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From College to Career: Connecting Student Participation in Work-Integrated Learning with Employment Outcomes

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FROM COLLEGE TO CAREER: CONNECTING STUDENT PARTICIPATION IN WORK-INTEGRATED LEARNING WITH EMPLOYMENT OUTCOMES

By

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Love, Cassandra

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ABSTRACT

Students come to college with expectations that their experiences will help them secure a career after graduation (Eagan et al., 2016; Stolzenberg et al., 2020). Institutions offer work-integrated learning (WIL) experiences, which directly connect students' coursework to future careers (Cooper et al., 2010). Extant literature provides an abundance of evidence supporting a positive relationship between WIL and student success, including employment outcomes (i.e., Bist et al., 2020; Coker et al., 2017; Huber, 2010; Jackson & Bridgstock, 2021; Pascarella & Terenzini, 2005; Wyonch, 2020). While the overarching literature supports the relationship between WIL and employment outcomes, some studies have emphasized the possible equity effects WIL activities can provide to traditionally underserved populations such as first-generation students and those who identify as underrepresented racial minorities (URM) (Finley & McNair, 2013; Wyonch, 2020).

Using the quasi-experimental approach of inverse probability weighted regression adjustment (IPWRA) in the current study, I examined the presence of a relationship between WIL and employment outcomes at a large public research institution in the southeastern United States (n = 5,417). In addition to an overall relationship, I examine possible moderating effects of first-generation or URM status on the relationship between WIL and employment outcomes. The findings of this study show a significant negative relationship between participating in WIL and securing a job offer as well as a significant interaction between WIL and URM status. As WIL activities are widely offered at postsecondary institutions across the United States, the results of this study hold both practical and policy implications for students, faculty and staff, institutions, and funding agencies.

CHAPTER 1

INTRODUCTION

Study Context & Problem Statement

When thinking about college, one of the questions a student often asks themselves is: What am I going to get out of this? Among freshmen entering college in Fall 2019, 83.5% cited that getting a job was very important in their decision to go to college while 73.2% cited they wanted to be able to make more money, and 78.6% wanted to get training in a specific career (Stolzenberg et al., 2020). While these are the most recently reported statistics, these reasons for attending college have historically been high throughout over 50 years of the CIRP Freshman Survey results (Eagan et al, 2016; Pryor et al., 2007).

Two pathways which students can meet these goals are securing a job with a bachelor's degree and continuing their education beyond a bachelor's degree. Evidence shows that a bachelor's degree increases lifetime earnings over a high school diploma by 75% and the increase continues to grow for each subsequent degree level obtained (CEW, 2021). One possible way a student can increase their ability to meet these goals while they are still in school is by being actively engaged in their learning, both in and outside of the classroom.

Among the opportunities for engagement is work-integrated learning (WIL). Research on WIL provides evidence that participation in these activities has a generally positive influence on student success with an emphasis on how it can prepare students to enter the workforce (i.e., Huber, 2010; Pascarella & Terenzini, 2005; Waiwaiole et al., 2016; Wan et al., 2012) While some studies show that participation in WIL helps prepare students for life after college (Bist et al., 2020; Coker et al., 2017; Jackson & Bridgstock, 2021), few look beyond preparation and examine actual employment outcomes as forms of student success. In this study, I examined

whether participation in WIL can improve students' likelihood of securing a job after graduation and ultimately be a pathway to help undergraduate students meet their goals by the time they attain their bachelor's degree.

The Study

Purpose

The purpose of this study was to examine whether engagement in work-integrated learning (WIL) leads to students having higher rates of securing employment after graduation. In this study I also examined the differential effects of participating in WIL for students with minoritized identities. Lastly, this study served as an exploration into different ways in which student success can be measured, expanding the definition to include post-baccalaureate outcomes.

Research Questions

The following two research questions guided my study:

RQ1: Are students who participate in WIL more likely to get a job offer immediately prior to graduation than their peers who did not?

RQ 2: Does a student's identity as being first-generation or an underrepresented racial minority moderate any relationships between work-integrated learning and employment outcomes?

Guiding Theories

The theories I used to guide my study are Bourdieu's (1986) theory of capital, Yosso's (2005) community cultural wealth model, and Schultz's (1961) theory of human capital, providing a foundation in both higher education and human resource development literature. The concept of work-integrated learning (WIL), as defined by Cooper et al. (2010), is central to my study as it served as the intervention in which students can participate. Using these concepts and

theories along with extant literature, I explored how gaining a combination of social, cultural, and human capital via participation in WIL can lead to higher rates of securing jobs.

