian; South Asian</td>
<td>American</td>
<td>Middle</td>
<td>May-18</td>
<td>Self-Declared Major</td>
<td>Arts &amp; Liberal Arts</td>
<td>FT Job</td>
<td>None</td>
</tr>
<tr>
<td>Gianna</td>
<td>Female</td>
<td>Caucasian</td>
<td>Russian; Jewish</td>
<td>Middle</td>
<td>May-18</td>
<td>Psychology</td>
<td>Public &amp; Human Services</td>
<td>FT Graduate School; PT Jobs</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Hunter</td>
<td>Male</td>
<td>White</td>
<td>Irish</td>
<td>Lower</td>
<td>May-18</td>
<td>Finance</td>
<td>Business</td>
<td>Seeking Job</td>
<td>Consistent</td>
</tr>
<tr>
<td>Ian</td>
<td>Male</td>
<td>White</td>
<td>White; Non-Hispanic</td>
<td>Middle</td>
<td>Aug-17</td>
<td>Economics</td>
<td>Public &amp; Human Services</td>
<td>FT Job</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Jasmine</td>
<td>Female</td>
<td>White</td>
<td>Non-Hispanic</td>
<td>Middle</td>
<td>May-18</td>
<td>Nursing-Accelerated</td>
<td>STEM</td>
<td>FT Job</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Katalina</td>
<td>Female</td>
<td>White</td>
<td>Mixed; Italian</td>
<td>Middle</td>
<td>May-18</td>
<td>English &amp; Digital Studies</td>
<td>Arts &amp; Liberal Arts</td>
<td>Post-Graduate Internship</td>
<td>None</td>
</tr>
<tr>
<td>Lynette</td>
<td>Female</td>
<td>Black</td>
<td>Nigerian American</td>
<td>Lower</td>
<td>May-18</td>
<td>Biology</td>
<td>STEM</td>
<td>PT Jobs (Multiple)</td>
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</table>
### Table 14

*Continued.*

<table>
<thead>
<tr>
<th>Name</th>
<th>Gender</th>
<th>Race/Ethnicity</th>
<th>Marital Status</th>
<th>Age</th>
<th>Major</th>
<th>Consistent</th>
<th>FT Job Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael</td>
<td>Male</td>
<td>White</td>
<td>White; Italian</td>
<td>Upper/ Middle</td>
<td>Computer Science</td>
<td>STEM</td>
<td>FT Job</td>
</tr>
<tr>
<td>Natalie</td>
<td>Female</td>
<td>Black</td>
<td>Non-Hispanic</td>
<td>Middle</td>
<td>Health Sciences</td>
<td>STEM</td>
<td>Post-Graduate Internship</td>
</tr>
<tr>
<td>Olivia</td>
<td>Female</td>
<td>African American</td>
<td>Black</td>
<td>Lower/ Middle</td>
<td>Nursing</td>
<td>STEM</td>
<td>FT Job</td>
</tr>
<tr>
<td>Parker</td>
<td>Male</td>
<td>White</td>
<td>Jewish</td>
<td>Lower/ Middle</td>
<td>Biology</td>
<td>STEM</td>
<td>FT Job</td>
</tr>
<tr>
<td>Quinn</td>
<td>Female</td>
<td>White</td>
<td>None</td>
<td>&quot;Not great&quot;</td>
<td>&quot;Not great&quot;</td>
<td>&quot;Not great&quot;</td>
<td>FT Job</td>
</tr>
<tr>
<td>Ryan</td>
<td>Male</td>
<td>Caucasian</td>
<td>White</td>
<td>Middle</td>
<td>Accounting &amp; Finance</td>
<td>Business</td>
<td>FT Job</td>
</tr>
<tr>
<td>Serena</td>
<td>Female</td>
<td>African American</td>
<td>African American</td>
<td>Middle</td>
<td>Management</td>
<td>Business</td>
<td>FT Job</td>
</tr>
<tr>
<td>Travis</td>
<td>Male</td>
<td>African American</td>
<td>Black</td>
<td>Lower</td>
<td>Africana Studies</td>
<td>Arts &amp; Liberal Arts</td>
<td>Entrepreneurship</td>
</tr>
<tr>
<td>Ursula</td>
<td>Female</td>
<td>Caucasian</td>
<td>Non-Hispanic</td>
<td>Middle</td>
<td>Business Admin</td>
<td>Business</td>
<td>FT Job; PT Graduate School</td>
</tr>
<tr>
<td>Vincent</td>
<td>Male</td>
<td>&quot;Super White&quot;</td>
<td>&quot;Super White&quot;</td>
<td>Middle</td>
<td>Criminal Justice</td>
<td>Arts &amp; Liberal Arts</td>
<td>FT Job</td>
</tr>
<tr>
<td>Wade</td>
<td>Male</td>
<td>Caucasian</td>
<td>Caucasian</td>
<td>Lower/ Middle</td>
<td>Political Science</td>
<td>Arts &amp; Liberal Arts</td>
<td>FT Post-Graduate Internship</td>
</tr>
<tr>
<td>Xia</td>
<td>Female</td>
<td>White</td>
<td>Italian; Latina</td>
<td>Lower/ Middle</td>
<td>Sociology</td>
<td>Arts &amp; Liberal Arts</td>
<td>FT Job</td>
</tr>
<tr>
<td>Yasmine</td>
<td>Female</td>
<td>Egyptian American</td>
<td>Non-White; MENA</td>
<td>Lower/ Middle</td>
<td>Religion &amp; Health Sciences</td>
<td>STEM</td>
<td>PT Jobs (Multiple)</td>
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<tr>
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<td>Male</td>
<td>White</td>
<td>Italian</td>
<td>Upper/ Middle</td>
<td>History &amp; Teacher Prep</td>
<td>Arts &amp; Liberal Arts</td>
<td>FT Job</td>
</tr>
</tbody>
</table>

Sixteen of the 26 participants (61.5%) identified as female. This is comparable to the overall female population of Institution X, 60%. When asked “How do you describe your racial identity?,” 15 participants (57.7%) identified as Caucasian or White, 8 participants (30.8%) identified as African American or Black, one participant (3.8%)
identified as Pakistani American, one participant (3.8%) identified as Asian/South Asian, and one participant (3.8%) identified as Egyptian American. When asked “How do you describe your ethnic identity?,” eight participants (30.8%) identified as Caucasian, White and/or non-Hispanic; seven participants (26.9%) identified as Black, African American, Black American and/or Nigerian American; two participants (7.7%) identified as Italian; two participants (7.7%) identified as mixed and/or multiple ethnicities including Italian (i.e. Mixed and Italian; Italian and Latina). One participant identified as each of the following (3.8% for each ethnicity): Pakistani American; American; Russian and Jewish; Irish; Jewish; non-White, MENA; and none.

Participants also identified their socio-economic status (SES). Each participant was asked "How do you describe your socioeconomic status?" to allow participants to describe their SES in whatever way they felt most comfortable; some described their SES by class and others by quality of life. Many participants had questions about how to answer this question, so a list of possible options were provided in these cases. The participants were also told there is no wrong way to describe their SES to allow for candid responses. Participants were asked to clarify their current SES. Some provided their SES as a child and their present SES. Twelve participants (46.2%) identified as middle-class, seven participants (26.9%) identified as lower/middle-class, five participants (19.2%) identified as lower class or “not great,” two participants (7.7%) identified as upper/middle-class. Four of the participants (15.4%) graduated with their undergraduate degree in August 2017 and three participants (11.5%) graduated in January 2018. The majority of graduates, 19 participants (73.1%), finished their programs in May 2018. After graduation, 13 participants (50%) secured full-time employment, three participants (11.5%) secured multiple part-time jobs at once, and three participants
(11.5%) secured post-graduate internships. Two participants (7.7%) began full-time graduate school, and three participants (11.5%) balanced a full-time job while attending graduate school. One participant (3.8%) balanced a full-time job and their own non-profit organization. One participant (3.8%) was seeking a job for over a year after graduation. Interviews were conducted with participants that responded to the recruitment email independent of survey completion.

Fifteen interview participants (57.7%) had also completed the *Class of 2018 Outcomes Survey*. Of those that completed the survey and participated in the interview, eight participants (53.3%) reported a consistent primary outcome status on the survey and in the interview, while seven participants (46.7%) reported inconsistency between the survey response and the interview (i.e. part-time/full-time job status was different; job was listed instead of post-graduate internship; reported one of two outcome statuses; and had employment but noted seeking employment, while employed). Eleven participants (42.3%) had not provided primary outcome status until the completion of the interview (i.e. the participants did not complete the *Class of 2018 Outcomes Survey*).

Table 15 shares another perspective of this information, grouped by career cluster and then primary outcomes status.
### Table 15

**Participant Information by Major/Career Cluster**

<table>
<thead>
<tr>
<th>Career Cluster</th>
<th>Name</th>
<th>Primary Outcome Status</th>
<th>Gender</th>
<th>Race</th>
<th>Ethnicity</th>
<th>SES</th>
<th>Grad Date</th>
<th>Major</th>
<th>Survey Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Liberal Arts</td>
<td>Travis</td>
<td>Entrepreneur; FT Job</td>
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<td>African American</td>
<td>Black</td>
<td>Lower</td>
<td>May-18</td>
<td>Africana Studies</td>
<td>None</td>
</tr>
<tr>
<td>Arts &amp; Liberal Arts</td>
<td>Fang</td>
<td>FT Job</td>
<td>Female</td>
<td>Asian; South Asian</td>
<td>American</td>
<td>Middle</td>
<td>May-18</td>
<td>Self-Declared Major</td>
<td>None</td>
</tr>
<tr>
<td>Arts &amp; Liberal Arts</td>
<td>Xia</td>
<td>FT Job</td>
<td>Female</td>
<td>White</td>
<td>Italian; Latina</td>
<td>Lower/ Middle</td>
<td>May-18</td>
<td>Sociology</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Arts &amp; Liberal Arts</td>
<td>Zachary</td>
<td>FT Job</td>
<td>Male</td>
<td>White</td>
<td>Italian</td>
<td>Upper/ Middle</td>
<td>May-18</td>
<td>History &amp; Teacher Prep</td>
<td>None</td>
</tr>
<tr>
<td>Arts &amp; Liberal Arts</td>
<td>Wade</td>
<td>FT Post-Graduate Internship</td>
<td>Male</td>
<td>Caucasian</td>
<td>Caucasian</td>
<td>Lower/ Middle</td>
<td>May-18</td>
<td>Political Science</td>
<td>Consistent</td>
</tr>
<tr>
<td>Arts &amp; Liberal Arts</td>
<td>Katalina</td>
<td>Post-Graduate Internship</td>
<td>Female</td>
<td>White</td>
<td>Mixed; Italian</td>
<td>Middle</td>
<td>May-18</td>
<td>English &amp; Digital Studies</td>
<td>None</td>
</tr>
<tr>
<td>Arts &amp; Liberal Arts</td>
<td>Quinn</td>
<td>FT Graduate School</td>
<td>Female</td>
<td>White</td>
<td>None</td>
<td>&quot;Not great&quot;</td>
<td>May-18</td>
<td>Liberal Studies</td>
<td>Consistent</td>
</tr>
<tr>
<td>Business</td>
<td>Dylan</td>
<td>FT Job</td>
<td>Male</td>
<td>White</td>
<td>Non-Hispanic</td>
<td>Middle</td>
<td>Jan-18</td>
<td>Marketing</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Business</td>
<td>Ryan</td>
<td>FT Job</td>
<td>Male</td>
<td>Caucasian</td>
<td>White</td>
<td>Middle</td>
<td>May-18</td>
<td>Accounting &amp; Finance</td>
<td>Consistent</td>
</tr>
<tr>
<td>Business</td>
<td>Serena</td>
<td>FT Job</td>
<td>Female</td>
<td>African American</td>
<td>African American</td>
<td>Middle</td>
<td>May-18</td>
<td>Management</td>
<td>None</td>
</tr>
<tr>
<td>Business</td>
<td>Ursula</td>
<td>FT Job; PT Graduate School</td>
<td>Female</td>
<td>Caucasian</td>
<td>Non-Hispanic</td>
<td>Middle</td>
<td>Aug-17</td>
<td>Business Administration</td>
<td>Consistent</td>
</tr>
<tr>
<td>Business</td>
<td>Hunter</td>
<td>Seeking Employment</td>
<td>Male</td>
<td>White</td>
<td>Irish</td>
<td>Family; Middle; Current: Lower</td>
<td>May-18</td>
<td>Finance</td>
<td>Consistent</td>
</tr>
<tr>
<td>Public &amp; Human Services</td>
<td>Aaliyah</td>
<td>FT Job</td>
<td>Female</td>
<td>African American</td>
<td>Black; American</td>
<td>Lower</td>
<td>Jan-18</td>
<td>Psychology &amp; Art</td>
<td>None</td>
</tr>
<tr>
<td>Public &amp; Human Services</td>
<td>Ian</td>
<td>FT Job</td>
<td>Male</td>
<td>White</td>
<td>Non-Hispanic</td>
<td>Middle</td>
<td>Aug-17</td>
<td>Economics</td>
<td>Inconsistent</td>
</tr>
</tbody>
</table>
As graduates responded with interest in participating in an interview for this research, major was considered to allow for a stratified random sampling approach. Majors were grouped by category/professional goals, called career clusters. Originally, there were five possible career clusters that majors could be divided into; Arts and

<table>
<thead>
<tr>
<th>Public &amp; Human Services</th>
<th>Vincent</th>
<th>FT Job</th>
<th>Male</th>
<th>&quot;Super White&quot;</th>
<th>&quot;Super White&quot;</th>
<th>Male</th>
<th>Aug-17</th>
<th>Criminal Justice</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public &amp; Human Services</td>
<td>Camille</td>
<td>PT Jobs (Multiple)</td>
<td>Female</td>
<td>African American</td>
<td>African American</td>
<td>Lower/ Middle</td>
<td>May-18</td>
<td>Childhood Studies</td>
<td>None</td>
</tr>
<tr>
<td>Public &amp; Human Services</td>
<td>Emma</td>
<td>FT Graduate School; FT Job</td>
<td>Female</td>
<td>African American</td>
<td>Black; African American</td>
<td>Lower/ Middle</td>
<td>May-18</td>
<td>Social Work</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Public &amp; Human Services</td>
<td>Gianna</td>
<td>FT Graduate School; PT Jobs</td>
<td>Female</td>
<td>Caucasian</td>
<td>Russian; Jewish</td>
<td>Middle</td>
<td>May-18</td>
<td>Psychology</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>STEM</td>
<td>Jasmine</td>
<td>FT Job</td>
<td>Female</td>
<td>White</td>
<td>Non-Hispanic</td>
<td>Middle</td>
<td>May-18</td>
<td>Nursing-Accelerated</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>STEM</td>
<td>Michael</td>
<td>FT Job</td>
<td>Male</td>
<td>White</td>
<td>White; Italian</td>
<td>Upper/ Middle</td>
<td>Jan-18</td>
<td>Computer Science</td>
<td>Consistent</td>
</tr>
<tr>
<td>STEM</td>
<td>Olivia</td>
<td>FT Job</td>
<td>Female</td>
<td>African American</td>
<td>Black</td>
<td>Lower/ Middle</td>
<td>May-18</td>
<td>Nursing</td>
<td>Consistent</td>
</tr>
<tr>
<td>STEM</td>
<td>Parker</td>
<td>FT Job</td>
<td>Male</td>
<td>White</td>
<td>Jewish</td>
<td>Lower/ Middle</td>
<td>Aug-17</td>
<td>Biology</td>
<td>Consistent</td>
</tr>
<tr>
<td>STEM</td>
<td>Natalie</td>
<td>Post-Graduate Internship</td>
<td>Female</td>
<td>Black</td>
<td>Non-Hispanic</td>
<td>Middle</td>
<td>May-18</td>
<td>Health Sciences</td>
<td>None</td>
</tr>
<tr>
<td>STEM</td>
<td>Lynette</td>
<td>PT Jobs (Multiple)</td>
<td>Female</td>
<td>Black</td>
<td>Nigerian American</td>
<td>Lower</td>
<td>May-18</td>
<td>Biology</td>
<td>None</td>
</tr>
<tr>
<td>STEM</td>
<td>Yasmen</td>
<td>PT Jobs (Multiple)</td>
<td>Female</td>
<td>Egyptian American</td>
<td>Non-White; MENA</td>
<td>Lower/ Middle</td>
<td>May-18</td>
<td>Biology, Religion &amp; Health Sciences</td>
<td>None</td>
</tr>
<tr>
<td>STEM</td>
<td>Bushra</td>
<td>FT Graduate School</td>
<td>Female</td>
<td>Pakistani American</td>
<td>Pakistani American; Non-White</td>
<td>Middle</td>
<td>May-18</td>
<td>Biology (BSDO)</td>
<td>Inconsistent</td>
</tr>
</tbody>
</table>
Liberal Arts; Business; Healthcare; Public and Human Services; and STEM. Majors like Biology and Health Sciences could have fallen into multiple career clusters. For majors like these, career goals after graduation were considered to determine the career cluster chosen. For example, one participant was listed as a Biology major. When they responded to participate in the interview they mentioned that they were enrolled in an Osteopathic Medicine program. This participant was included in the Healthcare career cluster. As interviews were being conducted, a lower response of interest was noticed for majors in the STEM career cluster. After checking for saturation of responses overall and in these two career clusters, STEM was combined with Healthcare; this combination/recategorization is now called “STEM.” This change resulted in four career clusters.

The goal for each career cluster was to complete five to seven interviews. The exact number of interviews for a career cluster was determined by saturation in the responses provided by participants. For this reason, there are varied numbers of participants in each career cluster. Seven participants (26.9%) were included in the Arts and Liberal Arts career cluster; consisting of one participant per major: Africana Studies, English/Digital Studies (dual major), History and Teacher Prep (dual degree), Liberal Studies, Political Science, Self-Declared, and Sociology. Five participants (19.2%) were included in the Business career cluster; consisting of one participant per major: Accounting/Finance (dual major), Business Administration, Finance, Management, and Marketing. Six participants (23.1%) were included in the Public and Human Services career cluster, consisting of one participant per major: Childhood Studies, Criminal Justice, Economics, Psychology, Psychology/Art (dual major), and Social Work. Two Psychology majors were accepted as participants, as they had different goals and one was a dual major. This was also to assist with determining if saturation in responses was met.
The final career cluster, STEM, had eight participants (30.8%) due to the combination of the original STEM and Healthcare career clusters. Three Biology majors were included in this career cluster due to different career goals (osteopathic medicine, pharmaceutical science, physical therapy). Two Nursing majors were included in this career cluster as they were from two different programs; one participant was a traditional BSN graduate and the other was an Accelerated BSN graduate (an 18-month program for candidates that have already completed a 4-year bachelor’s degree). Nursing is one of the largest majors at Institution X, with approximately 250 graduates in the Class of 2018 alone, which was also considered when accepting participants for this research. The remaining participants in this career cluster each represented one of the following majors: Computer Science, Health Sciences, and Religion/Health Sciences (dual major).

**Participant Outcomes by Career Cluster.** Each individual participant was interviewed separately using the interview protocol as the foundation for the interview. Additional questions were used where necessary to get a clearer picture of the participant and their experience with the searching process. The above tables, Table 11 and 12 provide an overall picture of the demographics of each participant and their post-graduation outcome. Now each participant’s search story will be shared using career clusters as a method of organization and to see how participants with similar majors experienced the searching process.

**Arts and Liberal Arts.** A self-declared major, Fang, created her own double major in religion and anthropology. Fang identified as a middle-class, female, “Asian. South Asian. Cambodian.” She described her ethnic identity as American. Fang’s goal after graduation was to get an entry-level job in communications. As a student at Institution X,
she completed an internship in healthcare administration, but decided it was not a fit. She also worked in human resources for three years. This position ended due to the COVID-19 pandemic, so she is working full-time for a mortgage company currently. In addition to the human resources position, she is doing research with a professor at Institution X that she worked with during her undergraduate degree and that became a mentor to her. She is working toward applying to a competitive, research-oriented graduate program. She used a recruitment agency to find her jobs and networking to find the research role. She found the job search to be “really frustrating.” She shared that the nuances of the job search was a lot to learn and that companies requiring experience for new graduates was concerning. Fang found the graduate search less difficult to navigate due to Career Center assistance.