Methods

In this study I used a quasi-experimental research design. More specifically, I employed the inverse probability weighted regression adjustment (IPWRA) approach using case weights with regression analyses to estimate the influence of participating in WIL on employment outcomes. Data for the study were collected using a survey for graduating seniors at a large public institution in the southeastern United States. The study combines responses to questions on the survey related to WIL and employment outcomes with institutional data related to demographics and academics (i.e., GPA and time to degree completion). The main variables of interest from the survey included involvement in WIL (e.g., internships, co-ops, clinical experience, etc.) as the primary independent variable, as well as secured job offers at the time of graduation as the dependent variable.

To answer the research questions, IPWRA was used to approximate how student characteristics predict participation in WIL. I then used logistic regression models to examine the relationship between participation in WIL and employment outcomes. I ran follow-up analyses to estimate the possible moderating effects of student characteristics on any relationship between WIL participation and employment outcomes.

Definitions

As I use multiple acronyms, terms, and constructs in this study, I use this section to provide definitions for each of these items.

Work-integrated learning (WIL) – main independent variable of interest as defined by Cooper et al. (2010); derived directly from institutional survey responses and the following activities:

practicum, internship, fieldwork, cooperative education (co-ops), service learning, clinical experiences, student teaching, and apprenticeships.

Employment outcomes – a term referring to the employment status of students following baccalaureate graduation

- *Secured Job offer* – dependent variable of interest; directly pulled from the secured job offer variable on the institutional survey.
- *Accepted Job Offer* – this is an alternative variable to my main dependent variable of interest, which is used in a supplemental analysis; this variable refers to whether a student who had received a job offer had accepted the offer at the time of the survey.

Capital – a term referring to what a student can possess to make them valued or successful in society; in this study, I use definitions of capital by Bourdieu (1986), Yosso (2005), and Schultz (1961).

- *Bourdieu's capital theory (1986)* – Bourdieu developed various concepts and theories on capital and education. The three forms of capital outlined Bourdieu are economic, cultural, and social. Economic capital is directly related to money while cultural capital emphasizes knowledge and culture through various forms and social capital focuses on connections with others.
- *Yosso's community cultural wealth model (CCWM) (2005)* – Yosso's CCWM expands upon the traditional concepts of capital as outlined by Bourdieu with a critical lens. The CCWM other forms of capital in which minoritized populations possess: aspirational, linguistic, familial, social, navigational, and resistant.

- *Schultz's human capital theory (1961)* – Schultz's human capital theory refers to the investment in people through training and education which leads to the development of knowledge and skills they can use to become a productive employee. Human capital is directly convertible to an economic value.

Minoritized identities – a term referring to identities which students may hold and have traditionally been not considered the "norm" of society; holding these identities may lead to a student being traditionally underserved in higher education; examples of these identities can include, but are not limited to: first-generation, underrepresented racial minority (URM) based on racial/ethnic identities, low socioeconomic status, etc.

- *First-generation status (first-gen)* – a term used for students whose parents do not hold a college degree; this student characteristic is examined as a moderator on the relationship between WIL participation and securing a job offer.
- *Underrepresented racial minority status (URM)* - a term used for students who identify as American Indian or Alaska Native, Black or African American, Hispanic or Latinx, Native Hawaiian or other Pacific Islander, or Two or More Races; students who identify as Asian, White, Nonresident Alien, or whose race is unknown are considered non-URM; this definition is based on IPEDs definitions; this student characteristic is examined as a moderator on the relationship between WIL participation and securing a job offer.

Inverse Probability Weighted Regression Adjustment (IPWRA) – a doubly robust quasi-experimental approach to adjust for possibly confounding in the data due to selection bias.

Delimitations

In this delimitations section, I provide justification for the decisions I have made to constrain, limit, or create parameters for my study. First, I was interested in how work-integrated learning connects with achieving career-related goals. For this reason, I limited my main independent variable to WIL and not all experiential learning activities, ultimately excluding some activities which have been researched as high-impact practices in the higher education literature (Kuh, 2008). Additionally, since my data were from a survey, I matched the activities on the survey with the pre-existing work-integrated learning (WIL) framework as outlined by Cooper et al. (2010). This framework has a body of literature supporting its examination within the international higher education context, providing justification for me to use it in this study. Lastly, I chose secured job offers as my outcome of interest as this variable matches the goals cited by students entering college, is supported in the extant literature, and is specifically asked about on the survey I used for the source of my data.