Katalina is a female, White, Italian, middle-class English and Digital Studies dual-major graduate. She completed her degree in May 2018. While she was at Institution X, she completed multiple publishing internships and worked in the writing and design lab at the institution. After graduation, Katalina started working at a performance venue in New York City because she “loves Broadway.” Before this, she interned at a cabaret style restaurant for nine-months, as a post-graduate intern. After the internship, she began working as a freelance press assistant for Broadway shows. Due to COVID-19 that position changed drastically. She is now reviewing livestreamed shows virtually. In addition to working as a press assistant, she also was a financing guest relations assistant at the employer she interned with. The pandemic forced a revamp in her plan. Katalina is working reviewing the livestreamed shows and also enrolled in a Marketing Communications graduate program at Marist that began in September 2020. She found her positions through direct employer communication and networking. Katalina was
specifically interested in an online Marketing Communications program and applied solely to Marist. The biggest barriers to Katalina’s search was availability of positions in her niche interest and COVID-19.

A May 2018 Liberal Studies graduate, Quinn, attended Fordham University, Ramapo Community College, and Brookdale Community College before completing her degree at Institution X, at a satellite campus. Quinn identified as a White woman. She described her socioeconomic status as “It’s changed significantly…I would say it wasn’t great.” Her goal for after graduation was to become an attorney. She completed a semester of paralegal studies at Brookdale before transferring and worked as a paralegal for three years. After graduation, Quinn enrolled in law school. She will be finishing law school in May 2021 and has already secured a full-time position at a law firm in New York City for after graduation. While in graduate school, she was not able to work, due to American Bar Association rules, but she served as a teaching assistant and research assistant and also represented clients in the federal court system. She selected Seton Hall University for law school, as it was the highest ranked school that she was accepted into, and it was close to home. She described both the job and graduate school searches as “stressful.” She felt “it was a lot of sending off resumes into a black hole, and hope.” She found it difficult to spend time on the graduate school search and LSAT preparation because she was working full-time, while completing her undergraduate degree. Quinn ended up using an advising service to help her with picking law schools to apply to and tailoring applications.

Travis, a May 2018 Africana Studies graduate, began his college career at Camden County Community College and transferred to Institution X after earning his associate degree. Travis identified as a Black, African-American male below the poverty
line (lower-class). When he was enrolled in college, he wanted to learn and “went there just for knowledge’s sake.” He expressed that “I wasn’t in school with the mindset of like, ‘I’m here to get a job’.” While Travis was in college, he volunteered in the community and ran his own non-profit organization. His goal was to “take everything I learned in my undergraduate degree and put that towards the (non-profit) organization and my career…to get that organization off the ground so I can do that full-time.” After graduation, Travis started working on his non-profit full-time and was a manager at a shoe store in the mall. He quit the retail position in December 2019 to focus on the non-profit and to teach. Direct applications were the primary approach for these roles that paid the bills. He is the president and founder of the non-profit, so he did not search for this position. Travis is currently applying for graduate school. He shared that the biggest barrier to the graduate school search was “being the first to do it,” or being the first in his family to attend college. The other biggest barrier for him was standardized testing and their biases.

A May 2018 Political Science graduate, Wade, completed his associate degree at Brookdale Community College and then transferred to a satellite campus of Institution X where he finished his four-year degree. Wade identified as a Caucasian, lower-middle class male. His plan for after college was to move to Washington D.C. and to find a job “on the Hill.” Wade planned to start in any position on the Hill and work his way up in politics. He found a position within two months of graduation, working on a political campaign in Pennsylvania. Wade interned his entire college career, starting his first semester of college and through graduation until starting his first job. The internships were in Pennsylvania, New Jersey and on Capitol Hill in Washington D.C. In addition to his internships, he worked part-time at Best Buy. Despite all of the internship experience
he had, he felt that he did not have a lot of experience because “when you step into the real world, like D.C. world, no one gives a crap about your internship experience truly, which is like really tough, man. It’s all about who you know.” He applied directly to the employer to secure his first internship and was prompt on responding and following up to secure an interview. That position assisted him with finding a mentor who assisted him in networking for other internship roles. He was willing to make sacrifices to work toward his dream of D.C., moving in with his sister and her boyfriend in a one-bedroom apartment for 4 months and $600 to his name. He would commute from Washington D.C. to New Jersey each weekend to work. His first full-time position was with a campaign working 70 hours a week. When the campaign, and therefore his position contract was over in November 2018, he applied for jobs for six months. In January 2019, he moved to Washington D.C. with his friend and applied for “tons of jobs.” After six months of searching, a big move, a lot of networking and a huge risk, he got a job offer to be a full-time employee at a fundraising firm in D.C., just in time; he only had $10 left in his bank account. After about a year in that role he transitioned to a new job, during the beginning of the pandemic, as a senior analyst at a public affairs firm. While he applied directly to numerous employers for his full-time job applications, he felt networking was critical in his search, even though he personally hates networking. He described the job search as “grueling” and found location to be the biggest barrier identifying proximity as important; “if you’re not there in the location you’re attempting to get to, that is probably the biggest barrier because it limits your ability to meet with people face-to-face and sort of generate that rapport, create that relationship.”
Xia, a self-described “non-traditional student” with three kids, graduated with a Sociology degree in January 2018. She originally began her degree at Rutgers University-New Brunswick in 1989. Before starting at Institution X, she took classes at Camden County Community College to test out returning to school. Xia identified as a White, lower-to-middle class woman. She described her ethnicity identity as difficult to answer. She grew up in a White, Irish town. Her mother was White, and her father was Cuban. With a Latinx identifying last name she found it difficult to define her background, sharing that her father faced racism and discrimination, so she didn’t really identify with that portion of her identity. Instead, Xia saw herself as more of the ethnic identity that she grew up with on her mom’s side, Italian-American. Her plan for after graduation was to “just get a job that was full-time that would maybe be able to offer me benefits, that at least had something to do with my interests that I was exploring through my major and my coursework.” While she was a student at community college, she secured a work study position working with adults in a GED program. When she got to Institution X, she was able to then find an opportunity to work with an organization for parents affiliated with a local school district. After graduation, she secured a role as a teaching assistant in a school in Camden, NJ. She found this position through a substitute teacher organization. She felt the job search was different than she expected; finding that she got one interview for approximately every ten positions that she applied for. As a “non-traditional student,” she felt that she was passed over for a few opportunities because the employer may have thought she may quit quickly or “Why do you want this job? It pays like $13 an hour.’…but I just wanted any job though. I wanted any full-time job and I feel like in a way that hurt me a little bit.” She worked in her role from November 2018 until the pandemic. She is now unemployed.
A May 2018 History graduate, Zachary, was successful in finding a teaching position within a few months of graduation, despite not expecting to secure a full-time teaching position until he was 2-3 years out of college. Zachary identified as a “pro-choice, pro-listener male,” who acknowledges his privilege as a White man. He described his ethnicity as “I am of Italian descent.” Zachary also shared that one of his grandparents was Cherokee Indian. He said that “Yes, Native American might be in me” but “I will not sit there and say like, ‘I deserve to have Native American benefits.” Zachary also shared that he grew up upper-middle class until his parent’s divorce. He saw his socioeconomic status as lower-middle class after the divorce, as he lived with his single mother, working multiple jobs. Zachary felt as though his socioeconomic status “really shaped my identity.” He described the time after the divorce as difficult; his grandmother helped take care of him while his mother worked, recalling times without food or heat. After Zachary secured his full-time job, he felt he became middle-class and took pride in buying “my real car by myself,” a brand-new car from a car dealership. He worked three jobs when he was in college and felt accomplished by having a full-time job that could make him financially comfortable enough to buy a new car. His degree was a five-year program because he completed four years of history and one additional year of student teaching/education courses. When applying for positions, he applied for over 40 jobs, but felt that connections (networking) was most impactful in securing his position. He is an English Inclusion Teacher for a high school. Despite interest in history, he is enjoying this role and felt that he is making a difference where he is most needed. In addition to his full-time job, he assists with an after-school program for low-income students. He described the job search as “a salmon swimming upstream.” Zachary shared the biggest
barriers to the search was being a male in a major that was male-dominated and also lack of support from other people. He described others questioning how he got his job.

**Business.** Dylan finished his Marketing degree in January 2018. He started college at Institution X after high school. Dylan identified as a White, non-Hispanic, middle-class male. He participated in many internship opportunities during his time at Institution X, starting his first-year of college. During his junior and senior year, Dylan was working part-time at Fastenal. After graduation, he was converted to a full-time employee at the same employer. He had originally planned to work in a marketing firm or in-house marketing company after college but described the Fastenal position as “Fastenal landed in my lap, and I just ran with it.” When that opportunity presented itself, the five-year plan/goal for after graduation became to work full-time in sales and then to get promoted to a General Manager position. Within two years he had navigated and exceeded both of these goals and decided to move on to a new role in marketing for a behavioral health company. He used the job application system through the Institution X Career Center to secure the Fastenal position and other job application systems for his current role. Dylan did not feel that he experienced barriers to the job search.

A Finance graduate, Hunter, started college at Camden County College in 2007 and did not do well. In 2012, he returned back to school and slowly achieved his associate degree. After earning his associate degree, he enrolled at Institution X and earned his degree in May 2018. Hunter identified as a White, Irish, lower-class, male. He explained that he grew up middle class but did not secure employment after graduation. Hunter shared that he was the top of his class (3.96 GPA), interviewed for multiple positions after graduation, but did not secure a position. His plan for after graduation was to be a Certified Financial Planner. At the time, he did not realize that it was a sales-
oriented role. He felt there was a disconnect between the degree he earned and the working world of finance, that he was unable to fill, despite efforts from multiple Institution X support systems, faculty, staff, the Career Center. He used job application systems, including the Institution X Career Center system for his search. He identified the biggest barriers to the job search as lack of transparency and/or accuracy of job postings and COVID-19, as he is still searching for positions. After two years of searching, he decided to complete a financial analysis certification to feel more marketable in the job search as he pivots his search to becoming a Financial Analyst. Despite still looking for a job, Hunter spoke highly of his experiences and the resources at Institution X but felt the degree he earned was like he was “sold a bill of goods.”

Ryan earned a dual-degree in Accounting and Finance in May 2018. Accounting requires 150 credits for the CPA exam so he took 135 credits at Institution X and the remaining 15 credits at a community college. Ryan identified as a White/Caucasian, middle-class male. The plan for after graduation was to get a job in accounting. While in college, Ryan worked part-time banking positions and also had two accounting internships. The second accounting internship that he was hired for was during his final semester of college. That employer, BBD, hired him full-time after graduation. Ryan is still in that position. He used Institution X Career Center events and resources to find his accounting-related roles. Ryan shared that the biggest barrier to the job search was time.

Serena transferred to Institution X in 2014 after attending Mercer County Community College and Temple University. She started as a pre-med major and switched to a Management major, which is the degree she earned in May 2018. Serena identified as an African American, middle-class female. Her goal for after graduation was to secure a role as a probation officer. She worked in corrections while in college and loved it. She
realized that this was her goal early on but chose the management degree over a criminal justice degree because she “didn’t think it would be profitable after graduation.” After finishing her degree, she interviewed for and got past the interview stage for a probation officer role. She shared that “they had told me to submit some documentation (after the interview), and I psyched myself out and didn’t submit the documentation because I didn’t think I did a good job.” Instead, she found a position in corporate banking. She utilized job application systems when submitting applications, but secured her role with her current employer, TD Bank, through networking. Since starting at TD Bank in August 2018, she has been promoted twice. She described the job search as “frustrating” and felt she could have used improvement with interviewing skills.

An August 2017, Business Administration graduate, Ursula, attended a satellite campus of Institution X after earning her associate degree at Brookdale Community College. Ursula identified as a Caucasian, non-Hispanic, middle-class woman. She described her goal for after graduation as:

I really didn’t have any kind of career goals of like, ‘Oh! I want to do XYZ’ or whatever. It was more my main goal to continue my education afterwards. Um, so that’s really what I was looking toward. It didn’t really matter to me what uh, I did. I guess in terms of career goals, I wanted to do something that was just something…like a company I just enjoyed working at.

Ursula shared that her goal was to pursue her MBA, which she did and has already completed at Montclair State University. While pursuing her undergraduate degree, she completed two internships, secured through job application systems and networking. The second internship was at Society Worldwide Financial Interbank Telecommunications (SWIFT). They hired her full-time after graduation. She described the job search as “very challenging” and “overwhelming.” The biggest barrier to the search, that she shared, was the volume of applications and finding it hard to vet opportunities.
**Public and Human Services.** The first participant, Aaliyah, a January 2018 graduate identified as a lower-class, African American woman. When asked about ethnicity, Aaliyah found the question difficult to answer, but identified as Black American. She graduated from Institution X with a dual-major in Psychology and Art(Animation). Aaliyah transferred to Institution X from Montclair University after realizing that institution was not a fit for her. Prior to graduation, Aaliyah planned to apply for PhD programs in psychology or psychiatry. She wanted to gain more research skills, so her immediate goal after graduation was to find a job in research and take an EMT course (to build medical skills for psychiatry). She engaged in research her final semester of her undergraduate program at Institution X. That position helped her to secure a part-time position in April 2018 and she was able to save money for the EMT course. The EMT course assisted in clarifying career goals and helped her to realize that she was not interested in the medical component of psychology, so she decided not to pursue psychiatry. The clear goal became research, and she secured a full-time research position in September 2018, eight months after graduation. She loves her current position and feels that she was able to obtain her goal shortly after graduation. The biggest impact on this search was the professor that she worked with on research during her final semester. That professor would directly send opportunities to Aaliyah and served as a mentor. Even with this greatly impactful person’s help, Aaliyah still felt that breaking into psychology as an undergraduate candidate was difficult because many employers seek experience, even for new graduates. Aaliyah described support from her family during her search but found there to be a disconnect between the support and truly understanding the job search process. Now almost three years after graduation, Aaliyah is
in the process of applying to PhD in School Psychology programs and plans to begin in Fall 2021, which will help her to fully reach her career ambitions.

Camille, a May 2018, Childhood Studies graduate, transferred to Institution X as a Junior from Camden County College. Camille identified as a middle-class, African-American woman. Her goal for after graduation was to work as a teacher. During her time at Institution X, she volunteered and was a substitute teacher. These activities were to assist in working toward becoming a teacher, as was the desire to enroll in a Childhood Studies graduate program. She did not get into the graduate program but was able to secure a position as an assistant teacher after graduation. She realized she does not want to be a teacher anymore, but enjoys the assistant teaching role she is in. In addition to being a teacher assistant, Camille works as a tutor, at Shoprite, and has her own skincare business. She enjoys all of these roles and secured them through job application systems and networking. Camille shared that these roles and their flexible schedules assist her in balancing her responsibilities as a mother of a two-year-old. Camille plans to begin investing more time and resources into her skincare business.

A May 2018 Social Work graduate, Emma, earned her associate degree at Camden County Community College before enrolling at Institution X in 2016. Emma identified as a lower-class, Black African-American, woman. After completion of her Social Work degree, she completed a one-year MSW program. While enrolled in the MSW program, she also worked part-time as a library assistant. In addition to her education, she also volunteered on the Camden County Domestic Violence Response Team. After completion of the MSW, she began a full-time position as a veteran service representative for the Veteran Benefits Administration. Networking was helpful for Emma as she secured her library assistant role. Her current role was shared by a VA
career counselor as part of her veteran’s benefits. Due to burn out and a tough graduate school experience, Emma waited five months after her graduate program to apply for jobs. Within four months of starting her search and three applications, she secured her current role. Her job search and graduate school searches were described as “not too bad.” Emma attended graduate school at Institution X, so the application process was seen as manageable. She shared that the biggest barrier to the job search was herself because of the negative feelings she had toward the MSW program that she completed. In addition, she is a single parent, which made balancing work, school and home difficult.

Gianna, a May 2018 Psychology graduate, began Institution X as a junior in 2016, after completing an associate degree at Camden County College. Gianna identified as a middle-class, Caucasian woman. She described her ethnic identity as Russian and Jewish. After graduation, Gianna planned to attend graduate school for social work. She enrolled in an MSW program right after graduation and will be finishing in May 2021. During her undergraduate experience, she completed research and presented at an academic conference. In addition, she had two jobs; teaching paint and sip classes and in administration for a place that taught baseball lessons. During the MSW, she completed internships in school social work and social work in healthcare. In addition to her internships during her graduate studies, she is also working per diem in human resources for a hospital. She has enjoyed all of her experiences for different reasons. The positions that she secured during her undergraduate degree and after were through networking and online applications. The internship positions in graduate school were found through the institution placement coordinator. She described her job search as “very lucky, in that a lot of things have fallen into place at the right time.” The biggest barrier to her search was life circumstances, including her mom becoming sick.
Ian, a middle-class, White, non-Hispanic, male finished his Economics degree in August 2017. He began at Institution X in 2015 after completing an associate degree at Burlington County Community College. When he began college, he wasn’t sure of his career goals, but found Economics to be a good fit, as it was “more broad in comparison to just finance, or accounting.” During college, he completed two accounting internships, which were also not a fit. His goal was to work on Wall Street after graduation. After interviewing for Wall Street, he realized this was not a fit for him and he secured a position working for a shipping logistics corporation. He loved his experience in supply chain and used that experience to get him closer to his long-term industry goal of healthcare. Ian is currently working for Universal Health Services in supply chain and is very happy. In addition, he is a graduate student in an MHA program. He used job application systems to apply for positions after graduation and for this current role. Ian knew where he wanted to apply for graduate school because of his love for Rutgers University. He will be finishing his graduate program in May 2021. He identified not hearing back from employers as the biggest barrier of the job search. He shared “you apply for a lot of positions, and then you get rejected, but you don’t know why.” This is frustrating and does not assist with growth in the application process.

An August 2017 Criminal Justice graduate, Vincent, transferred to a satellite campus of Institution X after completing his associate degree at Raritan Valley Community College. Vincent identified as a “super White,” middle-class male. Prior to graduation, his goal was to become a police officer. Instead, he got married, moved to Florida because his wife started a doctoral program there, and found a full-time position at the University of Miami. The university was impressed with his prior experience from his undergraduate degree working in retail loss prevention and volunteering as an EMT,
so he was hired as the overnight supervisor. Since Vincent is working for a university, he has tuition remission benefits and explored multiple graduate program options. He applied for and was accepted to the MBA program at the University of Miami. Vincent described the job search as “stressful” and shared it took two months after moving to find a position. He utilized job application systems for his search after college and shared the stress of needing a job and moving to a new state was really challenging and that the lack of response from employers was a “struggle.” Vincent shared that “for every 50 resumes, you may get one response.” He felt like he didn’t know anything about Florida so “when somebody was like ‘oh, it’s in this town.’ I’m like ‘I have no idea where that is’.”

**STEM.** Bushra was enrolled at Institution X as a Biology major and graduated in May 2018. Bushra applied for Institution X through a specific admissions process for the BSDO program and was selected as a BSDO student. Bushra described the BSDO application process and student experience. The BSDO program accepts students prior to their first-year of college. Accepted students spend three years at Institution X and as long as their qualifications meet the DO program requirements at their affiliated medical school, students are accepted to and begin their DO program their fourth year (senior year). BSDO students also have the ability to apply to other medical schools if they wish. Bushra applied for the BSDO program at Institution X with the plan of starting the DO program at the affiliate institution starting her fourth year of college. She obtained this goal and is enrolled in the DO program and is completing residencies as part of that program. Bushra identified as middle-class and as a “Caucasian, Pakistani specifically…Pakistani-American.” She felt the leg-work for the graduate/medical school search was completed before enrolling at Institution X, due to the nature of the BSDO program. The biggest challenge in officially applying to the DO program (BSDO students
still need to officially apply and be accepted to the program) was taking the MCAT, because the MCAT needed to be taken before some of the material was learned in classes for this expedited program. Overall, Bushra saw the graduate school search as easy because she planned on applying to the affiliate institution only, which was her plan as a high school student.