When it comes to the decision for choosing controlling variables, I have selected student-level characteristics which have previously shown to be related to students' college choices, experiences, and outcomes. Additionally, I examined various student characteristics as moderating variables on the relationship between WIL and employment outcomes, as the literature suggests student characteristics may lead to variation in WIL participation and higher education outcomes. Each of these decisions are supported by my review of the literature as well as the availability of data from the institution and the survey being used.

Significance

Students

Students, both current and future, are the main stakeholders for this study. Students are the ones paying for their degrees. They are the ones who are most interested in what a degree can do for them. They are also the ones typically driving decisions which will influence whether they participate in WIL. Students should be keenly interested in the results of this study because it could benefit them in increasing the value of their degree, as it relates to securing a job when they graduate. The findings of this study may enable students to make an informed decision about the activities they engage in while at school. The results can help students see the influence co-curricular activities can have on their success immediately after college and can use this information to make their time in college more worthwhile.

Researchers

This study also provides evidence regarding links between post-baccalaureate student success and specific higher education practices. This study should mostly resonate with higher education researchers as it adds to the literature and evidence related to work-integrated learning and overall student success. The findings should also interest researchers in fields such as business and economics considering the main outcome of interest focuses on successful entry into the labor market upon graduation.

Postsecondary Institutions

Institutions should be interested in the results of this study as they are the ones hosting the co-curricular activities under study. Additionally, this study can be used as evidence to support the increase in offerings of WIL experiences by the institutions themselves if there is found to be a positive relationship between WIL and employment outcomes. Alternatively, if the

findings show a null, or even negative, relationship between WIL and employment outcomes, then institutions should examine their offerings and whether they should be providing them or if they may be able to modify them to lead to more positive results.

Employers

Employers can use this study as a way to increase, or even initiate, collaborations with institutions as they relate to offering WIL experiences such as internships and co-ops. If these activities are shown to lead to better employment outcomes, then it would be mutually beneficial for institutions and employers to collaborate and offer more of these experiences to the broader student population. This can be especially beneficial for local employers and the institution's connection to its surrounding community.

Funding Entities

Funding entities such as federal and state governments, as well community partners, should be keenly interested in the results, as offering WIL, and possibly increasing them, can be costly. As many institutions receive funding contingent on their students' success, it makes sense that entities providing funding would be interested in finding out if offering these types of activities lead to better student outcomes. If they do, then these entities will be more likely to provide funding for institutions to implement these opportunities for students. If the results show a null or negative relationship between WIL and employment outcomes, then these entities will be likely to ask why these activities are being offered if they are not beneficial.

Summary/Organization

In this study I investigated whether involvement in WIL leads to an increased likelihood of securing a job. Guided by theories of capital and the conceptual framework of work-integrated learning, I used a doubly robust IPWRA approach to analyze institution- and student-supplied data from two cohorts of graduating seniors. The results can provide guidance for a wide range of stakeholders.

In the next chapter, I examine the existing literature related to students' purpose for attending college, current trends in employment outcomes, and evidence supporting participation in work-integrated learning. Using the extant research, I outline theories which guide my study through the idea of improving employment outcomes by participating in WIL while still in school. In the following chapters, I provide details about the study's data, analyses, and interpretation of the findings.

CHAPTER 2

BACKGROUND & LITERATURE

Overview

Student success can be defined broadly, from year-to-year retention to lifetime earnings. In this study, I focused on the outcome of receiving a job offer immediately prior to Bachelor's degree completion. To examine student success from this lens, it is important to review students' goals for college, corresponding employment outcomes, and what students can do throughout their undergraduate degree to improve these outcomes.

In this study, I built on the concepts of social and cultural capital as defined by Bourdieu (1986) and Yosso (2005), human capital as described in the human resources literature (Schultz, 1961), and work-integrated learning as outlined in the economics of education literature (Cooper et al., 2010). I used the various capital concepts to guide my examination of how participation in work-integrated learning (WIL) activities can connect with increased chances of gainful employment at the time of graduation. This chapter starts by providing a beginning and an end to the "story" of students' college journey: why students go to college and the state of post-baccalaureate outcomes today. I then examine extant literature connecting empirical evidence of WIL activities to the theories and concepts related to social, cultural, and human capital. By reviewing the existing literature and its connections to my guiding theories and the conceptual framework of WIL, I am able to find support for participation in WIL activities and their connection to student success. While the literatures speaks toward the purpose of WIL activities as preparing students to work once they graduate, few studies look at whether participation in these activities connects with actually securing job offers. I used these guiding theories of capital

and their connection with work-integrated learning to inform the methods and interpretation of my study.

Why College?

In UCLA's 2020 report from their Higher Education Research Institute's (HERI) Freshman Survey, 83.5% of students cited getting a job was very important in their decision to go to college, 78.6% wanted to get training in a specific career, and 73.2% wanted to be able to make more money (Stolzenberg et al., 2020). Historically, reasons for attending college related to a career have been cited by the majority of students who take the CIRP Freshman Survey, many more than those who say "to please my family" or "to make me a more cultured person" (Eagan et al, 2016; Pryor et al., 2007; Stolzenberg et al., 2019a; 2019b; 2020). Although securing employment is not the only reason students are going to college, it is one of the most prominent and consistent goals for incoming college students.

Demographic Differences in Postsecondary Goals

While the results from the CIRP Freshman Survey provide an overview of why the general population goes to college, students with varying characteristics may differ in their motivations for attending college, ranging from securing a career to helping to support their families (Bui, 2002; Eagan et al., 2017; Pryor et al., 2007). Bui (2002) found that students who identify as first-generation were more likely to cite goals related to helping their families out financially than their continuing-generation peers. Surveys such as the Baccalaureate & Beyond (2016/17), National Postsecondary Student Aid Study (2016), and Beginning Postsecondary Students Longitudinal Study (2012/17) administered by the National Center for Education Statistics collect data related to students' characteristics, plans for college and beyond, and post-baccalaureate outcomes. When asked about employment aspirations after graduating, female,

URM, Pell-eligible, first-generation, and students in the business or humanities fields cited employment plans at higher rates than their peers (NPSAS:16, 2018).

However, this emphasis on employment outcomes does not necessarily translate to getting a job. The majority of students begin college with goals related to securing employment, but do not always meet these goals. For this reason, I look to the literature about employment after graduation to determine whether goals are being achieved, and by whom.

Employment Outcomes

In the 2016-2017 Baccalaureate & Beyond, 2016 National Postsecondary Student Aid Study, and the 2012-2017 Beginning Postsecondary Students Longitudinal Study, NCES examined whether students actually meet these goals via their national surveys. In 2020, over 2 million students graduated with their bachelor's degree in America (U.S. Department of Education, Table 322.10, 2021b). Most of these students aim to secure a job (Fregoso & Lopez, 2020; Lozano & Tilman, 2016). According to the Baccalaureate and Beyond survey, over 90% of students were employed within a year of graduating (NCES, 2019a). In a follow-up survey 5 years after students started college, over 60% of the respondents reported that they were employed in a job that matched their intended area from five years earlier (NCES, 2019b).

Since 2010, the unemployment rate has decreased for all individuals, no matter their educational attainment, but those with a bachelor's degree or higher consistently have lower unemployment rates than anyone else (NCES, 2021a). Among the 2021 reports, the Bureau of Labor Statistics (BLS, 2022) also found that among the population 25 years and older, citizens with a bachelor's degree or higher had an unemployment rate of 3.1% as compared to high school graduates at 6.2%.

A similar pattern emerges with regard to earnings over the last decade, yet the Center for Education and the Workforce (CEW) (2021) continues to find that a person with a bachelor's degree will earn nearly 75% more over their lifetime than a person with just a high school diploma. The CEW (2021) does note that these earnings differ by field of study and other demographics, but the overall finding is that a college degree will lead to larger lifetime earnings. Additionally, the BLS (2021) finds that full-time workers with a college degree make nearly 65% more than those with a high school diploma on their median weekly earnings, and these differences only increase with higher degree levels. Evidence shows that lifetime earnings grow with each subsequent degree-level with the caveat that certain fields of study can earn more with a lower degree-level (CEW, 2021). The data consistently show that a person will have better employment and earning opportunities if they hold a bachelor's degree or higher. These increased earnings, however, depend upon students securing employment after completing their bachelor's degree. If students could increase their chances of securing a job by participating in work-related activities while in college, then they would also be increasing their chances of securing higher earnings.