A May 2018, accelerated Nursing graduate, Jasmine, completed her degree after finishing an associate degree from Gloucester County College and a bachelor’s degree in Psychology at Rutgers University. Jasmine identified as a White, non-Hispanic, middle-class woman. Her plan for after graduation was to purchase a home. She had no clue what kind of Nursing she was interested in pursuing. During the accelerated Nursing program, she worked at a liquor store, completed clinical experiences and focused on classes. After graduation, she started a Registered Nurse position and has been in that same position for two years. She found the position through networking. She did not describe barriers to the job search.

Lynette, a May 2018 Biology graduate completed all four years at Institution X. Lynette identified as a Black, Nigerian-American, lower-class, female. Her goal for after graduation was to enroll in graduate school for Physical Therapy. She was a student-athlete during her time at Institution X so she decided to take a gap year after finishing her degree so she could spend time on graduate school applications. In addition to being an athlete she also worked as a tutor during college, which kept her very busy. Her first year after college, she continued tutoring. Lynette also participated in a physical therapy pipeline program at Thomas Jefferson and worked at a physical therapy clinic. She was in that role until the pandemic began. She also took some prerequisite courses at Camden County College to assist with getting into a Physical Therapy graduate school program.
She didn’t get into graduate school the first application period that she applied. After working in the physical therapy clinic, Lynette realized that physical therapy was no longer the goal. In May 2020, during the pandemic, she decided to apply for a graduate program in Public Health at Drexel University. Lynette began this program in August 2020. She is still tutoring. The biggest barrier to Lynette’s job search was (lack of) experience and the hectic student-athlete schedule.

A Computer Science graduate that completed their degree in January 2018, Michael, completed all four years at Institution X. Michael identified as a White, Italian/Irish, upper-middle-class, male. His plan for after graduation was to find a job. He shared that “well, my plan for after I graduated would start before I graduated, because I planned to get internships.” Michael interned for ASRC Federal Mission Solutions in software quality assurance. He was hired full-time at that same employer after graduation in a Software Quality Engineer Associate role. He likes his position and attributes securing the internship to networking and “a stroke of luck.”

Natalie graduated with a Health Science degree from Institution X in May 2018. Prior to Institution X, she earned her associate degree at Burlington County Community College. Natalie identified as a Black, non-Hispanic, middle-class woman. Her goal for after graduation was to get a full-time job and think about graduate school for occupational therapy, but not apply right away. During college, she originally wanted to be a nurse and then realized her interest in occupational therapy. She started shadowing in that field. After graduation, Natalie engaged in a two-week program at Thomas Jefferson called STEP UP. This program assisted her in writing essays, preparing for the GRE and shadowing in preparation for applying to occupational therapy programs. In addition to this program, she was working to support herself. Natalie worked as a
paraprofessional, a daycare teacher and part-time at Macy’s. She liked all of these experiences and they provided the opportunity to pay bills while working toward applying to graduate school. She found these positions through networking and direct applications. Natalie is now enrolled at Springfield College for occupational therapy. She described the biggest barriers to the job and/or continuing education searching process as:

I ultimately didn’t take the GRE because I was so scared to take it. I just heard stories about you had to get a certain percentile, and not getting in and all that stuff. So my barriers were picking schools that didn’t need it. So my list dwindled down significantly.

Natalie also mentioned that the cost of the GRE was a deterrent.

A Nursing student, Olivia, graduated from the traditional program (traditional 4-year Bachelor of Science in Nursing program) in May 2018. She transferred into this program in 2016 after earning her associate degree at Rowan College at Gloucester County. Olivia identified as a lower-middle-class, African American woman. She shared that her ethnic identity is Black. Prior to graduation, her goal was to work as a nurse “anywhere that would take me.” Within a year after graduation, Olivia wanted to pursue a graduate nurse practitioner degree to specialize in geriatrics. She obtained the first goal; she is an RN at Our Lady of Lourdes. She decided to delay her graduate school plans so that she can pay her undergraduate loans before accruing loans for her graduate degree.

During college, she completed her nursing clinical experiences, shadowing and worked at an adult daycare. She has dived into her RN role and taken advantage of many of the additional teams offered to gain more and more experience. Prior to accepting her current role, she had taken a position at a long-term care facility because she had not heard from hospitals, after applying to many. When she got the offer at a hospital she transitioned to the new role, which was in December 2018. She described the job search as “really hard”
and “stressful at first.” She felt that lack of positions at the time she was looking was her biggest barrier to the search.

Parker earned his Biology degree in August 2017. He began college at Indiana University, but moved closer to home in 2015 and enrolled at Institution X. Parker identified as a White, Jewish, lower-middle-class to middle-class, male. Prior to graduation, he had “no clue” what he planned to do. During college he had the opportunity to do research with a professor. After graduation, his first role was a lab assistant in a toxicology lab. He realized quickly this was not what he wanted to do, so after three months he transitioned to a role in pharmaceutical research. He was there for over two years and recently transitioned to a pharmaceutical scientist position. He used job application systems to apply for these roles. He described the job search process as “tedious” and difficult to manage due to “fake opportunities.”

A May 2018 graduate, Yasmén, graduated as a triple-major in Biology, Health Sciences and Religion. Yasmén identified as a cis-female, Egyptian-American, “broke college student.” She explained that some people “want to consider Egyptians White, and I truly do not think that we are…People in the Middle East, it’s called MENA, Middle Eastern and North Africa. That’s just all kind of ethnicity. So I would say that.” Yasmén shared that she grew up “pretty solid middle class, lower middle class. Not too wealthy but still had food to eat.” Prior to graduation, she had planned to go to dental school and to become a dentist. Yasmén had been the President of the Pre-Dental Society on campus, did hundreds of hours of shadowing in dentistry and completed research during her time at Institution X. In addition, she worked in a few different campus jobs. Ultimately, she did not apply for dental school because she “ended up psyching myself out from taking the DAT, The Dental Admission Test.” She was at Institution X for five years to obtain
her three undergraduate degrees. Yasmen’s final year was tough personally due to an injury and other health issues. That challenging year adjusted her timeline to apply for dental school, leading to the thought of taking a gap year. During the gap year, she worked for Institution X in a professional capacity in the Office of New Student Programs, the Honors College and Residence Life. During her undergraduate career as a work study student in multiple campus roles she started having interest in Student Affairs. This continued in the professional roles at Institution X. She decided to pursue a MSW at Institution X, while working. As part of the MSW, she had also completed two internships. She found securing these internships difficult, due to the process at Institution X and due to the pandemic. She found networking and being herself to be the driving force for her work study and first jobs after college. Overall, she found the job search “frustrating.” She had tried using a placement agency and they did not find her a position. She then had her eyes set on Institution X, so it took some time to break into the positions that she had.

Coding and Themes. Inductive analysis was used to code the data into themes and to “work back and forth (Creswell & Creswell, 2018, p.181)” between the themes until a comprehensive set of themes were determined (Creswell & Creswell, 2018). Table 16 highlights the final codes and themes used in relation to the qualitative data.

Table 16

Codes and Themes

**Category/Theme: Education**
- Code: Transfer
- Code: Multiple Degrees
  - Subcode: Dual-Degree
  - Subcode: Triple-Degree
  - Subcode: Second Baccalaureate Degree
Table 16

*Continued.*

Code: "Non-Traditional"
Code: Time to Completion
Subcode: Illness
Subcode: Family
Subcode: Legal Issues
Code: Pride

**Category/Theme: Post-Graduate Plans**
Code: Work Toward Goal(s)
Subcode: Testing the Waters
Subcode: Major-Related
Code: Own Business

**Category/Theme: Experiential Learning**
Code: Internship(s)
Code: Research
Sub-Code Publication(s)/Conference Presentation(s)
Code: Clinical

**Category/Theme: Other Experiences**
Code: Work Study
Code: Jobs
Sub-Code: Full-Time
Sub-Code: Multiple Part-Time
Subcode: Part-Time
Code: Honor Society
Code: Leadership

**Category/Theme: Outcomes**
Code: Positive
Code: Negative

**Category/Theme: Goal Alignment**
Code: Aligns
Code: Change but Alignment with Major(s)
Code: Change
Table 16

*Continued.*

**Category/Theme: Searching Resources**
- Code: Job Search Resources
- Sub-Code: General Job Searching Sites
- Sub-Code: Career Center Job Searching Site
- Sub-Code: Employer Website
- Code: Graduate School Search Resources
- Sub-Code: Application Assistance

**Category/Theme: Networking**
- Code: Necessary
- Code: Not Use

**Category/Theme: Search Perceptions**
- Code: Negative
- Sub-Code: Difficult/Hard
- Sub-Code: Frustrating/Stressful
- Sub-Code: Overwhelming/Daunting
- Sub-Code: Disheartening
- Sub-Code: Tedious
- Code: Different than Expected
- Code: Positive
- Sub-Code: Not Hard
- Sub-Code: Luck

**Category/Theme: Barriers**
- Code: Job
- Sub-Code: Money
- Sub-Code: Time
- Sub-Code: Unclear/Unresearched Goals
- Sub-Code: Lack of Support
- Sub-Code: Insufficient Skills
- Sub-Code: Availability of Positions/Timing
- Sub-Code: Experience Conundrum
- Sub-Code: Employers
- Sub-Code: Lack of Employer Response
- Sub-Code: Relocation
- Sub-Code: Anxiety
- Code: Graduate School
Table 16

Continued.

Sub-Code: Standardized Testing
Sub-Code: First-Gen
Code: None

**Category/Theme: Success**
Code: Motivation
Sub-Code: Intrinsic
Sub-Code: Extrinsic
Code: Support
Code: Networking
Code: Internship Conversion
Code: Persistence
Code: "Paying dues"
Code: Creativity

**Category/Theme: Overcoming Barriers**
Code: Variety of Opportunities
Code: Career Center
Code: Networking
Code: Support
Code: Fixing Issues

**Category/Theme: Other**
Code: Long-Term Goals
Code: Changing Position
Sub-Code: Promotion
Sub-Code: New Job
Code: Changing Goals/Timeline
Sub-Code: Loans
Sub-Code: COVID-19

*Undergraduate Education.* When interviewing participants, they were asked demographic and education-related questions. These questions included “Where did you begin your undergraduate education. Eighteen of the 26 participants shared that they were transfer students (70%). Some of these participants transferred to Institution X with a few
credits from another institution (both 2-year and 4-year colleges), while others transferred from community colleges with associates degree(s).

Two participants self-identified as non-traditional students when asked about where they started their undergraduate education. One graduate, Xia, shared that they began college in 1989 and took time between starting and finishing their degree. While Emma completed two associates degrees, her bachelors and then her masters later in life.

Xia’s time to degree completion was delayed due to leaving school and also starting a family/serving as a stay at home mom. She was one of four participants that expressed delay to completion of their degree. Two other graduates mentioned that their degree took longer than expected due to an unexpected illness; one they experienced themselves, the other of a parent. The final time delay graduate, Hunter, had “fallen down the wrong path” and got into some legal issues which resulted in regrouping and taking time off before returning to finish the degree.

Participants were also asked “how would you describe your experience with Institutions X?.” The majority of participants responded positively about their experiences with and opportunities during their time at Institution X. These participants expressed connections with peers, faculty and staff as some of the biggest positives of their experience. In addition, many shared that Institution X was “convenient” and/or easy to commute to, helped them to “learn a lot,” and/or was a “great community.” Ryan shared, “I was able to work and make money on the side and you know, go to class at night.” Many graduates echoed the benefits of being able to work and go to school highlighting financial necessity. Overall, participants with negative responses typically had specific experiences with a person or department that they shared as a negative. Despite this, all had a neutral or positive view of Institution X overall. Most of these
issues mentioned were with cheating happening in classes, specific faculty/staff that were “awful,” and or a “disconnect” between what was being taught and what they needed to learn for their goals.

Participants also shared their degree earned at Institution X. Many of the participants had dual-degrees; one had a triple-degree. These degrees often impacted the career trajectory of the participant. Sometimes this assisted in the graduate in using both degrees to work toward one goal. For example, Aaliyah, graduated with a dual-degree in Psychology and Art. She is currently doing research and is in the process of applying for graduate school, for school psychology. She hopes to use the intersection of art and psychology for this degree. Sometimes this opened the door for additional options and/or a change in initial goals. For example, Yasmen graduated with a triple-major in Biology, Health Sciences and Religion. Her initial goal for after graduation was to apply for dental school. She is now enrolled in an MSW program.

**Post-Graduation Plans.** When describing career goals, all but a few participants planned to work toward their long-term career and educational goals after they completed their undergraduate degree. For example, Aaliyah shared:

I guess I knew that I wanted to go get a PhD in some form of psychology, but then I was also battling if I wanted psychiatry too. So before I left, my goal was to find a job in research, take an EMT class…yea, that was pretty much it.

Aaliyah got a job in research and saved money to pay for the EMT class she wanted to try. She decided that Psychiatry wasn’t a fit after the EMT class and has decided to focus on research and is applying for PhD in School Psychology programs. She was willing to work for free, commission or a stipend to gain experience to help her test out and work toward her goals. Fang shared that she was looking for an entry-level position in communications immediately after college to gain experience. Her long-term goal was to
transition to a career in anthropology, using the communications background. Whether or not the goals were exactly aligned with the major depended on each graduate. The majority of participants had goals in alignment with their major/degree.

One participant, Ursula, wasn’t sure of the immediate goal after college, but knew she wanted to attend graduate school. She shared:

I mean, to be honest with you, when I was going to (Institution X), I was very uncertain what I wanted to do specifically. Um, And my main goal, I mean, I really didn't have any kind of career goals of like, Oh, I want to do XYZ or whatever. It was more my main goal was to continue my education afterwards. Um, So that's really what I was looking toward. It didn't really matter to me what uh, I did. I guess in terms of career goals, I wanted to do something that was something that I just... Like a company I just enjoyed working at it. It wasn't anything really specific, but I guess maybe some kind of management role would have been ideal for me, or some kind of analytical role.

Ursula wanted to be happy in her job but felt she needed to determine what that specific role would be.

A few participants wanted to align their first position after college with their major/degree but did not know exactly what their plan was. For example, Xia’s plan was to “just get a job.” She shared:

I hoped just to get something that was full-time that would maybe be able to offer me benefits, that had at least something to do with my interests that I was exploring through my major and my coursework.

Similarly, Parker knew he wanted to use his Biology degree, but said “I had no plan. I had no clue…I wasn’t sure if I wanted to do graduate work to hit industry”

One participant, Travis, had developed his own non-profit before enrolling at Institution X. Travis said:

So when I was in school, I wasn’t in the mindset of like ‘I’m here to get a job.’ That wasn’t me. I really did- I loved Africana Studies and the field of study. So I went there just for knowledge’s sake.
He knew his goal was to transition into working for his non-profit full-time after graduation, so he wanted to choose a major that was of interest. This major also worked well with the mission of his non-profit organization.

**Experiential Learning.** Participants were asked “were there any significant educational or career-related experiences that you completed to reach your goals, while at Institution X.” Responses for this included internships, work, leadership, activities, clinical experiences and research. All but one participant had an experience like this to share. These experiences were divided into experiential learning opportunities (discussed in this sub-section) and other experiences (discussed in the next sub-section). Experiential learning opportunities include internships, research and clinical experience for the Class of 2018 Institution X grades. Fourteen participants (54%) engaged in experiential learning opportunities during their undergraduate experience. The most common experiential learning opportunity of these participants was engaging in internships. Some of these graduates engaged in more than one experiential learning opportunity. Those that completed an experiential learning opportunity shared that they were helpful in gaining skills for their field and also in determining what they did not want to do. For example, Dylan shared that he was interested in Marketing, but after three internships he was able to more clearly see which types of marketing interested him and some marketing positions that he no longer wished to pursue. Parker was able to engage in undergraduate research which resulted in a publication. This helped him to stand out in the application process for a job.

**Other Experiences.** Some of the other experiences that participants shared when they were asked about educational or career-related experiences included work study positions, jobs (part-time, multiple part-time and full-time), honor societies, and
leadership opportunities. At least half of the participants engaged in a work study or job experience while pursuing their undergraduate degree. These graduates often appreciated the flexibility of Institution X so that they were able to work to support themselves and/or their families. Ryan shared that he balanced multiple part-time jobs, an internship and classes concurrently throughout his education.

**Outcomes.** Participants of this research were asked about their experiences after graduation. All but two of the participants described what NACE (2019) would describe as a positive outcome, employment or continuing education in these cases. Positive outcomes are securing employment or continuing education within one year after graduation. In addition to this, participants with positive outcomes shared they are happy with their current role or see it as a good steppingstone toward their goals, whether or not their current position is related to their major.

Negative outcomes are categorized as not obtaining employment or continuing education within a year after graduation (NACE, 2019). Two participants had negative outcomes. Hunter graduated at the top of his class but is still currently seeking a position (over two years after graduation). Hunter believes that some of his challenges with the job search stem from pursuing financial services, but not realizing the sales-oriented nature of it was not for him. It is also worthwhile to mention, Hunter did not complete an experiential learning opportunity while enrolled at Institution X. He did other experiences like two leadership development programs and an honor society. Hunter shared “I just feel desperation, I feel hopeless.” The other negative outcome was that Lynette did not secure full-time employment after graduation. NACE (2019) categorizes part-time employment as a negative outcome. Lynette’s account of her experience after graduation included:
So I wanted to apply to physical therapy school, and I knew I was going to have to take a year off because I didn’t want to apply and start right after undergrad. So I applied for physical therapy for two years, two cycles… The first year out of school, I was just tutoring and then going into the second year being out of school, I actually did get a job at a physical therapy clinic.

Lynette did secure a job in her field of interest, but after two years; resulting in this negative outcome.

**Goal Alignment.** Over 65% of the participants were engaging in an experience after graduation that aligned with their career goals or aligned with their major (even if their original career goals were different). For example, both Jasmine and Olivia worked as Nurses, and they were both Nursing majors. This aligned with their career goals.

While Ian aligned more with his major than his original career goal:

My plan was to work on Wall Street…So after graduation, it really did not come to fruition the way I thought it would. Applying for jobs is hard, and this is no exaggerations, I put down, uh, probably 5,000 job applications out. Ranging from all levels and tailoring each resume to the specific job and cover letter…I did have a chance to interview on Wall Street, um, and hated it. So that answered the curiosity question for me.

It took experiencing an interview on Wall Street to realize it was not what he thought he had wanted. Instead, he pivoted and took a full-time job in supply chain management for a logistics company, using his Economics degree. He later transitioned to a supply chain role in the healthcare industry which he is passionate about. Ian decided “I will work for a year and if I love it, I will add graduate school,” which he did.

Only two participants, Yasmus and Camille, changed their career plans completely. Both had planned on attending graduate school to achieve their goals, but did not apply or were not accepted, resulting in a change in career path.

**Searching Resources.** Participants were asked what resource(s) they used to secure their post-graduation opportunities, as well as their educational and career-related experiences while in college. Two participants used application assistance services to
apply for jobs/programs in line with their goals. This was due to working full-time and having lack of time to devote to class, work and graduate school applications.

In terms of the job search, job application sites like Indeed, ZipRecruiter, LinkedIn, Craigslist, Google, Monster, Zippia, and Glassdoor were used by participants. Participants equally used these general job searching sites and the job searching site offered by the Institution X Career Center. In addition, two participants mentioned using the employers’ direct websites for applying. These job searching sites were talked about both negatively and positively by participants. However, the biggest resource that participants mentioned in their search (job or graduate school) were networking connections.

**Networking.** Due to the overwhelming mention of networking/connections from participants, it was important to code this resource separately from resources. Almost of the participants mentioned the importance of networking and/or connections in both the job and graduate school search. Many participants, including Wade and Ian, shared “It's really who you know,” in terms of being successful in the job search. Gianna gained most of her experiences though networking.

How participants described their network/connections varied. Some shared that family, friends, faculty, staff, mentors and/or the Career Center assisted them with connecting to opportunities. The experiential learning and other experiences that participants engaged in during their undergraduate experience like internships, research, work study, and jobs created opportunity to ask supervisors and others at those experiences for networking connections. For example, Aaliyah shared “So my previous professor, who I did research with, she uh, pretty much guided me throughout, from her lab all the way out until I got my job.” She also shared that this professor would send job
postings for available positions regularly, which was helpful to her. Even by chance connections were helpful. Michael shared:

I worked through college at a phone repair kiosk in the mall…I was working there and a friend from high school, who I didn’t really even know, came up with her mom…Her mom overheard that I was a computer science major, and I was looking for internships…She referred me, and I got lucky, I guess.

He reiterated how “lucky” and “fortunate” he was throughout the interview.

One participant, Ian, mentioned that he intentionally did not use his network when applying to jobs because he wanted to “do it myself.” His sister worked at the company he now works at. However, he applied, interviewed and started working before anyone realized the connection.

Search Perceptions. To learn about the overall perception of job and/or the continuing education search, participants were asked “Overall, how would you describe your job/graduate school searching process?” Approximately 70% of participants found the job search to be a challenging experience. The way they described the search included “difficult,” “hard,” “frustrating,” “stressful,” “overwhelming,” “daunting,” “disheartening,” and “tedious.” Wade described the job search as “grueling” and “haunting.” Serena shared “I felt like ‘I’m never going to get a job’.” Ursula found both the job and graduate school search challenging, she mentioned:

Oh man, (it was) very difficult. Very overwhelming. Um, I always find it very challenging, because I know that a lot of the ways people find you today, if you don’t know somebody there, is basically the algorithm looks at your resume.

Although knowing the way recruiters often search for candidates was helpful, it did not make it any less challenging for her. Fang expressed that she felt she was “learning as you go.” She also shared that it was frustrating, saying “I don’t think anyone prepared you for how difficult it is to get a job right out of college…but it’s a lot more frustrating
than you would expect it to be.” Zachary shared an analogy that brought many of the feelings that participants had been sharing to life:

It was like a salmon swimming upstream… I ultimately felt like I was dumped into a river with multiple different fishes, and we are all swimming up to get a position in the real world. I used the word salmon as like that's the teacher group. And so when we got to a ridge that you have salmon jump up on. It felt like you jump up and if you didn't make it, you hit the wall, you jumped back down, but at least you still could get on top of it. But ultimately, what does make you nervous and anxious is you see all the other salmon jumping up, meaning like you see all the other teachers getting hired. You see like all the teachers getting a position, all the time it’s like, ‘Oh, look at me. I went and subbed all this time and look; I'm getting a job right out. I didn't even have to interview.’ So that's what makes you anxious and nervous. On top of that, there's some times where like, in my first year of my position, of course there's some negative people that are like, "Oh, you only got your position because they needed the spot to fill." So that's where it's like a combination, but ultimately at the end of the day, when you're that salmon and you jump up on that ridge, you are now past the waterfall. It's easier swimming. It's easy, but you've done something right. You've done something different. You’re something in some sense that you have now improved yourself. You've done it.

Like the job search, Quinn shared that the graduate school search was stressful. Yasmine echoed that saying, “nothing ever comes easy.”

One participant shared that the job search was “different than expected.” A different participant, Ryan, said:

I don’t want to say it was the most difficult thing, but you definitely have to put yourself out there because if you’re not applying for jobs, or you’re not talking to people or not going to any of the networking nights or just any of the career fairs, I think it’s that you put yourself at a huge disadvantage because… (otherwise) you’re just a name for someone who’s fighting for the same position…it’s all about the connections.

This expressed that it wasn’t necessarily a terrible experience, but that it was something he needed to work at.

Six participants shared that they felt that they didn’t think the search for a job and/or graduate school was “that bad” or “that hard.” Most of these participants (four) were in the STEM career cluster. The other two participants that felt this way were in the
Public and Human Services career cluster. One of these Public and Human Services graduates was not pursuing employment or continuing or education in her field. In addition, two participants felt that finding their job was “lucky” or that “it was luck; it fell into place.”

**Barriers.** The more negative perceptions of the searching process were likely felt because of barriers to that searching process. Twenty-five (96%) of participants shared a barrier to their searching process. Many job search barriers were described by the participants including, money, time, unclear/unresearched goals, lack of support, insufficient skills, availability of positions/timing, lack of experience, employers, lack of employer response, relocation and anxiety. The biggest barrier to the graduate school search was standardized testing. One participant shared that they did not experience barriers to their searching process.

Of the participants that mentioned barriers to the graduate school search, all mentioned that standardized testing was a barrier. Whether it was the GRE, MCAT, LSAT or DAT, each student felt that it made their process difficult. A few participants made decisions on where they would apply for graduate school based on where the standardized test was not required. Travis shared his concern for the “bias” in standardized testing that makes access a challenge for diverse populations. Yasmen ultimately did not apply to dental school for many reasons, but the DAT was a large part of the reasoning. She was the Pre-Dental Society President and now is an MSW student, in a program that didn’t require the GRE. She also felt that:

I didn’t have many people to guide me in the process. I always say that I feel like I’m a first-gen, but my parents did go to college but, back in Egypt. I’m like, ‘I’m still first-gen here because they have no idea what any of this is.”
In terms of the job search, money and time were mentioned frequently as barriers by participants. Often these codes went hand-in-hand. For example, a student may be working to pay bills and therefore has less time for the search process. Unpaid experiences added to the financial stress of participants. Dylan shared a different perspective on time, in terms of feeling that his time was wasted when searching, “everyone hates redoing everything a thousand times.” He described the application process as time-consuming, especially when you are tailoring documents and filling out a lot of applications. He mentioned the challenges of application portals. Time was also mentioned in terms of balancing family commitments. Emma shared:

I’m a single parent… I barely saw her (daughter) before I left in the morning. And when I got back she’d already eaten and put herself to bed. So the fact that I couldn’t be there for my child as much as I could have, um, it was a huge barrier, but it was a huge motivator.

This statement was in relation to balancing work, internships and her graduate degree. Balancing multiple commitments were also mentioned in terms of extracurricular activities, like athletics for other participants.

Lack of clear career goals and/or research regarding careers also posed a barrier to the job search. For example, Serena had a lack of understanding about salary expectations. She said:

I also was looking for $100,000 job. I came out of college; I deserve six figures because I have a degree. And I think I just had to humble myself, and take a step back, and realize that nothing happens overnight.

In addition, some participants were not exactly sure what they wanted to apply for, so it took some time to find what they were interested in pursuing. Xia shared “it wasn’t really easy to get a job after all those years, even with a degree. But my degree, to be fair, is like not really specific.” Katalina echoed that ambiguity by saying:
I’d say definitely the job’s (search) is a little more challenging (than the graduate school search), especially like right out of college initially, because I really didn’t know if I wanted to do something in writing or publishing or where to even start with that.

Lack of support also was a barrier to the job search. Participants described lack of support in many ways including support from the community, family/friends, and/or campus. A few participants shared that a specific family member and/or friend was not supportive of their goals which made searching challenging. Fang highlighted family pressure “They wanted me to do pre-medicine. They weren’t supportive of the choices I made there.” She decided she was not pursuing medicine and her family did not like that. Parents also did not understand the job search, like in Serena’s case, “I think I was forcing myself to do Biology because my parents wanted me to do Biology, but that wasn’t my focus. So then I was like I’m going to do business. I’m going to play it safe.”

Zachary felt that people in his environment were questioning his success by saying:

‘Oh, you didn't get that job because you did this, this and this.’ Or the other people are like showing like ‘oh look I'm getting a job.’ So those are the types of barriers. They're not like physical ones. They are not like anyone who can support you at. It's more like the mental barriers that are in place.

In addition, Gianna shared that community was a barrier “I think it is just the field I am in, isn’t always perceived very well socially. Um, I think people hear social work and they think like, ‘Oh, you just take babies away’.” The majority of participants that mentioned lack of campus support mentioned that they did not feel the Career Center offered services or resources for them. For example, Aaliyah shared that she “Blocked out the entire career service after that because I kept going to so many things, but they were all related to, you know, that area (geographic area) so I had to find a better way.”

Travis highlighted his experience with the Career Center as:

It was very much like, ‘Here’s your resume, tear it up,’...a lot of good job opportunities that they were offering catered to those nursing and business majors.
So the whole humanitarian majors and liberal studies majors, they really didn’t have much for us there.

Another participant, Dylan shared:

I did go to the career fair I think once or twice… I knew the Career Center was always there for resume building and stuff like that, but never really bothered with it because I knew what I was doing to an extent. I thought it was good for people that didn’t really know what to do.

Perception of appropriateness of fit based on career goals is important to students are they evaluate whether or not they feel supported by the Career Center.

One participant, Serena, mentioned that she felt her lack of interviewing skills were a barrier to her search:

I really feel that like the interview skill was holding me back because I wasn’t confident… (after getting the job) I’ve been 100% myself, and I give answers from the heart. I think that’s benefited me more than going into an interview and sounding like a robot. And that’s something I had to teach myself, but I wish somebody would’ve told me, when you go into an interview, be yourself.

This graduate could have benefited from Career Center or mentor guidance on interviewing to feel more confident in her skills. For participants without a natural network, support would have also been helpful.

Lack of available positions was also a concern. Graduates felt “there was nothing for me.” Some also felt that their undergraduate degree was not enough and that they needed graduate level education to find a job in their field. Zachary felt that being a male interested in becoming a history teacher was a barrier for him. He felt that many history teachers are male and that his gender did him a disservice in a male-dominated path. For Olivia, waiting to get her RN license was a barrier because she felt that by the time she got her license nothing was available.
A few participants felt that experience was a concern. Xia shared “I could find things, I felt like. But I felt like sometimes I was applying to things that maybe I wasn’t qualified for, but I would just apply anyway.” Aaliyah highlighted the experience conundrum for new graduates as a barrier. She shared “That’s what I was struggling with. I’m like ‘I don’t understand how you guys want us to get the degree, but of course we’re not going to have any experience.’ It didn’t make any sense.” Interestingly enough, Aaliyah had research experience and felt this way. Fang echoed this saying “even an entry-level job expected you to have experience.”

Participants also described employer-related barriers including their assumptions and quality of experiences/legitimacy. Xia described an assumption that employers made about her age, “I was older and when people would call me for an interview and then realize that it was a job that wasn’t paying much… I just wanted any full-time job.” Legitimacy of organizations/positions were also a concern. Parker shared there are a lot of “fake opportunities.” Another participant mentioned that is very difficult to “vet every opportunity.” Ian said, “I wish employers were a little more truthful.” Dylan and Hunter echoed this by sharing job postings are inaccurate, “employers not listing jobs accurately.”

One of the biggest barriers to the search by employers is lack of response. Participants recognize the high volume of applicants (even it if may be intimidating). But they describe applying like “It was a lot of sendoff the resume into a black hole, and hope (Quinn).” Yasmen echoed this saying, “They ghosted me. They just were unresponsive.” Travis mentioned the notion of gatekeeping in terms of the application process:

The difference between someone going to the next level and someone staying where they’re at are them maneuvering over the gatekeepers…gatekeeping to get to the next part, even if they make no sense, just know that you have to go through the gatekeepers to get where you want.
Frustration with the lack of ability for a candidate to grow from an experience due to lack of response was also shared “you apply to a lot of positions, and get rejected, but you have no reason why…you have no idea what you did wrong. So, how can you ever get better? (Ian)” Some quantifiable examples were shared by Michael and Xia. Michael said:

I applied to, I don’t know 25, 30 places and I didn’t get an email back from most of them. I only got one interview out of it…it was kind of disheartening to just hear complete silence from all the places. I’m still getting emails, two years later saying, ‘Hey, we’re rejecting your internship application.’ I’m like, ‘what?!’

Xia echoed that experience by mentioning:

There was not a lot of return of interviews considering the volume of jobs I applied to. So say I applied to maybe 45 or 50 jobs, and I probably got like four or five interviews out of that. Not much.

Participants would like more transparency and response in the searching process to avoid these barriers.

Wade and Vincent mentioned that relocating for work was also a barrier due to unfamiliarity with the location and also lack of contacts. Both of these participants relocated to their desired geographic area and then sought opportunities. This took two to six months to secure. In relation to proximity, Wade shared:

If you’re not there, if you’re not in that location, which is why I moved to D.C and that proved to be the right decision at the time. If you're not there in the location you're attempting to get to, that is probably the biggest barrier because it limits your ability to meet with people face-to-face and sort of generate that rapport, create that relationship.

This assisted in helping Wade to get contacts in the area he was seeking, but it was challenging.

Participants also expressed their own anxiety was a barrier. Serena shared that she “psyched myself out” of applying for a probation officer position. Yasmen had this same
experience with the DAT for dental school. In addition, a participant shared that they had anxiety about not getting a job.

**Success.** Success can be defined in many ways. In this research, participants mentioned ways they found success in reaching their goals. These keys to success included motivation, support, networking, internship conversion, persistence and breaking out your comfort zone, “paying dues,” and creativity. Participants mentioned both intrinsic and extrinsic motivators like reaching goals, parents, money and loans.

Aaliyah shared “I had to make sure I laid out everything because I didn’t want to graduate and then have no plans, uh, nowhere to go… parent expects them to, you know, transition.”

Support was also helpful in achieving success for Emma, who was working, taking care of her family, completing internships and finishing school. She shared:

I had two interviews in a week, and they covered my shift so I could do interviews for other jobs…although it was hard, I had support people and including my place of employment that supported me throughout my school time. They would let me bring my child to work when I had to. I would do homework while I was working…If it wasn’t for the people that surrounded me I probably never <pause> would have made it.

Zachary also described the need for support in terms of cheerleaders around him for mental support:

It’s the mental support of you got to fight. It's the fight or flight at that moment. Like you got to do this. You got to rock any interview you get, even like, if it's an eight minute interview. Like you got to rock it. You got to rock that conversation in that elevator. Like that's the ultimate thing. Like you got to support yourself. You won't hurt the rest of your life.

The Institution X Career Center was also mentioned as an important area for support.

Dylan shared that the Career Center does a “phenomenal job” helping students through their search.

The importance of networking was mentioned in terms of success. Many
participants felt that they were successful in the search due to the connections they had or people that helped them. Similarly, three of the participants secured their full-time roles through their internship experiences. They were converted to full-time employees after graduation. These participants attribute their success to securing an internship and felt that they were “smooth sailing” once the internship was secured.

Wade talked a lot about the importance of persistence and breaking out of your comfort zone. He shared:

I applied on Indeed, and I was like, "Wow, I'm actually hearing back." And I replied… I remember he emailed me, and I emailed him back like a minute later… And I didn't hear back for three days, and I was like, "I'm not losing out on this frigging interview." So, I emailed him again, like I emailed him two more times. I'm like, ‘Hey, are you getting back to me or what?’ Finally, he got back to me on a totally different email and was like, ‘Hey, really sorry. I don't really use that other email. Sure, come in for this interview or whatever.’ And I was like, ‘Cool.’ And I like drove there. And me and him just like… he interviewed me, brought me in. And instead of really interviewing me, he really just talked politics the whole time.

Wade got the position. Similarly, Quinn shared an experience that she was persistent with working toward graduation, despite others’ skepticism:

My graduate school search ... so that hinged obviously on me graduating in time. I could do everything in my power to graduate or to get into graduate school. But if I didn't have an undergraduate degree, a lot of waste of time and effort. Um, So I did eventually graduate on time. And by on-time, I mean, in two semesters. It was doable, but the advising staff kind of told me that it wasn't possible… They looked at my transcripts from the past and my course equivalencies and said that, "The fastest that you can graduate is next fall." I asked for another meeting, and I said, "Hey, so here's the math that I did, and you know, I can graduate in the spring. I'm going to have to take a winter class, but that's three credits, no big deal." So the advisor really disagreed with me and said, "I don't think there's any way that this can happen." So I broke it down again. And she said, "Well, maybe." I'll never forget it. She said, "You'll really have to raise hell if you want to graduate." She didn't know at the time that I have a tattoo on my leg that says, "Hell hath no fury." I graduated in two semesters.
Quinn wouldn’t let these things keep her from her goals. On the lines of breaking out the comfort zone, Wade said:

I'm just like, "Oh, I don't really feel comfortable emailing these people," but you have to do it. And at the end of the day, no one's going to really care if an email sits in their inbox. So, I really owe it to the people I met along the way…I think a lot of it is putting yourself in really uncomfortable positions that you otherwise wouldn't. And that's something I struggled with a ton. Like it sounds dumb, but it's really as simple as like... For me like I hate like loud crowd experiences, like those freak me out. And this year prior to the pandemic and right before the end of 2019, I had a friend who would always like kind of challenge me and make me do stuff that I like typically would be like, "No, I'd rather stay home and be a hermit." And now I think I'm a more well-rounded individual. And I think that extends also into the professional space. And if you're not challenging yourself in those sorts of ways, you're going to really, really limit yourself. And I did it for a long time.

Despite not being comfortable with networking, he has found success networking to assist in achieving his goals.

A few participants mentioned the importance of “paying dues,” or working up to the position that they want(ed). For example, Wade described his internship experience, sharing:

I don't know if I can advise this, but there were times where (my supervisor) would text me and be like, "Hey, can you like right now get your car and go find the State Senator and record them?" And I remember one time I like literally left my class, like mid class. I was like, "I got to go." And I left class and went and found, I think at the time it was Senator (name omitted). And I remember I like pretended to be like a Republican and walked in and recorded her, and I got this footage of her they used it in a campaign ad or whatever.

Not only did he pay his dues during this internship experience, but he also demonstrated this while he was interning on Capitol Hill:

So yeah, I remember actually it was to the point where I was so low on money that on the weekends I would drive back to Jersey to work a few shifts and then go back to D.C that Sunday night.

While these experiences were challenging, they set the foundation of skills for his career.
Thinking creatively about career paths was also mentioned as a way to achieve success. Travis shared, “You got to grab the unconventional way and you have to be very patient with it as well.” Many examples of these were given in relation to working more than one position (one full-time and one part-time (Zachary)) or attending graduate school and volunteering (Quinn). Wade and Katalina both engaged in post-graduate internship opportunities after earning their degree to gain experience before transitioning into their next position. Natalie completed a graduate school preparation program to assist with graduate school applications. Other creative ways of thinking were by Dylan and Xia. Dylan realized that his position wasn’t ideal for his long-term goals, so he took a pay cut to work with something more in line with his career path. Xia worked hourly for a school district, so she assisted with an after-school program to get paid more (and because she wanted to).

Overcoming Barriers. Participants were asked “Do you have any suggestions on how Institution X could assist you in navigating those barriers?” Participants shared more variety of opportunities would be helpful, especially those in the Arts and Liberal Arts career cluster. They shared that a variety of fields and geographic areas would be helpful in navigating the Career Center job searching site. In addition, participants mentioned utilizing the Career Center, engaging in networking, having support and fixing Institution X issues would have assisted in overcoming the barriers that they experienced.

With the importance mentioned throughout the interviews with participants, networking came up as important in overcoming barriers, as did having support on and off campus. Quinn mentioned the importance of having an educated staff to avoid the frustrating experience that she went through being told she would not be able to graduate in time. The implications of that personally, professionally and financially were
overwhelming. In addition, a few participants mentioned that a mentoring program would be helpful. Travis shared “where you have a large African American and POC population is to maybe try to have some type of program where you pair undergraduates with graduates.”

Many participants mentioned the importance of the Career Center in helping to overcome barriers. Ryan shared “go to the networking nights, go to the career fairs, and get your name out there.” Ryan had utilized the Career Center when he was a student. Some other participants, who may or may not have used the Career Center during their undergraduate degree shared opportunities for the Career Center to help. Fang said:

We can’t force everyone to go to the Career Center, but I think that they should prepare you for work. Like realistic expectations of what those jobs you can get when you’re right out of college. Then people graduate with new expectations.

Ursula mentioned:

It would have been good to hear, ‘Hey, we have resources (for graduate school searching)’…I don’t really know anyone that went to grad school…maybe connecting people with those who went to graduate school would have been good to freely ask questions.

Connections and guidance were the biggest ways the participants saw the Career Center assisting in their search. Zachary shared:

Like I know they’re at the Career Center, but more of engagement or like a serious person that sits there and is like the guidance counselor. That checks in with their students. Says, ‘Here are the resources that we can provide.’…almost like a guidance counselor. The one that can be like, ‘Here are great resources that we have to get you there.’ Understandably, I know college students are always busy. Like they have their own different schedules, but something that it’s like makes it required, like for graduate, you have to check in with the Career Center or the like guidance counselor, people you see for graduation.

Michael shared some realism to why students may not already be engaging in Career Center events and resources “It is just up to the student. I never utilized job fairs or anything like that… which I should have, honestly. I don’t know why I didn’t. I guess I
just didn’t really pay attention to my email.” Finding a better way to communicate with students was a suggestion from Michael.

**Other.** Through the scope of this research, conversations were focused on exploring the first outcome after graduation. Since these graduates are part of the Class of 2018, they have been out of college for two to three years which led to some other codes/information. A few of the participants have already achieved their long-term goal and have been enjoying it or they have already pivoted to a new goal. For example, Quinn’s goal was to become an attorney, she is in her last year of law school and has a job offer at a law firm in New York City. Dylan had a goal of becoming a General Manager at his company, which he earned in less than two years. He has now moved on to a different position at a different company.

Also, because these participants are a few years out from graduation, many have had multiple roles/employers since graduating in 2018. Many of the participants described a few transitions that they have made since graduating. Only three are in the same role that they entered after graduating. One of those is at the same company, but has been promoted two times.

Loans and COVID-19 also were mentioned often by participants as concerns. For some, one or both of these even changed their career goals or timeline. Due to COVID-19 some participants had been laid off, forcing a career change, sparking an interest in graduate school, and/or causing unemployment. In relation to loans, Dylan shared, “I was poor. So I just didn’t want seven thousand more dollars to be charged to my student loans to be honest with you.” This is ultimately why he graduated early. Loans are also impacting decisions about when to start graduate school. Olivia shared “NP is still on the
table, but what I want to do is pay off student loans, I don’t want to keep adding loan on loan.”

**Summary of Results**

This research explored the 1,375 graduates from the Class of 2018 at Institution X using a pragmatic mixed methods approach. Overall the Class of 2018 at Institution X has a lower knowledge rate (N=632; 46%) than the NACE (2019) average of 64.8% (p.5). The majority of Institution X graduates captured by survey results were employed full-time (68.2%) or enrolled in graduate school (24.4%). This was higher than the national average represented in the NACE report for the Class of 2018. This NACE report shared that 54.5% of Class of 2018 graduates from undergraduate programs were employed full-time (2019, p.4). The next largest outcome for the Class of 2018 nationally was enrollment in continuing education (19.2%), followed by seeking (14.1%), “employed other (p.4)” (9.1%), and volunteer service/military involvement (1.7%) (NACE, 2019).

The overall Class of 2018 at Institution X was characterized by approximately 60% female students. Diverse student populations made up almost 50% of the student body graduating in 2018 including Black (16.9%), Asian (10%), Hispanic (6.8%), Multiple (races) (3.7%) and Puerto Rican (5.7%). Approximately four percent of the Class of 2018 were veterans. The largest career cluster was STEM (34.3%), followed by Public & Human Services (26.5%), Business (26%) and Arts & Liberal Arts (13.2%).

**Quantitative.** The survey respondents from the Class of 2018 at Institution X were analyzed by t-tests and chi squares. These analyses found that age, GPA, ethnicity and major were significant in relation to survey completion. Graduates with a higher mean GPA were more likely to complete the survey. Graduates with a lower mean age
where more likely to complete the survey. Asian and White graduates were more likely to complete the survey. In addition, Business majors were more likely to complete the survey.

When looking at the graduates that chose to respond to the interview request for the qualitative research, GPA and major were significant. Graduates with a higher mean GPA were more likely to respond to the interview request. STEM majors were less likely to respond to interview requests.

The outcomes of the Class of 2018 were explored using chi squares and ANOVAs. Major, gender, graduation date, GPA and age were significant in relation to positive outcomes. Business majors were more likely to have a full-time job and less likely to enroll in continuing education. The reverse, less likely to have a full-time job and more likely to enroll in continuing education was true of Arts and Liberal Arts and Public and Human Services graduates. Females were less likely to have a full-time job. They were more likely to have a part-time job and enroll in continuing education. Males were more likely to have a full-time job and were more likely to be seeking employment. August 2017 and January 2018 graduates were more likely to have a full-time job, while May 2018 graduates were more likely to enroll in graduate school. While the ANOVA indicated a difference among the groups in terms of age, there were no significant pairwise differences. Graduates with full-time jobs had GPAs that were significantly lower than graduates enrolled in continuing education.

Four multinominal logistic regressions were conducted. Throughout these analyses ethnicity was found to be insignificant in relation to post-graduation outcomes. Gender was found to be significant in Model 1. Once major was added, gender was no longer significant, suggesting the likelihood of multicollinearity between gender and
major. Model 4 showed significance in all of the IVs being tested, GPA, age, graduation date, and major in relation to post-graduation outcomes. January 2018 graduates were more likely to have full-time jobs, than part-time jobs. Arts and Liberal Arts graduates were most likely to have a full-time job in the context of GPA, age and graduation date. Public and Human Service majors were more likely to have full-time, than part-time jobs.

**Qualitative.** Twenty-six interviews were conducted from this Class of 2018 at Institution X during October and November of 2020. Approximately 60% of the interview participants were female, while approximately 42% were from diverse populations. This is comparable to the overall graduating Class of 2018, with a small decrease in the diverse student populations. Interview participants identified as Caucasian/White, African American/Black, Pakistani American, Asian/South Asian, and Egyptian American. Ethnic identity stemmed even more ways that the participants identified. Approximately 46% of the participants identified as middle class, followed by lower/middle-class (26.9%), lower class or “not great” (19.2%), and upper/middle-class (7.7%). Socioeconomic status was varied amongst ethnicity, gender and major. The only notable finding was that the two participants that identified as upper-middle class were White men. The majority of interview participants had graduated in May 2018 (73.1%). Participants graduating in August 2017 were comprised of three White males and one White female. Participants graduating in January 2018 were two White males and one Black female. The only major not to have an August 2017 or January 2018 graduation date was Arts and Liberal Arts; all of these graduates finished in May 2018.

When describing post-graduation outcomes, interview participants were most likely to have full-time jobs (50%), comparable to the survey results. Interview participants mentioned that they secured multiple part-time jobs at once (11.5%), secured
post-graduate internships (11.5%), began full-time graduate school (7.7%), balanced a full-time job and graduate school (11.5%) or balanced a full-time job and their own non-profit (3.8%). One participant, a White male, was still seeking employment (3.8%). Of the participants that had full-time jobs; nine identified as White (64.3%), four identified as Black (28.6%), and one identified as Asian (7.1%). Full-time employment was split evenly by gender and comparatively by major. Participants engaging in a post-graduate internship identified as Black female (STEM major), White female (Arts and Liberal Arts), and White male (Arts and Liberal Arts). The two participants enrolled in graduate school were both women; one identified as Pakistani American (STEM), and one identified as White (Arts and Liberal Arts). In addition, participants engaging in multiple part-time jobs were all women. Two of these women identified as Black (one Public and Human Services; and one STEM) and one woman identified as Egyptian American (STEM). Women also comprised those balancing full-time jobs and graduate school; one Black woman (Public and Human Services) and one White woman (Business). White woman (Public and Human Services) was also the identity of the participant with the outcome of part-time job and graduate school. No discernable information about career cluster and outcomes were found.

When considering the qualitative responses from participants, it was important to also explore how many of the participants had completed the Class of 2018 Outcomes Survey. Fifteen of the 26 interview participants, or 57.7% had also completed the survey. The interviews provided the opportunity to elaborate on the survey results for these individuals. Some of the interviews aligned with the survey results and others highlighted inconsistencies. A new voice was also able to be considered in the data, those that did not complete the survey. The participants identifying as Asian and Egyptian American did
not complete the survey but did participate in the interview; they were both women. Eight participants shared a consistent response in the survey and the interview. All of these “consistent” participants represented Arts and Liberal Arts, Business and STEM; Public and Human Services responses were not found to be consistent (if completing the survey). These participants were predominantly White male (62.5%), followed by White female (25%) and Black female (12.5%). Interview participants that did not participate in the survey were mostly Black women (36.3%) and White men (18.8%). Women were overall most likely not to complete the survey (63.6%). Arts and Liberal Arts participants (36.3%) were least likely to complete the survey, followed by Public and Human Services (27.2%), and then STEM (18.1%). Public and Human Services majors (42.9%) were the most likely to have an inconsistent response between the survey and interview, followed by STEM (28.6%). Women overall were more likely to have inconsistent responses (71.4%). The largest identity of inconsistent responses were of White women (42.8%) and White men (28.6%).

The interview participants were divided into four career clusters (i.e. major groups); Arts and Liberal Arts (26.9%), Business (19.2%), Public and Human Services (23.1%) and STEM (30.8%). The interview participants represented STEM and Public and Human Services similarly to that of the overall Class of 2018. Interview participants in Business had less of a representation than the overall Class of 2018 (26%), while interview participants in Arts and Liberal Arts had more of a representation than the overall Class of 2018 (13.2%). The career cluster with the most diversity was STEM, with participants identifying as female Pakistani American, White female, Black female (two participants), White male (two participants) and Egyptian American female. The Arts and Liberal Arts career cluster was mostly White female (three participants) and
White male (2 participants), with Asian female and Black male representation (one participant for each identity). Business and Public and Human Services were categorized by Black and White identifying participants only. Public and Human Services had mostly participants identifying as Black women (three participants) and White men (two participants). One participant in Public and Human Services identified as White female. The same was true for Business. Business was mostly White male identifying participants (three). Additionally, there was one Black female identifying Business major.

The stories of 26 graduates from the Class of 2018 shared a lot of great information about their search, successes and barriers. Categories/Themes were used to organize the interviewees responses. The categories/themes included education, post-graduate plans, experiential learning, other experiences, outcomes, goal alignment, searching resources, networking, search perceptions, barriers, success, overcoming barriers and other.

The category/theme education provided insights into other education-related information that students felt important to share in relation to their lived experience. Seventy percent of the interview participants had transferred to Institution X from a community college or another four-year institution. This is a large number of the participant sample. Seven of the participants that transferred identified as Black (26.9%) and 10 identified as White (38%). Participants that did not transfer identified as White (19.2%), Black (3.8%), Pakistani American (3.8%), Asian (3.8%) and Egyptian American (3.8%). When looking at transfer status by gender, eleven women (42.3%) and seven men (26.9%) transferred. In addition, it is worthwhile to mentioned that three of the transfer students were based out of majors/programs at satellite campuses of Institution X. Participants also shared information about their multiple degrees (i.e. dual-
degree, triple-degree, and second bachelor’s degree). This seemed to be evenly split between men and women that represented ethnicity categories including Black, White, and Egyptian American. Two women participants self-identified as non-traditional students which may or may not have impacted their time to degree completion. Family, illness(es) and legal issues also contributed to longer time spent working on the undergraduate degree. Interview participants with longer time spent on their degree were more often female. The majority of participants highlighted a positive experience during their time at Institution X.

All of the interview participants were working toward their career goals after they completed their undergraduate degree. Some of the participants had clear career goals and dove into them immediately, others were working toward reaching their career goals by taking a position where they “paid their dues,” by working their appropriate career ladder, or by attending graduate school to reach their goals. In addition, some participants tested the waters in their field of interest and/or in their overall major-related area. Some chose to stay in those fields and others pivoted, most commonly to something else major-related. Two participants made big changes to their career goals (outside of their related-major) after testing the waters once they graduated. One participant worked toward his goal of working full-time until his non-profit organization was able to be his full-time focus. There was no discernable differences in gender or race in regards of post-graduation plan.

When asked if they completed any experiences in relation to their educational or career-related goals, participants shared experiential learning and other experiences that they felt assisted with securing their outcome(s) after graduation and/or in reaching their career goals. The experiential learning opportunities that the participants engaged in were
internship(s), research, and clinical experiences. Most commonly, participants engaged in
internships and work (full-time and/or part-time). Work fell in the other experiences
category/theme. Other experiences in that category/theme were work study positions,
honor societies and leadership. White men and women reported completing multiple
internship(s), research, and part-time employment while enrolled at Institution X. White
men also shared that they engaged in honor societies, leadership, and full-time work.
White women also engaged in clinical and work study positions. Black women
completed research, volunteering, part-time work, internship(s), leadership and clinical
experiences. The one Black man interviewed was growing his non-profit organization
when he was a student. The three students that identified as Pakistani American, Asian
and Egyptian American were all women. The participant identifying as an Asian woman,
engaged in an internship and part-time job. The Egyptian American woman engaged in a
work study position and research. The Pakistani American woman didn’t participate in
any experiential learning and/or other experiences when she was a student. White men
were the most common to report participating in multiple internships during their degree.

Following the NACE (2019) definitions of positive and negative outcomes, the
participants’ outcomes within the first year after graduation were assessed to determine
the proper outcome category. Ninety-two percent of participants had positive outcomes.
Two participants had negative outcomes; one because they worked multiple part-time
jobs (therefore counted as “other experience,” a negative outcome according to NACE)
and one because they were still seeking employment. The graduates with a negative
outcome were a Black, female STEM major and a White, male Business major. The
participant working multiple part-time jobs was happy with each job she was working,
and these experiences helped her to refine her career goals.
In reviewing outcomes, it was also important to assess if the participants were aligning their post-graduation outcomes/experiences with their initial plans for after graduation/career goals. The majority of participants’ experiences after graduation were in alignment with their plans. A few of the participants changed their plan but kept within the scope of their major. The participants that pivoted their plans within their major included two from Business (a White male and a Black female), two from Public and Human Services (two White males), and one from STEM (a Black female) Two women participants changed their plans altogether (one Black; one Egyptian American).

Multiple resources were used in job and graduate/professional school searching. For the job search, many participants used general job searching sites (like Indeed or Monster), the Institution X job searching site, and employer websites. Specific resources were often not shared in relation to the graduate school search, with the exception of a participant sharing that they used an outside agency to assist with graduate school applications. Both of the participants that used outside agencies were female Arts and Liberal Arts majors.

Almost all of the interview participants mentioned the importance of networking. Some shared how this was very important in their search, while others mentioned the importance in general. One participant, a White male Public and Human Services graduate, shared he intentionally did not use their network for their search. The rest found success in using their network or planned to, moving forward. No discernable information about race and gender were found, as the majority of participants mentioned the importance and/or success from networking.
The interview participants were also asked about their perception of the job and/or continuing education search process(es). Seventy percent of participants shared negative words to describe the search like “difficult,” “stressful,” “overwhelming,” “tedious” and “disheartening.” One participant mentioned that the search was different than expected. Eight participants shared that they were lucky in their search process and/or it wasn’t hard/bad. No discernable information regarding race or gender was found in relation to perception of the searching process.

The biggest barriers to the job search that the interview participants highlighted were money, time, unclear goals, lack of support, insufficient skills, availability of positions/timing, lack of experience, employers, lack of employer response, relocation, and anxiety. Black women were more likely to share that they felt they had insufficient skills. Women (both Black and White) shared that time and money were barriers. White men and women found employers and employer lack of response to be barriers. White men shared relocation as a barrier. Standardized testing and first-generation status were the biggest barriers shared in relation to searching for continuing education. These barriers were identified by diverse graduates that were Black (both male and female) and Egyptian American (female). One participant shared that they did not have any barriers. Business majors were more likely to be aware of Career Center resources and services.

Motivation, support, networking, internship conversion, persistence, “paying dues,” and creativity were shared by interview participants in relation to success. Gender and race were undiscernible for most of these success factors. The exception was in internship conversion. Business and STEM majors were more likely to have the opportunity to convert from an internship to full-time employment with the same employer. White men and women were the most likely to experience this conversion
from internship to full-time employee. Five participants had shared experiencing this conversion. Four of the participants converted for employment were White.

When asked if Institution X could have done anything to assist in overcoming the barriers that they experienced, interview participants shared that providing a variety of opportunities in terms of major/field and geographic location would be helpful. In addition, they shared that the Career Center, networking, support and fixing Institution X issues would have been helpful for them. Graduates from STEM and Arts and Liberal Arts shared lack of applicable services, events and resources from the Career Center as a barrier and suggested areas for improvement to assist others in overcoming barriers.

Other datapoints came up in the interviews that were worth sharing. Ethnicity and gender did not have any discernable findings in terms of other datapoints. Since the interview participants were being interviewed between two and three years after graduation, many had achieved their career goals already and some had changed positions through promotion or finding new jobs. In addition, as interview participants reflected on their experiences their goals changed or the timeline to those goals were adjusted due to loans and/or COVID-19. In the midst of this research, the COVID-19 pandemic changed life as we knew it in the United States starting in March 2020. Interviews conducted in October and November 2020 shed light into the impacts of the COVID-19 pandemic on the Class of 2018; some were still unemployed, others lost their job and made career transitions, others adjusted their timeline for changing positions or enrolling in graduate school.

Quantitative and Qualitative Combined. When thinking about both the quantitative and qualitative data combined, mentioning that age and GPA were not explored in the interviews is important, so a qualitative perspective of these IVs cannot
be provided. Therefore, we must rely on solely the quantitative data for these IVs of significance. Age and GPA were found to be significant in post-graduation outcomes and in survey/interview completion, per the quantitative research.

Both the quantitative and qualitative data found women more likely to have a part-time job and to enroll in continuing education. Males were more likely to have a full-time job and were more likely to be seeking employment from research both perspectives. In addition, August 2017 and January 2018 graduates were more likely to have a full-time job, while May 2018 graduates were more likely to enroll in graduate school. The multicollinearity of gender and major (career cluster) can be seen from both quantitative and qualitative perspectives. Both research perspectives also shared that Public and Human Service majors were more likely to have full-time, than part-time jobs.

**Conclusion**

Overall, over 92% of the Class of 2018 at Institution X secured full-time employment or enrolled in continuing education (positive outcomes) within a year after graduation. Age, GPA, ethnicity and major were found to be significant in terms of survey completion. Asian and White graduates were more likely to respond to the survey. Business majors were most likely to complete the survey. Participants were also more likely to respond if they were younger (age) and had a higher GPA. Higher GPAs were also found when looking at graduates that responded to interview requests. STEM majors were less likely to respond to interview requests.

Major, gender, graduation date and age were significant in relation to positive outcomes. Once major was considered, gender no longer showed significance due to the multicollinearity between gender and major. Women were less likely to have a full-time job and were more likely to enroll in graduate school or have part-time employment. Men
were more likely to have a full-time job and to be seeking employment. In addition, 96% of interview participants shared at least one barrier to the searching process. Career Centers were mentioned as a key resource to assist students in overcoming barriers to the search. The COVID-19 pandemic did not have an impact on the initial post-graduation outcomes of the Class of 2018, as they began their careers before the pandemic impacted the world and the job market. Through the timing of the interviews for the qualitative portion of this research, impacts of the COVID-19 pandemic were shared and reported.
Chapter 5: Discussion

The purpose of this chapter is to summarize this dissertation research. This chapter shares a summary of the research, a discussion of the findings and conversation about the results in relation to each of the four research questions. In addition, reflections are included to relate this research to the current literature regarding post-graduation outcomes and to revisit limitations. Implications for future research and practice are also shared in this chapter.

Summary of Study

The purpose of this dissertation was to understand the post-graduation outcomes of college students at a small, Research 1 institution, Institution X, overall and then in terms of gender, race and ethnicity. A case study approach was used to explore the Class of 2018 (i.e. the case). A pragmatic, mixed methods perspective was employed to provide both quantitative and qualitative analysis of the post-graduation outcomes for graduates from all majors and backgrounds. The Class of 2018 was comprised of 1,375 graduates (N=1,375). The secondary quantitative dataset, the Class of 2018 Outcomes Survey data, about these graduates’ post-graduation outcomes (DV) was used to explore the relationships with the IVs of gender, race/ethnicity, birth date (age), veteran status and GPA. These IVs were also used to explore relationship(s) in relation to survey/interview response and/or completion. Descriptive statistics, t-tests, ANOVAs, chi squares and multinomial logistic regressions were used to explore the relationships between the IVs and DVs.

The Class of 2018 Outcomes Survey data was also used as a foundation to provide the list of Class of 2018 graduates for qualitative interviews. The Institution X Career Center emailed Class of 2018 graduates on the researcher’s behalf and graduates interested in participating in interviews reached out to the researcher directly. Stratified
random sampling was used to ensure graduates from different majors were strategically selected to provide a clear understanding of the job/graduate school searching process across multiple majors. Graduates that responded that they were interested in participating in an interview was placed in a career cluster. Twenty-six semi-structured interviews (N=26) were completed representing four career clusters: Arts and Liberal Arts, Business, Human and Social Services, and STEM. Transcription of the interviews were used and checked for accuracy by the researcher. Notes, pre-coding, and coding were used to analyze the quantitative data for this research.

The quantitative and qualitative datasets were explored separately to determine any relationships and/or themes of the data. The data was then analyzed looking at both types of data to provide the mixed methods perspective about post-graduation outcomes of the Class of 2018. The next section revisits the findings of this study in relation to the research questions asked.

Discussion of Findings

The quantitative, qualitative and combined mixed methods results were highlighted in Chapter 4 in-depth. It is helpful to revisit these findings in this section to relate these results to the research questions asked in this study.

Mixed Methods Results and Findings by Research Question. In mixed methods research, exploring the data from a quantitative, qualitative and an integrative lens (considering both quantitative and qualitative techniques) is necessary (Creswell & Plano Clark, 2018). The previous chapters describe methodology and results. This section analyzes the integrative lens, or both qualitative and quantitative research, to answer each of the research questions for this study. The integrative lens also allowed the data to be
explored in terms of converging evidence, or mixed methods triangulation (Creswell & Creswell, 2018; Yin, 2014; Yin, 2016).

**RQ1. Do undergraduate students of Institution X find employment and/or enroll in graduate school within a year after graduation?** Of the 632 respondents of this survey, 96.5% reported that they were employed (full-time or part-time) or enrolled in graduate school. According to NACE (2019), part-time jobs are not considered positive outcomes. Therefore, if we consider self-report of full-time employment or graduate school enrollment only, 92.6% of the Class of 2018 at Institution X have positive outcomes (NACE, 2019). The *Class of 2018 Outcomes Survey* explored the outcomes status of 1,375 graduates of the Class of 2018 from Institution X.

This percentage of positive outcomes was also comparable when looking at the qualitative interview results. Twenty-four of the 26 interview participants (92.3%) had positive-outcomes. It is also worth noting that Hunter mentioned that he may be considered an outlier due to his lack experiential learning opportunities, lack of understanding of the job search and lack of support from family and friends. Hunter also noted that his troubled past could have impacted his search. In the interview it was evident that Hunter did not use networking due to a lack of or perceived lack of social capital.

**RQ2. What barriers do Institution X recent undergraduate alumni face when seeking employment and/or graduate school enrollment opportunities after graduation?**

Ninety-six percent of the interview participants (N=25) shared at least one barrier to their search process. This resulted in a predominantly negative perception of the search process. Job searching barriers that were described by the participants included money,
time, unclear/unresearched goals, (lack of) experience, lack of support, relocation and anxiety. Employer-related barriers including employer assumptions, lack of available positions, lack of response, and quality of experiences/legitimacy were also mentioned as barriers. In addition, although it did not impact the initial post-graduation outcomes for the Class of 2018, the COVID-19 pandemic was seen as a barrier by participants that participated in interviews, suggesting that second outcomes or future outcomes will be impacted by this global event. Standardized testing was the biggest barrier described by participants in relation to the graduate school search.

Unfortunately, due to the information not being provided by Institution X, quantitative data was not able to be used to identify barriers to the searching process. Responses to “How did you hear about this opportunity?” “Did you have this position prior to graduation?” and “Additional comments” were not able to be provided or used for this research. For this reason the qualitative interview questions of “How did you secure this/these experience(s)?”, “When did you secure this/these experience(s)?”, “Overall, how would you describe the job/graduate school search process?”, and “Did you experience any barriers to the search process?” served as the data for this research question.

**RQ3. How can Career Centers decrease the barriers that recent undergraduate alumni face in seeking employment and/or graduate school enrollment post-graduation?** Many of the participants mentioned the importance of the Career Center in helping to overcome barriers. Some mentioned the value of using the Career Center services when they were a student while others made suggestions that the Career Center could be doing to assist graduates with the searching process. Graduates that had utilized the Career Center mentioned the value of attending career fairs and networking events.
Participants shared that having a larger variety of opportunities at these events and in job postings would be helpful, especially for those in Arts and Liberal Arts. Career Center guidance/assistance with realistic expectations of the search, preparing for the world of work, resources available and connections were areas that participants identified as important to assist in overcoming barriers. Two key areas of insight about engagement with the Career Center from the participants included: the need for finding a better way to communicate with students and the need for a positive experience with the office. A negative experience with the Career Center impacted one student in engaging with the services. It seemed that if a student felt that their major was represented well at events and in through information provided by career counselors, they were more likely to have a positive perception of the Career Center and the value. Some mentioned wishing they went to the Career Center when they were a student, but they didn’t know about the services, didn’t think about it, or didn’t have time. Three others mentioned negative experiences with other offices on campus. These were extra barriers that the students needed to overcome, which could have been avoided by Institution X faculty and staff.

Interview participants were asked “Did you experience any barriers to the search process?” and “What could have made your search for a job/graduate school easier?.” Additional prompting questions helped to explore these barriers and how Institution X could have assisted in overcoming the barriers. Some of the barriers mentioned were in relation to Institution X, specifically in terms of departmental or institutional policy issues, which are not in the purview of the Career Center. However, relationships with departments and stakeholders of Institution X could potentially assist in sharing the concerns of these graduates to assist in adjustments that could help future graduates.

**RQ4. How do the post-graduation employment and/or graduate school**
enrollment rates differ by gender and across diverse populations for undergraduate Class of 2018 alumni at Institution X, if at all? Overall, the 1,375 graduates of the Class of 2018 at Institution X were predominantly female (60%). Approximately 50% of the Class of 2018 were from diverse populations; Black (16.9%), Asian (10%), Hispanic (6.8%), Multiple (races) (3.7%) and Puerto Rican (5.7%). STEM was the largest career cluster (34.3%), followed by Public & Human Services (26.5%), Business (26%), and Arts and Liberal Arts (13.2%). The quantitative analysis of the Class of 2018 Outcomes Survey data found that age, GPA, ethnicity and major were significant in relation to survey completion. Asian and White graduates were more likely to respond to the survey. This is important to consider when thinking about outcomes. Major, gender, graduation date and age were significant in relation to positive outcomes. Females were less likely to have a full-time job and were more likely to have a part-time job and enroll in graduate school. Males were more likely to have a full-time job and be seeking employment. Gender was found to be significant in ANOVA Model 1. Once major was added to the ANOVA, gender was no longer found to be significant due to multicollinearity with major/career cluster. Ethnicity (race and ethnicity) was not found to be significant in this analysis.

The qualitative analysis highlighted a much wider self-identification of ethnicity (race and ethnicity) than the survey data provided. Interview participants identified as African American/Black, Asian/South Asian, Egyptian American, Caucasian/White, and Pakistani American and had a much broader self-identification of ethnicity. Approximately 60% of the interview participants were female and 42% were from diverse populations. One participant, a White male was seeking employment. Fifty percent of the participants reported securing a full-time job after graduation; 64.3%
identified as White, 28.6% identified as Black, and 7.1 percent identified as Asian. Full-time employment was split evenly by gender and comparatively by major. Post-graduate internships were the outcome reported by 11.5% of the participants. Both of these participants were female; one identified as Black, and one identified as White. Women were also more likely to report full-time graduate school enrollment (11.5%) and engaging in multiple part-time jobs (11.5%). These women identified as Black (2), White, and Egyptian American. Women who completed interviews were less likely to complete the survey and if they did complete the survey, they were more likely to have inconsistencies in responses between the survey and interview responses.

**Reflections and Relation to Literature**

The Institution X Class of 2018 largely secured positive outcomes (i.e. full-time jobs or continuing education) within a year after graduation. The positive outcomes were comparable across quantitative and qualitative analysis, sharing that approximately 92% of survey respondents and interview participants had a positive outcome after graduation. The survey respondents and interview participants were largely representative of the over Class of 2018. I was hoping this would be the case, but without having control over the survey and the data provided by Institution X, and by accepting interview participants based on career cluster rather than other demographics, this was not guaranteed. That being said, it is important to mention that diverse students were less likely to be interview participants (42%). This is small decrease of representation from the overall Class of 2018 distribution of graduates.

It is also important to acknowledge the knowledge rate of survey responses were approximately 46% (N=632) of the overall graduating class (N=1,375), which is higher than the national knowledge rate according to NACE (2019). Eleven interview
participants had not responded to the survey, which led to a total of 643 (approximately 48%) participant voices to this research. Asian and White students were more likely to respond to the survey while Black and Hispanic graduates were less likely to respond. Other research has found this to be a common occurrence in survey responses, so I anticipated this to be the case in this research (Jang & Vorderstrasse, 2019). However, I was surprised to see that the average age of the overall Class of 2018 was 29.5 and the mean GPA 3.3. Survey respondents were more likely to respond if they had a higher GPA and were younger in age. This may be due to perceived student success with higher GPAs. Also, since GPAs were significant in this research, it may mean that students with higher GPAs were more likely to respond to the survey because they had a positive outcome to share. Higher GPAs also responded more to interview participation requests. Connection with the institution as a younger student may have also contributed to this. What I mean by this is that students are in their late teens and early twenties often have a stronger connection with the institution they attend because they are more likely to engage in the college experience. Older students may have started college later or have started their education elsewhere and are more focused on completing the degree rather than engaging in the college experience. This may result in less of a likelihood to respond to emailed or mailed surveys.

Business majors were found to be more likely to complete the survey. This may be due to the clearer career goals that often come with majors like business and the professionalism curriculum and experiential education opportunities embedded in their degree navigation. Business majors were more likely to have a full-time job and less likely to enroll in graduate school. This could be due to career planning, gaining experience before applying for graduate school and/or the fact that the survey asked for
the primary outcome status. If the graduate was asked to select one primary outcome status, this could have resulted in capturing the full-time job, but not if they were enrolled in graduate school. From my experience working with MBA students, many MBA students work while they attend school and see working as their primary outcome.

STEM majors were less likely to respond to interview requests which ultimately resulted in the merging of the Healthcare and STEM career clusters. As I was receiving interview participation requests I was discouraged at first to see the lack of STEM responses. Many healthcare majors were responding, possibly due to outcome or my connection to those majors from other roles. Revisiting John Holland’s Typology allowed me to see the benefit of merging the two career clusters and worked nicely in this research (Holland, 1997).

Post-graduation outcomes is a complex topic to explore. ANOVAs helped to explore that complexity from a quantitative perspective. Arts and Liberal Arts graduates are most likely to have a full-time job when in context of GPA, age and graduation date. Public and Human Services majors were more likely to have full-time jobs than part-time jobs. Overall significance was identified for GPA, age, graduation date and major. One of the goals for this research was to explore the differences of post-graduation outcomes across gender and race/ethnicity. Ethnicity (race and ethnicity) was not found to be significant in this research. This could mean post-graduation outcomes to not differ by race. However, I believe that more research is needed to explore this. Institution X blends race and ethnicity into one demographic variable called ethnicity. This could have impacted the results of this research. Race and ethnicity are two commonly compared demographics in research but are also extremely complex, as we saw in this research (Klass, 2012). To combine these already complex variables does the students/graduates at
Institution X a disservice, especially when exploring race and ethnicity. In all research, we need to be exploring race, ethnicity and gender better to best account for how folks are self-identifying. It is insensitive and biased to alienate the way people define their race, ethnicity and gender by using the confines of narrow-minded selection boxes. I realize that in quantitative research some limitation is needed to avoid small Ns in groups, but as an academic community, we need to do better. This research, although only in the qualitative research, accounted for the identities of each interview participant. Many of the interview participants were confused when asked things like racial, ethnic and gender identity. As a society, we need to do more educating so our friends, family members and students who do not identify in the confines of what we are labeling them can feel accepted, appreciated and supported. We do not need to continue systemic oppression by using the White, cis-male benchmark.

Institution X is an institution that has a diverse student body. This led to Institution X being selected for this research. Institution X seems to be doing a good job at attracting and retaining diverse students. However, it is worth noting that diverse student populations made up slightly less than 50% of the Class of 2018. Socioeconomic status was something that I had hoped to explore in this research due to prior literature highlighting its impact on outcomes. Zachary noted that socioeconomic status was a big motivator sharing, “socioeconomic status shaped my identity.” This is an area for future research and support. As a country and as higher education as a whole, we must continue to attract, retain and support these students/graduates as they work toward their educational and career goals.
The multicollinearity of major and gender was found to impact this research. While in the final ANOVA model, gender was not found to be significant; recognizing that is likely due to the impact of gender on major choice and career goals. Many of the occupations (and therefore majors in the context of college) that women choose earn 10 to 37 percent less than men and can often be described as sex segregation (Democratic Staff to the Join Economic Commission, 2016; Shauman, 2016; Wharton, 2012; Whitmarsh & Wentworth, 2012). This can be attributed to choice or to lack of unbiased information about jobs and harassment in male-dominated careers (Hartmann et al., 2016; Steelfisher et al., 2019). All of these things are important to recognize in context of this research and why gender may not have been seen as significant, yet may actually be significant but already represented by major. Women are also significantly underrepresented in the STEM field, which could have also contributed to the lack of interview participants from those in the STEM career cluster (Eddy & Ward, 2017). Although decades of work and research has been done on gender equity, it is critical to continue this work and also to recognize that gender is not something that can be described solely as male or female. There are many other gender identities that should be included in research and in conversation. I wish I could have explored these gender identities in this research, but Institution X defines gender as male and female currently. Also, when asked about gender identity in the interviews, participants identified as male or female. This could be the way they identify or due to lack of comfort in sharing non-binary identities in the context of this research.

Despite women being 60% of the Class of 2018, they were less likely to have a full-time job than their male counterparts. This is not surprising based on the literature, but I was hoping this would be different. Women were more likely to have a part-time
job or to continue their education. It seems that continuing education could be due to major/career choice. For example, women are more likely to choose psychology and social work-related majors/careers (Shauman, 2016). Both of those majors often require continued education to begin the desired career. Women may also more creatively think about and piece together their career plans/trajectory. For example some of the female interview participants were engaging in multiple part-time jobs to “pay their dues” or because they enjoyed having multiple positions. For one of the participants having multiple positions also assisted with scheduling and taking care of her child. Males were more likely to have full-time job or to be seeking employment. This could mean that men are investing their energy into a full-time job search and not exploring and/or not taking part-time opportunities. They may rather be unemployed than have a part-time position.

In this research, graduation date was found to be significant. Graduates from August 2017 and January 2018 were more likely to have full-time jobs. May 2018 graduates were more likely to enroll in graduate school. This could have been due to timing of survey distribution and this research. For example, if someone graduated in August 2017, they would not receive the first Class of 2018 Outcomes Survey email until April 2018, almost eight months after they graduated. That survey could have been submitted in April 2018 or at any time until February 2019; meaning the August 2017 graduate was surveyed eight months to a year and a half after they graduated. Whereas a May 2018 graduate was surveyed for ten-months maximum. Also, many graduate schools begin an academic class in the Fall semester. A May 2018 graduate would have a three month break between graduation and starting graduate school if enrolling in Fall 2018. However, a January 2018 or August 2017 graduate could be waiting to start graduate school for nine months to a year after graduating which could impacted their outcome.
In this research, I expected students to have perceived barriers to the searching process. However, I was surprised that 96% highlighted a barrier to the job search. This resulted in a predominantly negative perception of the search process. Job searching barriers that were described by the participants included money, time, unclear/unresearched goals, (lack of) experience, lack of support, relocation and anxiety.

One of the biggest surprises to come out of this research was that the COVID-19 pandemic was discussed. When I began my dissertation proposal in 2018, I expected to study the Class of 2018 and their post-graduation outcomes using a different approach (using race, ethnicity and gender) and by exploring post-graduation outcomes of an entire class; which was not being explored at the time. There was no way to foreshadow the COVID-19 pandemic and the impact it would have on this research and the participants. As this research evolved in 2020, I had thought about COVID-19 and the impact it may have on the responses. At the time, it was assumed that although the COVID-19 pandemic was impacting the world in many ways that the data in this research would not be impacted, since the Class of 2018 would have needed to secure employment or continuing education within a year after graduation, so at the latest May 2019. While this was the case for the quantitative data, which concluded data collection in February 2019, this was not the case for the qualitative data since interviews were completed in October and November 2020. The initial post-graduation outcomes and the data on positive outcomes went unchanged. However, the quantitative data shared the impact of the COVID-19 pandemic on later post-graduation outcomes for the Class of 2018.

Many of the graduates that were interviewed expressed the need to work when they were in college to support themselves or others which often accounted for money and time. High impact practices are researched heavily in higher education especially
through survey instruments like NSSE (2015). The high impact practices often have benefits for students as they enter the job market (Kim & Bastedo, 2017). These high impact practices often include internships, service learning, leadership, study abroad and living learning communities (NSSE, 2015). Service learning, internships and senior capstones were most positively related to positive outcomes (Miller et al., 2017). If students are relying on working a part-time job, multiple part-time jobs, or full-time jobs to pay their bills, they may or may not have the ability to complete other forms of high impact practice opportunities that will help them in the long-run with outcomes. In addition, family responsibilities, especially for women and older students could take away from the ability to complete high impact practices. While work experience can contribute to positive outcomes (Muramoto, 2013), if that experience is not related to the goal, it may or may not have the same value to an employer. As educators, it is important to not only encourage these high impact practices, but to explain how/why they could be beneficial and to assist students in understanding the process of applying. In addition, we can assist students/graduates in seeing that the high impact practice, if paid, may be better for their long-term success and if feasible financially could replace the job they are currently working. Many of the students interviewed worked and did not feel they could engage in these experiences or struggled to fit them in. Another way to assist these students is stipends or scholarships to assist with funding unpaid or underpaid experiential learning opportunities. This could also assist with gaining experience, clarifying career goals and lowering anxiety.

As educators we need to help our students to overcome these barriers. In a time where students are most commonly attending college for job placement and salary expectations (Pryor et. al, 2012), all stakeholders should understand the goals of our
students/graduates and assist them in achieving those goals. Higher education was originally built on the foundation of learning for the sake of learning (Geiger, 2015). However, the goals of the students/graduates have shifted, and higher education needs to acknowledge and support these goals. Career development is something that faculty, staff and other stakeholders can assist students/graduates with, but there is a culture-shift that needs to happen to make this possible. In addition, many of the survey participants mentioned the importance of the Career Center and its services and events. The changing needs of students and has made clear importance of Career Services on college campuses (Castellano, 2014). Career Centers can serve as a strong resource for students/graduates as they navigate their searching process and even before that. I believe that an overall “buy-in” from higher education stakeholders about the value of Career Services could assist students with their career planning and outcomes success. This would also assist with referrals that would complement the advertising being done by the career development professionals. Participants mentioned needing to know the services better so evaluating marketing and communication methods, would also be valuable.

Career Centers could also assist in educating employers on student needs, perceptions and wants to assist with the employer-related barriers that participants mentioned. While each employer is different, education could assist in minimizing assumptions, bridging the experience conundrum, and attracting candidates. The more employers hear the concerns of candidates like lack of response and quality of experiences/legitimacy, the more likely the barriers can be addressed.

In relation to the graduate school search, Career Centers can also be helpful. One of the interview participants mentioned that they were the first in their family to go to college so graduate school applications were a completely foreign concept. They felt lost
when applying. Others mentioned programs that they participated in to learn about and/or assist with the application process. Career Center resources could have assisted these graduates with the application process, but the divide needs to be closed between services offered and student engagement. Overwhelmingly, standardized testing was the biggest barrier described by participants in relation to the graduate school search. It is vital to help calm the nerves about these tests, if the test is required by a school that they are applying to, and to educate them on resources to prepare. A study plan can also be helpful to provide. As educators it is also important to recognize the bias that standardized testing comes with and to advocate for change and better predictors of success to be used in the graduate school application process. Just because standardized tests have been used as an entry requirement for a long time doesn’t mean it is what should be used or is the only option to measure success.

Social capital was an overarching theme in the qualitative interviews. Participants largely shared that networking assisted them with finding their post-graduation outcomes. Some mentioned a lack of connection or social capital. Those that did not have social capital due to lack of network or due to relocation found it harder and had a more negative perception of the job searching process. Exploring outcomes in relation to social capital theory can assist in exploring structures and relationships within those structures that develop capital, especially in terms of job searching (Coleman, 1988; Granovetter, 1995). It can also assist in connecting this first searching process and its intersection with labor market research highlighting the long-term career path/tljectory.
Limitations

As outlined in Chapter 3, limitations of this research include limitations of the data, positionality and reflexivity. The limitations of the data include the broad picture of limitations of using a secondary dataset, survey development and distribution, and qualitative research. These limitations include that of validity and reliability. In mixed methods research, it is necessary to recognize the possible limitations of the research from the quantitative, qualitative and mixed methods perspectives.

In addition, this research is looking at a singular institution that is very diverse, in a very diverse location. While race and ethnicity were not strong factors in predicting outcomes for this study (outside of survey completion) they are likely important factors in universities and locations that are less diverse. The composition of the university and the surrounding area likely moderates the impact that structural racism has on outcomes, meaning that while social barriers to success are put into place against communities of color, the diversity of the university and surrounding area likely reduces these barriers so that race and ethnicity as predictors in post-graduation outcomes become less important. What this study likely shows, although not intentional, is that Institution x is doing a good job in working with a diverse population and preparing them to overcome race based barriers.

When discussing race/ethnicity and gender, highlighting that survey responses are typically from a small portion of the population that is being researched, creating bias in responses is an important consideration (Fowler, 2009). In addition, those responding to the survey may be painting themselves in a more positive light (Groves et al., 2009). Therefore, graduates with positive outcomes may have been more likely to respond and/or participate in interviews.
It is also important to mention the specific limitations of the Class of 2018 Outcomes Survey, the dataset used as the foundation of this research. Using a secondary dataset comes with its own limitations. In addition, unique limitations of missing and/or not shared data by Institution X for this research resulted in the inability to explore all of the datapoints that were originally considered for this study. For example, information on volunteer service and military service, two post-graduation outcomes options in the Class of 2018 Outcomes Survey were not provided to the researcher. On top of this, eighteen survey question responses were not provided. In addition, socioeconomic status/zip code and Honors College enrollment were not able to be used for this research. Timing of distribution of the survey could also be seen as a limitation for this research. Lastly, the ways that demographic information was asked by the Registrar at Institution X is a limitation of this research. The Registrar at Institution X provided gender information that had two responses; male and female. There are many other ways that people describe their gender identity, that was not captured. In addition, the choice to lump ethnicity and race into one “ethnicity” category could be problematic.

As a researcher, it is important to recognize one’s own impact on the research (Jones et al., 2014). Positionality and reflexivity are important in recognizing bias from my identities and professional connection to the work. As a well-educated, White, middle-class, heterosexual, 34-yearold cis-woman and a professional in career development, I acknowledge my power and privilege in this work and have explored biases that could impact this research.
Implications for Future Research and Practice

To my knowledge this dissertation is the first research of its kind; evaluating the post-graduation outcomes of a full undergraduate graduating class from a mixed methods perspective. Using pragmatism as the methodological framework for this mixed methods research was the best first to explore post-graduation outcomes of the Class of 2018 at Institution X in an effort to combine qualitative and quantitative data to paint a clearer picture of the job/graduate school search in general and in terms of race and gender. As Creswell & Plano Clark (2018) describe this research “provided a way to harness strengths that offset the weaknesses of both quantitative and qualitative research (p. 12).” This mixed methods research provided breadth and depth in exploring post-graduation outcomes (Creswell, 2007). The majority of the current research on post-graduation outcomes is either quantitative or qualitative and does most commonly does not explore race and gender in relation to outcomes. The goal of this research is to bring attention to the colorblindness and gender-blindness that post-graduation outcomes reporting is perpetuating, in an effort to solve this problem (Decuir-Gunby & Schutz, 2017). This is an area ripe for future research. Case studies are not generalizable to populations as a “sample (p.21).” Instead, the goal is to expand the understanding of theory (Yin, 2014). It would be fantastic if this research could be duplicated to see if the findings are found in other cases. This would assist with a broader understanding of post-graduation outcomes from both the qualitative and quantitative lens and to identify themes in relation to race, ethnicity and gender.

While there are any possible theories to explore this research, social capital theory and career development theory served as a strong foundation to explore post-graduation outcomes. They assisted in identifying the structural need for connections, the connection
to larger labor market trends and decision making about careers. Further exploration of post-graduation outcomes using these theories or other related to success after graduation would be valuable to explore.

This research could and should also be expanded to include socioeconomic status. Koc (2016), identified the importance of exploring socioeconomic status in relation to post-graduation outcomes. Due to data limitations, this was not able to be explored in this research, but it is an area of opportunity for future research. In addition, using data with a clearer distinction between race and ethnicity would be valuable. The larger First-Destination Survey responses as outlined by NACE (2016) would be helpful in further exploring the post-graduation outcomes, differences in outcomes by race, ethnicity and gender, and barriers/ways Career Centers can assist in overcoming barriers. A larger sample could also assist in using exploring all of the outcome options. Due to small Ns in part-time and not seeking employment, they were unable to be used in this research.

In a time where students are most commonly attending college for job placement and salary expectations (Pryor et. al, 2012) there is a call for transparency of outcomes. However data being considered relies heavily on salary data which is not the best predictor due to self-reporting and inconsistent measures (Powers & MacPherson, 2016) NACE (2016) attempted to make the data collection process for post-graduation outcomes consistent. This has made strides in reporting this information but isn’t perfect. More work is needed in defining post-graduation outcomes, making data collection and analysis consistent and sharing this information with key stakeholders in a consistent way. This work should be made especially in the first year through fifth year after graduation to fill the gaps in post-graduation outcomes and labor market data. This will
be especially important for recent graduating classes, especially as we consider the effects of the COVID-19 pandemic on short and long-term career goals and outcomes.

In research and in practice it is key to understand the data (quantitative) to identify trends and to understand the student voice (qualitative). It is also important to recognize the tradition in higher education to utilize antiquated policies and procedures that could be negatively impacting our diverse student populations. Higher education was developed in times where including women and people of color in that education was not even a thought (Wilder, 2013). While policies, procedures and structures have changed over the years, these have often been tweaked rather than fully changed. It is important to analyze the current structure of higher education, identify areas of inequality and address them. It is also important to bridge the divide between research and practice. As educators as a whole, we need to advocate for this change to better support our students and to assist them in entering, navigating and thriving in higher education. We must also assist them in obtaining their goals and reaching their post-graduation outcomes. We perpetuate this systemic oppression when we do not consider race, ethnicity and gender.

**Concluding Thoughts**

Students/graduates are more than statistics. Their experiences and stories need to be researched in a way that does not negate the complexity of that lived experience and the way they self-identify. Mixed methods research assisted me in exploring these lived experiences while also providing a more overarching perspective of the Class of 2018 post-graduation outcomes data for Institution X. To do this, we must look at things differently; research, the ways we are collecting data, reporting, what we value or perceive as success, and inclusion of all identities in research. It is also important to think about processes and policies that are negatively impacting our students,
especially our students of color, to better serve them and to avoid perpetuating the systemic oppression that has done them a disservice in the first place (DiAngelo, 2018).

As I began the dissertation process in Fall 2018, the importance of this work was evident and I could see a strong need to assist in exploring higher education and post-graduation outcomes from an “out-of-the-box” perspective to ensure the voices of all students were represented. Over the course of writing this dissertation, I would be remiss if I did not mention the impact of and importance of the events that have taken place in regard to equity and justice. While unfortunately, to our diverse students and communities of color, the oppression and injustices faced were nothing new, the Black Lives Matter Movement and the spotlight that these issues of inequality and injustice have brought stemmed much needed attention to the work that needs to be done.

Although this spotlight should have come much sooner, and quite frankly should never have to be highlighted at all, it is critical to not lose sight of the importance of this work. We must acknowledge the amazing work that is being done in many areas and also the work that still needs to be done. My hope is to contribute to this work, as small of a contribution as it may be. The current colorblindness in higher education and education overall is inappropriate, ineffective and racist. We must change that!
Appendix A

Class of 2018 Outcomes Survey - Electronic Survey

General Information

First Name(Required) *

MI

Last Name(Required) *

Student RU ID #(Required) *

E-mail Address

Please provide your e-mail address

School Name

Degree Earned

Major #1(Required) *

Major #2

Graduation Date

- May
- October
- January

Did you begin your academic career at Institution X as a transfer or freshman?
Did you use the Career Center's job and internship searching system while a student at Institution X?

- Yes
- No

Internship Participation
Did you participate in an internship during your college career?

- Yes
- No

Internship Credit or Noncredit
If you participated in an internship did you receive academic credit?

- Yes
- No

Which of the following BEST describes your PRIMARY status after graduation? Please select only ONE of the following Categories (Required) *

- Employed full time (on average 30 hours or more per week)
- Employed part time (on average less than 30 hours per week)
- Enrolled in a program of continuing education
- Participating in a volunteer or service program (e.g., Peace Corps)
- Serving in the U.S. Military
- Seeking Employment
- Planning to continue education but not yet enrolled
- Not seeking employment or continuing education at this time/Left the Workforce

Post Graduate Employment
If employed, please provide the following information concerning your employment.

Job Title
What is the title of your job/occupation?

Job Function

Organization Name
Name of your Employer.
Job Location: City

Industry

Job Location: State

Approximate Annual Salary (will be kept confidential)

Found Job Via
- Career Center
- Direct Contact With Employer (internet or other)
- Worked at the Employer in a Different Role
- Started Own Business
- Employment Agency
- Family/Friend
- Had Job During College
- Internet Job
- Board
- Internship
- Newspaper Ad
- Professor

Career Plan-If employed during some or all of your degree program, was it your goal to stay with that employer after graduation?
- Yes
- No

Start Date for Current Job

Did you receive other offers of employment?
- Yes
- No

Are you satisfied with your present position?
- Yes
- No

Graduate/Professional School Acceptance
If your PRIMARY Status is enrolled in a program of continuing education, please provide the following information concerning your education:

Enrollment Status

Field of Study
Degree Sought

University Attending

University Location (State)

University Location (Country)

Financial Award(s)
Select all that apply.

- Assistantship
- Grant
- Fellowship
- Scholarship

Total Amount of Award(s)

Volunteer Service
If your PRIMARY status is participating in a volunteer or service program, please provide the following information about your assignment:

Volunteer/Service Organization

Assignment Location

Role or title

U.S. Military Service (current service only)
If your PRIMARY status is serving with the U.S. Military, please provide the following information about your assignment:
Service Branch

Rank

Comments
We appreciate your comments about your education at Institution X

Comments
APPENDIX B
Class of 2018 Outcomes Survey - Paper Survey

October 2018

Congratulations Class of 2018 on your recent graduation!

We hope you have been successful in your search for a professional career. We would like to hear about the career path that you have chosen since graduation. Are you working full-time, continuing your education, serving in the military? Whatever you decided to do, we would love to hear about it! We invite you to take a few moments to complete the Career Outcome Survey.

Graduates who complete the survey by December 1, 2018 are eligible to win one of three Amazon $100 gift cards that we are giving away. If you already completed the on-line survey, you will be included in the raffle.

Please take a few minutes to complete the enclosed survey and return it in the business reply envelope provided. Alternatively, if you prefer, you can complete the survey on-line at...

For those graduates who are still seeking employment we also encourage you to search for jobs on RaptorLink. You can access RaptorLink on the Career Center’s website...

If you have any questions or need help with your job search, feel free to call the Career Center at... or email...

Thank you for taking the time to complete the survey.

BEST WISHES

Sincerely,
OUTCOMES SURVEY ~ CLASS OF 2018

DATE ____________________ GRADUATION DATE (Month/Year) ____________/__________

NAME ____________________ RU ID# ____________________

PERMANENT Address ____________________ Apt #: ____________________

ADDRESS City __________ State __ Zip __________ Phone# ____________________

Is this a new address since graduation? YES NO Email: ____________________

(Circle One) College of Arts & Sciences (50) School of Business (52) School of Nursing (57) University College (64)

MAJOR ____________________ 2nd MAJOR ____________________ MINOR ____________________ GPA ____________________

Did you begin your academic career at Rutgers as a FRESHMAN or TRANSFER STUDENT? Circle One

Which of the following BEST describes your PRIMARY status after graduation?

FULL-TIME (30 hour or more/week) ______ PART-TIME ______ VOLUNTEER SERVICE PROGRAM ______

MILITARY SERVICE ______ SEEKING EMPLOYMENT ______ NOT SEEKING AT THIS TIME ______

If employed, doing volunteer work or military service:

Is this a new position? Y/N (circle one)

JOB TITLE ____________________ STARTING DATE ____________________

STARTING SALARY (Kept Confidential) $ ____________________

EMPLOYER ____________________ CITY ____________________ STATE ______

INDUSTRY ____________________

FOUND JOB VIA (Circle one) 1-Career Center Event / Interview 2-Internet 3-Professor

4-Family/Friend 5-Employment Agency 6-Direct Contact

7-Internship 8-Other ______ 9-Had job during college

GRADUATE/PROFESSIONAL SCHOOL ACCEPTANCE

ENROLLMENT STATUS? FULL-TIME____ PART-TIME____ FIELD OF STUDY ____________________

SCHOOL ____________________ STATE ______

DEGREE SOUGHT (Circle One) MA/MS MBA MSW PHD JD MBA/JD MD DO DDS OTHER ______

SCHOLARSHIP____ ASSISTANTSHIP____ FELLOWSHIP____ GRANT____ AMOUNT $ ____________________

Future plans for Graduate Study (within 3 years) YES NO

COMMENTS about your education at Rutgers/Camden use reverse side.

Please return survey to Rutgers University ____________________ ____________________ ____________________ ____________________ ____________________ ____________________
Appendix C
Institution X Outcomes Survey Reports by School

A1: College of Arts and Sciences- Outcomes Report- Class of 2018

- Employed: 52%
- In Graduate School: 46%
- Seeking Opportunities: 2%

- Salary Range: $23,712–$70,000
- Average Salary: $44,145
- Median Salary: $45,675

Geographic Areas of Employment:
- New Jersey: 68%
- Pennsylvania: 24%
- Other: 8%

Industry Areas of Employment:
- Education: 29%
- Health Care: 15%
- Tech/Information Technology: 12%
- Social/Human Services: 10%
- Financial Services: 6%
- Law Enforcement & Security: 5%
- Scientific/Biotech & Pharmaceuticals: 5%
- All Other: 17%

Outcome information was obtained from 42.5% of the 766 graduates from the class of 2018 up to 6 months after graduation.
TOP EMPLOYERS AND GRADUATE SCHOOLS

EMPLOYERS

Amazon

American Airlines

ASRC Federal

Atlantic County Sheriff Office

Avon Elementary School

Bancroft Neuro-Health

Bayada

Bellwether Behavioral Health

Bloomberg LP

Camden County Sheriff’s Office

Center for Family Services

Children’s Hospital of Philadelphia

Christiana Care Health System

Collingswood Public Schools

Comcast

Cooper University Health Care

Department of Children and Families

Einstein Healthcare Network

EMSL Analytical, Inc.
Enterprise
Freedom Mortgage Corporation
Hewlett Packard Enterprises
Independence Blue Cross
Jefferson University Hospital
Lockheed Martin
Moody’s Analytics
Moorestown Friends School
Moss Rehabilitation
Naval Surface Warfare Center
NEST
SEI
TD Bank
The Arden Theater Company
The Kimmel Group
University of Pennsylvania
US House of Representatives

**GRADUATE SCHOOLS**

Brown University
Columbia University
DePaul University
Drexel University
Georgetown University Law School
Hofstra University
James Madison University
Kean University
New York University
Northeastern University
New England Law
Rowan University School of Osteopathic Medicine
Rutgers Law School
Rutgers University–Camden
Rutgers University–New Brunswick
Seton Hall University School of Law
Temple University School of Pharmacy
Texas Tech University
The University of Arizona
Thomas Jefferson University
University of California
University of Maryland Carey School of Law
University of Massachusetts–Amherst
University of Missouri
University of Pennsylvania

University of Rhode Island

University of Southern California

Widener University
A2: College of Business- Outcomes Report- Class of 2018

97% Employed or in Grad School

- 93% Employed
- 4% Graduate School
- 3% Seeking Opportunities

Salary Range

- $35,000–$70,000
- $47,625 Average Salary
- $45,000 Median Salary

Salary Averages by Degree

- Accounting: $54,944
- Business Administration: $39,290
- Finance: $49,036
- Management: $46,920
- Marketing: $42,315

Geographic Areas of Employment

- New Jersey: 70%
- Pennsylvania: 21%
- New York: 4%
- Other: 5%

Industry Areas of Employment

- Financial Services: 12%
- Accounting: 8%
- Business Services: 7%
- Automotive: 6%
- Education: 6%
- Retail/Wholesale: 6%
- Real Estate: 5%
- Health Care: 4%
- Banking: 4%
- Food Service: 4%
- Insurance: 4%
- All Other: 44%
- Government, Transportation, Consulting, Hospitality

Outcome information was obtained from 61% of the 365 graduates from the class of 2018 up to 6 months after graduation.
TOP EMPLOYERS AND GRADUATE SCHOOLS

EMPLOYERS

Accenture

Apple

Aramark

Baker Tilly

BAYADA Home Health Care

Bloomberg LP

Bristol-Myers Squibb

Day & Zimmermann

Deloitte

EisnerAmper

Enterprise Holdings

Fastenal

Federal Reserve Bank of Philadelphia

Freedom Mortgage

GEICO

Heffler, Radetich & Saitta

Holman Automotive, Inc.

J&J Snack Foods Corp

Janney Montgomery Scott LLC

JPMorgan Chase & Co.

KPMG
Lockheed Martin
Merrill Lynch
Moody’s Analytics
Oracle
PNC Bank
Pricewaterhouse Coopers LLP
Subaru of America
TD Bank
Tucker Company Worldwide
U.S. Vision
Urban Outfitters
Vanguard
Wawa Inc.
Wells Fargo

GRADUATE SCHOOLS

Arizona State University
La Salle University
Fitchburg Statue University
Montclair State University
Pace University
Rowan University
Rutgers Business School–Newark
Rutgers School of Business–Camden
Rutgers Law School

Seton Hall University

The Ohio State University
A3: College of Nursing- Outcomes Report- Class of 2018

96% employed or in grad school

- 94% employed
- 3% in graduate school
- 3% seeking opportunities

Salary Range: $40,000–$80,000
Average Salary: $60,834
Median Salary: $63,236

Geographic Areas of Employment:
- New Jersey: 73%
- Pennsylvania: 13%
- Other: 14%

Outcome information was obtained from 41% of the 230 graduates from the class of 2018 up to 6 months after graduation.
TOP EMPLOYERS

Ancora Psychiatric Hospital
Atlanticare
Cape Regional Medical Center
Capital Health
Cedar Crest Hospital
Centrastate Medical Center
Children’s Hospital of Philadelphia
Christiana Care Health System
Clara Maass Medical Center
Cooper University Health Care
Davita
Duke University Hospital
Epic Health Services
Inspira Medical Center
Jefferson Health
Kennedy Health
Lifetime Vascular Center
NJ Department of Military and Veterans Affairs
Newark Beth Israel Medical Center
New York–Presbyterian Hospital
Penn Medicine, University of Pennsylvania
Penn Presbyterian Medical Center
Piedmont Healthcare
Preferred Home Health Care & Nursing Services
Our Lady of Lourdes
Shore Medical Center
Saint Peter’s University Hospital
Robert Wood Johnson University Hospital
Thomas Jefferson University Hospital
Virtua Health System
Appendix D
Letter of Cooperation

Date: 9/28/2020

Re: Letter of Cooperation For- Rutgers University-Camden, Career Center

Dear Ashley Forsythe,

This letter confirms that that I, as an authorized representative of the Institution X, Career Center, allow the Principal Investigator (Ashley Forsythe), with oversight by her dissertation committee, access to conduct study related activities at the listed site(s), as discussed with the Principal Investigator and briefly outlined below, and which may commence when the Principal Investigator provides evidence of IRB approval for the proposed project.

- **Research Site(s):**
  
  Institution X

- **Study Purpose:**

  This study explores the post-graduation outcomes of alumni from the Class of 2018 at Institution X. This mixed methods approach explores the job/graduate school searching process and the impact of race, gender, and ethnicity on outcomes after graduation, while considering the lived experience of the recent alumni.

- **Study Activities:**

  The Institution X, Career Center- Class of 2018 Outcomes Survey dataset will be utilized for multinomial logistic regressions (quantitative research) to explore possible relationships between data in this dataset and
demographic information of individual students, using their unique identifier. *The Principal Investigator will need access to Institution X-Class of 2018 Outcomes Survey dataset.*

Interviews will then be conducted with 20-30 alumni from the Class of 2018 (qualitative research). The Principal Investigator will provide a recruitment email to the appropriate Institution X, Career Center representative, to solicit participants from the Institution X Class of 2018. *
The Institution X, Career Center will send this recruitment letter on behalf of the Principal Investigator using an agreed upon schedule for distribution of recruitment emails (by the Institution X Career Center and the Principal Investigator).*

- **Subject Enrollment:**

  The 1,375 Class of 2018 undergraduate degree graduates, representing 35 majors will be the sample for this research. The survey results/lack of response to the survey of the 1,375 alumni will be utilized for quantitative research. Twenty to thirty alumni will also be interviewed for 30-45 minutes each (qualitative research).

- **Site Support:**

  The site (Institution X, Career Center) support necessary for this study/research would be minimal. *The site agrees to provide access to the Institution X, Career Center- Class of 2018 Outcomes Survey dataset.*

  *The site also agrees to distribute the recruitment emails for the Principal
Investigator (Ashley Forsythe) on the agreed upon timetable, using the recruitment email provided by the Principal Investigator. The timetable will include dates for email distribution (i.e. initial email, 2 weeks after initial email, 1 month after initial email, etc.- until the target number of participants are met). Dates will be determined once IRB approval is obtained.

- **Data Management:**

Quantitative- The Institution X, Career Center- Class of 2018 Outcomes Survey dataset will be utilized to conduct multinomial logistic regressions. Once the dataset is received, the names of the students in the dataset will be removed and kept in a separate, secure file for confidentiality. Student unique identifiers (RUID number) was used for the research to maintain confidentiality of the students, so their data was not identifiable.

Qualitative- Interviews will be conducted using Zoom or WebEx (preferably Zoom). Participants will be provided the link for the interview and will be asked not to log into an existing a Zoom/WebEx account and to not include their name upon login. The reason for this is because participant interviews will be recorded (with consent) via Zoom/WebEx with the participants’ camera off. By not logging into an account and not providing name, the video cannot be linked to the participant. Recordings will be sent to a transcription service without any identifying participant
information. Once transcription is complete and checked for accuracy by the Principal Investigator, the recording of the interview will be deleted.

All data will be kept in a secure file by the Principal Investigator for security. If data must be shared with the dissertation committee, it will be shared via Rutgers secure email and/or box.

- **Other:**

- **Anticipated End Date:**

Once IRB approval is obtained, research for this study will commence and the site will be asked to release the Institution X, Career Center- Class of 2018 Outcomes Survey dataset. The quantitative research will be conducted at the same time interview participants will be solicited. The goal is to solicit for interviews and begin conducting interviews as soon as possible. Once interviews are complete, site involvement in the study will end. Anticipated completion of interviews is by December 2020.
We understand that this site’s participation will only take place during the study’s active IRB approval period. All study related activities must cease if IRB approval expires or is suspended. I understand that any activities involving Personal Private Information or Protected Health Information may require compliance with HIPAA Laws and Rutgers Policy.

Our organization agrees to the terms and conditions stated above. If we have any concerns related to this project, we will contact the Principal Investigator. For concerns regarding IRB policy or human subject welfare, we may also contact the Rutgers IRB (see orra.rutgers.edu/hspp).

Regards,

[Signature of Research Site]  [Date Letter Signed]
Authorized Representative}

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<thead>
<tr>
<th>Signature</th>
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Appendix E
Recruitment Email 1

Re: Request for Participation: Post-Graduation Outcomes for College Students Interviews

Dear [insert name],

My name is Ashley Forsythe. I am a Ph.D. in Higher Education Candidate at Rutgers University-New Brunswick. I am writing to invite you to participate in my research study about post-graduation outcomes for college graduates. You're eligible to be in this study because you graduated between August 2017 and May 2018 from [insert institution].

If you decide to participate in this study, you will be asked to engage in a 30-45 minute virtual interview about your experience finding a job/graduate school enrollment after graduation. I am happy to use the virtual resource that is best for you (i.e. Zoom, WebEx). If you volunteer to participate in this research, you will receive a $25 Amazon gift card. I will video record (without picture) your interview and then we'll use the information to explore the job/graduate school search process after graduation.

Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please email at [insert email] or call me at [insert phone number]. Thank you very much.

Sincerely,
Appendix F

Recruitment Email 2

Re: Second Request for Participation: Post-Graduation Outcomes for College Students Interviews

Dear [insert name],

My name is Ashley Forsythe. I am a Career Management Specialist (Careerm) in the Career Center at Rutgers University-Camden. In addition to my role as a Career Counselor, I am a Ph.D. in Higher Education Candidate at Rutgers University-New Brunswick. I am writing to invite you to participate in my research study about post-graduation outcomes for college graduates. You're eligible to be in this study because you graduated between August 2017 and May 2018 from Rutgers.

If you decide to participate in this study, you will be asked to engage in a 30-45 minute virtual interview about your experience finding a job/graduate school enrollment after graduation. I am happy to use the virtual resource that is best for you (i.e. Zoom, WebEx). If you volunteer to participate in this research, you will receive a $25 Amazon gift card. I will video record (without picture) your interview and then we'll use the information to explore the job/graduate school search process after graduation. Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please email at or call me at . Thank you very much.

Sincerely,
Appendix G

Recruitment Email 3

Re: Third Request for Participation: Post-Graduation Outcomes for College Students

Interviews

Dear [insert name],

My name is Ashley Forsythe. I am a Ph.D. in Higher Education Candidate at Rutgers University-New Brunswick. I am writing to invite you to participate in my research study about post-graduation outcomes for college graduates. You're eligible to be in this study because you graduated between August 2017 and May 2018 from [institution].

If you decide to participate in this study, you will be asked to engage in a 30-45 minute virtual interview about your experience finding a job/graduate school enrollment after graduation. I am happy to use the virtual resource that is best for you (i.e. Zoom, WebEx). If you volunteer to participate in this research, you will receive a $25 Amazon gift card. I will video record (without picture) your interview and then we'll use the information to explore the job/graduate school search process after graduation. Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please email at [email] or call me at [phone]. Thank you very much.

Sincerely,
Appendix H
Interview Consent and Scheduling Email

Hi _______,

Thank you so much for your interest in participating in my research on post-graduation outcomes for college students!

**Step 1:**

- Please see the attached "Adult Consent for Non-Interventional Research" document. This will share information about the study, the risks/benefits of this research, confidentiality, and consent to participate for the research.

**Step 2:**

- **Option A:** If you consent to participate in the research, please select a day/time for your interview using this link: [https://calendly.com/](https://calendly.com/)

  · If you need a time outside of the times offered on the above link (Calendly), please don't hesitate to contact me to try to find an alternative time to connect.

  · Shortly after the interview is scheduled I will send you a link to Zoom for the appropriate day/time of your interview.

  · Shortly after the interview is complete, you will receive a link to a $25 Amazon gift card.

- **Option B:** If you do not consent to participate in the research, not a problem. I would appreciate if you could let me know for my records, but there is no requirement to do so.
Please do not hesitate to contact me via email [REDACTED] or phone [REDACTED] with any questions. I really appreciate your interest and hope to connect with you soon!

Sincerely,
Appendix I
Consent Form

Title of Study: Post-Graduation Outcomes for College Students: More than Numbers

Principal Investigator: Ashley Forsythe, M.S., N.C.C. & Ph.D. in Higher Education Candidate

The information in this consent form will provide more details about the research study and what will be asked of you if you choose to take part in it. If you have any questions now or during the study, if you choose to take part, you should feel free to ask them and should expect to be given answers you completely understand. After your questions have been answered and you wish to take part in the research study, you will be asked to sign this consent form. You are not giving up any of your legal rights by agreeing to take part in this research or by signing this consent form.

Who is conducting this study?
Ashley Forsythe is the Principal Investigator of this research study. A Principal Investigator has the overall responsibility for the conduct of the research. However, there are often other individuals who are part of the research team. Ashley Forsythe may be reached at [redacted] or [redacted].

Why is this study being done?
This study explores the post-graduation outcomes of alumni from the Class of 2018 at [redacted]. This mixed methods approach explores the job/graduate school searching process and the impact of race, gender, and ethnicity on outcomes after graduation, while considering the lived experience of the recent alumni.

Who may take part in this study and who may not?
Subjects must have graduated from an undergraduate program at [redacted] between August 2017 and May 2018.

Why have I been asked to take part in this study?

You have graduated from [redacted] between August 2017 and May 2018. We would love to learn more about your experience searching for a job and/or graduate school after graduation.

How long will the study take and how many subjects will take part?

For this study, we are seeking approximately 20-30 subjects to participate in one 30-45 minute virtual interview. Interviews will be conducted over the Fall 2020 semester using Zoom or WebEx (preferably Zoom).

What will I be asked to do if I take part in this study?

If you wish to take part in this research, you will be asked to complete a 30-45 minute interview via virtual means (i.e. Zoom or WebEx). The virtual platform will be decided by the subject and the interviewer.

Each interview will be recorded, with permission of the subject. The recording of the interview is mandatory, as it will be used for transcription purposes. The interview recording will be used for transcription purposes only and will maintain confidentiality. Once transcriptions are completed and checked for accuracy, the interview recording will be deleted by the Principal Investigator.

What are the risks of harm or discomforts I might experience if I take part in this study?
Loss of confidentiality is a risk of virtual research. However, proper steps will be taken to code your interview early in the process to avoid any breaches in confidentiality. We hope to provide a positive and stress-free interview experience.

Proper confidentiality measures will be used to avoid name and visual confidentiality issues in the transcription process. Ultimately, interviews will be conducted without name included in the virtual interview space and will not be transcribed using a name. Unique identifiers will be used to assist with confidentiality.

**Are There Any Benefits To Me If I Choose To Take Part In This Study?**

If you wish to participate in this research, you will receive a $25 Amazon gift card.

**What Are My Alternatives If I Do Not Want To Take Part In This Study?**

Your alternative is not to take part in this study.

**How Will I Know If New Information Is Learned That May Affect Whether I Am Willing To Stay In The Study?**

During the study, you will be updated about any new information that may affect whether you are willing to continue taking part in the study. If new information is learned that may affect you after the study or your follow-up is completed, you will be contacted.

**Will I Receive The Results Of The Research?**

If you wish to receive the results of this research, please email me at [Ashley.Forsyth@Rutgers.edu](mailto:Ashley.Forsyth@Rutgers.edu) to request a copy of the overall research, once the research/dissertation process is complete.

**Will There Be Any Cost To Me To Take Part In This Study?**

There will be no costs to subjects for participation in this study.
**Will I Be Paid To Take Part In This Study?**

You will receive a $25.00 Amazon gift card for taking part in this study according to the following schedule:

- $25.00 Amazon gift card after completion of your interview.

**How Will Information About Me Be Kept Private Or Confidential?**

All efforts will be made to keep your personal information in your research record confidential, but total confidentiality cannot be guaranteed. Ashley Forsythe and her dissertation committee (as necessary) will be the only people to have access to your personal information. Personal information will be coded to avoid direct connection with participants. The coding document will be kept separate from the data to ensure confidentiality.

Transcription of the interviews will be completed by a transcription service. The transcription service will not be provided any personal information that could connect you to your video. Videos will be destroyed after transcriptions of the interview are checked for accuracy.

**What Will Happen If I Do Not Wish To Take Part In The Study Or If I Later Decide Not To Stay In The Study?**

It is your choice whether to take part in the research. You may choose to take part, not to take part or you may change your mind and withdraw from the study at any time.
If you do not want to enter the study or decide to stop taking part, your relationship with the study staff will not change, and you may do so without penalty and without loss of benefits to which you are otherwise entitled.

You may also withdraw your consent for the use of data already collected about you, but you must do this in writing to Ashley Forsythe at

**Who Can I Contact If I Have Questions?**

If you have questions about taking part in this study you can contact the Principal Investigator: Ashley Forsythe, [email address]

or [email address]: You can also contact my faculty advisor Dr. [name], Rutgers Graduate School of Education [email address]

If you have questions about your rights as a research subject, you can contact the Rutgers IRB Director at: [email address]

**Will I Be Able To Review My Research Record While The Research Is Ongoing?**

No. We are not able to share information in the research records with you until the study is over. To ask for this information, please contact the Principal Investigator, the person in charge of this research study.
Do I Have To Give My Permission?

No. You do not have to permit use of your information. But, if you do not give permission, you cannot take part in this study.

If I Say Yes Now, Can I Change My Mind And Take Away My Permission Later?

Yes. You may change your mind and not allow the continued use of your information (and to stop taking part in the study) at any time. If you take away permission, your information will no longer be used or shared in the study, but we will not be able to take back information that has already been used or shared with others. If you say yes now but change your mind later for use of your information in the research, you must write to the researcher and tell him or her of your decision: Ashley Forsythe,

How Long Will My Permission Last?

There is no set date when your permission will end. Your information may be studied for many years.

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<th>AGREEMENT TO PARTICIPATE</th>
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Subject’s written signature is NOT required:

By beginning the interview, you acknowledge that you are 18 years of age or older, have read the information and agree to take part in the research, with the knowledge that you
are free to withdraw your participation without penalty.

Verbal permission will be asked of you at the beginning of the interview. You have the ability to decline permission at any time in the process. If permission is declined, the interview will not be conducted. If you agree to the interview, you are agreeing to participate in this research AND to have your interview recorded.
Appendix J
Interview Round 2 Email

Hi ____,

Thank you so much for your interest in participating in my research on post-graduation outcomes for college students!

I am filling interview "spots" first-come, first-served based on major. Unfortunately, I have already filled the spot for your major. That being said- it is possible that the person in the spot may not complete their interview. Would you be open to being on an Interview- Round 2 list? I would love to have you participate (I wish I could have you participate now- I just have to adhere to my research protocol). If needed, I will be pulling interview participants off the Round 2 list, as "spots" open. My goal is to complete interviewing by November 30, so you would hear back from me shortly whether or not a "spot" is available.

If you are interested in being on the Interview- Round 2 list, please follow these steps:

1. Email me to let me know you would like to be on the Interview- Round 2 list.
2. Please see the attached "Adult Consent for Non-Interventional Research" document. This will share information about the study, the risks/benefits of this research, confidentiality, and consent to participate for the research.

Please do not hesitate to contact me via email [redacted] or phone [redacted] with any questions. I really appreciate your interest and hope to connect with you soon!

Sincerely,
Appendix K
Interview Scheduling Follow-Up Email

Hi _____,

I hope you are doing well and that you had a great week! I am writing to follow-up to see if you are still interested in participating in my research?

- **If yes**, please schedule using the below scheduling link or email me some days/times you are available.

- **If no**, please let me know that you are no longer interested (which is not a problem!).

If I do not hear from you by <date>, I will plan to move to the next person on the who identified interest in participating for your major. I appreciate you considering participating in my research!

Thank you,

[Redacted]
Appendix L

Interview Round 2 Scheduling Email

Hi _____,

I am starting to move to Round 2 of interviews! Are you still interested in participating in my research on post-graduation outcomes for college students? If so, please follow the below steps

**Step 1:**

- Please see the attached "Adult Consent for Non-Interventional Research" document. This will share information about the study, the risks/benefits of this research, confidentiality, and consent to participate for the research. (FYI- You also received this previously when I mentioned the Round 2 list)

**Step 2:**

- **Option A:** If you consent to participate in the research, please select a day/time for your interview using this link: [https://calendly.com](https://calendly.com)

  - If you need a time outside of the times offered on the above link (Calendly), please don't hesitate to contact me to try to find an alternative time to connect.

  - Shortly after the interview is scheduled I will send you a link to Zoom for the appropriate day/time of your interview.

  - Shortly after the interview is complete, you will receive a link to a $25 Amazon gift card.
• **Option B:** If you do not consent to participate in the research, not a problem. I would appreciate if you could let me know for my records, but there is no requirement to do so.

Please do not hesitate to contact me via email [email] or phone [redacted] with any questions. I really appreciate your interest and hope to connect (and catch up) with you soon!

Sincerely,

[Name]

[Name]

[Name]
Appendix M
Interview Round 2 Declining Email

Good evening ______,

I hope you are doing well and staying safe! Thank you again for your interest in participating in my research on post-graduation outcomes for college students. The person that was considered a Round 1 participant for your major completed their interview successfully. I no longer need participants from you major so unfortunately I cannot move forward with an interview with you.

I cannot thank you enough for your willingness to participate! It is appreciated!

Sincerely,

[Redacted]
Appendix N
Interview Protocol

Name:
Date:
Time:
Location:

Hi, ______. How is your day going so far? <response> (Respond to the student's response). Thank you again for taking time for my interview- I greatly appreciate it. This interview will be used for my dissertation research and will not include your name or contact information. Your responses will be kept confidential, so please feel free to be as honest and share as much as you feel comfortable with. This study is to evaluate post-graduation outcomes of recent undergraduate college graduates of Rutgers University-Camden and to learn more about your experience navigating your job and/or graduate school process. I have 18 questions for you today, and this will take approximately 30-45 minutes. Do you mind if I record this interview to assist me with transcription for my research? <response> (Thank the student either way- If yes, proceed with the interview. If no, thank them for their time- cannot proceed). Do you have any questions before we begin with the interview? <response> (Answer questions, if any) Please don't hesitate to ask me any questions that you have along the way or to skip any questions that you do not feel comfortable answering.

We will start with a few questions about your education.
1. Where did you begin your undergraduate education?

2. When did you graduate? (i.e. August 2017, October 2017, January 2018, or May 2018)

3. What was your major?

4. How would you describe your experience with Rutgers University-Camden overall?

*Thank you. Now let's talk a bit about your background:*

5. How do you describe your gender identity?

6. How do you describe your race identity?

7. How do you describe your ethnic identity?

8. How do you describe your socioeconomic status?

*Thank you. Now let's talk a bit about your career goals:*

9. Prior to graduation, what was your plan for after graduation?

   • <Seeking a career-related answer; may need to probe more>

10. What educational and career-related experiences had you completed, if any, to assist with this/these goal(s)?
11. What work and/or educational experiences are you engaged in, now that you have graduated, if any?

12. Are you enjoying this/these experience(s)?

13. How did you secure this/these experience(s)? (if applicable)
   - Did anyone assist you with the process of finding this/these opportunities?
   - What resource(s), if any, did you use to find this/these opportunities?

14. When did you secure this/these experience(s)?

15. (If still seeking) What have you done to work towards your goals after graduation, if anything?

16. Overall, how would you describe your job/graduate school searching process?

17. Did you experience any barriers to the search process?
   - If yes, what were they?
   - (If yes) Do you have any suggestions how Rutgers University-Camden could have assisted in navigating these barriers?

18. What could have made your search for a job/graduate school easier?
Thank you again for assisting with my research. Do you have any questions for me? I really appreciate you taking time out of your busy schedule to answer these questions. Your participation is truly valued. <Describe next steps (i.e. transcription, destroying recordings, and gift card distribution)>
Appendix O

Interview Thank You Message (Sent from Amazon.com with Gift Card)

<Name>,

Thank you again for your participation in my research on post-graduation outcomes for college graduates! I really appreciate your help and thoughtful responses. It was a pleasure meeting you! As promised, here is your $25 Amazon gift card for your participation. Hope you enjoy this Amazon Gift Card!

Thank you!

Ashley
Appendix P
Interview Recording Destroyed Email

Good evening,

I hope you are doing well and staying safe! Thank you again for your participation in my research on post-graduation outcomes for college students. I really appreciate you taking the time to participate in the interview. Your thoughtful responses have been very helpful for this research!

As promised, in the attached consent form, I am writing to let you know that all recordings of the interview that you completed have been destroyed. Please don't hesitate to reach out to me with any questions or concerns. Thank you again for your help!

Sincerely,

Ashley

Ashley A. Forsythe, M.S., NCC

she/her
References


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