Demographic Differences in Employment Outcomes

Evidence shows that there are differences in employment outcomes for students with various characteristics. When broken down by demographics, the results show that females, non-URM, non-Pell, and continuing-generation students reported employment at a higher rate (NCES, 2019a). Simultaneously, students who studied science or business reported employment at higher rates as compared to students who studied the social sciences or humanities. When looking at unemployment rates by demographics for those with a bachelor's degree or higher, the BLS (2022) also found that women (3.1%), Black or African American (4.4%), Asian (3.4%),

and Hispanic or Latino (3.9%) civilians had higher unemployment rates as compared to white (2.8%) or male (3.0%) counterparts. In addition to differences in outcomes by student characteristics, students may also struggle to reach their employment goals if their knowledge and skills do not match employers' expectations.

Employer Expectations vs. Employee Skills

Multiple studies provide evidence that there is frequently a misalignment between employers' expectations of newly graduated students' skills entering the career force (Abbasi et al., 2018; Bist et al., 2020; Garber, 2003; Jackling & De Lange, 2009). Employers often cite the need for students to have skills which align with competencies such as those set forth by the National Association of Colleges and Employers (NACE, 2022), yet students do not seem to be meeting that need (Koc & Konz, 2009; Pittenger et al., 2006). Students also recognize they need to develop those same skills employers expect (DiBenedetto & Willis, 2020; Lisá et al., 2019). A recent study by the Multi-Institutional Study of Leadership found that while students felt they had developed skills related to oral/written communication, teamwork/collaboration, and leadership, they also recognized the need for further development in these areas (Hoag, 2018). Both employers and employees/graduating students recognize the need for skills like the NACE competencies, yet there is a gap in the actual attainment of these skills.

One frequently promoted mechanism to help students develop employer-valued skills and knowledge is work-integrated learning (WIL), a collection of activities like internships and practicum, which intended to directly connect workplace and learning environments.

Work-Integrated Learning (WIL)

Work-integrated learning (WIL) activities connect the idea of experiential learning while in college with workforce development, which can improve employment outcomes for those who

participate in them. Cooper et al. (2010) defined work-integrated learning as "… a process of integration between workplaces, higher education institutions, government, business and industry…" (p. i). Within their WIL framework, Cooper et al. (2010) include the following activities in which students can participate: practicum, internship, fieldwork, cooperative education, field education, sandwich course (WIL course in between semesters), service learning, and international service learning. When defining the activities which count as WIL, Cooper et al. (2010) mention that terms such as 'internship' and 'practicum' are often used interchangeably, as they are similar activities. For an activity to fall within the WIL framework, it must address the following seven dimensions: purpose, context – the workplace -, integration, curriculum, learning, partnerships, and support. These dimensions ensure that the activity has clear outcomes, is connected to both the work environment and the student's curriculum, fosters learning, and provides support to the students. Cooper et al. (2010) emphasize that if an experience is not connected to the curriculum, does not promote learning, or is not experiential, then it cannot count as work integrated learning.

In providing resources on what WIL looks like in practice, Cooper et al. (2010) also provide three models which can be used for categorizing and offering WIL: professional programs, service learning, and cooperative learning. Professional programs include activities in which there are regulations governing entrance to the field, often by some sort of credentialing board. WIL for professional majors (i.e., nursing, education, law, and engineering) would fall under this model (Cooper et al., 2010). The second model, service learning, focuses on civic engagement through connections between the curriculum and partnerships with the community. The final model, cooperative learning, is often an elective option for students where they can receive credit for combining work at a job placement with classroom learning, with a focus on

combining theory and practice (Cooper et al., 2010). Across all three of these models, Cooper et al. (2010) define work-integrated learning as a group of practices in which students can engage throughout their time in college directly connecting their learning to workforce experiences.

WIL has been an increasingly common topic in the literature over the last decade or so as the emphasis on graduate employability has grown (i.e., Clegg, 2011; Choy & Delahaye, 2011; Ferns et al., 2014; Smith et al., 2015; and Tomlinson, 2008). While this framework has been adopted more frequently in an international context than it has in the US, research on practices which fall within the framework has been published for decades. Though not necessarily using the term WIL, research related to activities such as internships, co-ops, practicum, and field experiences often use these terms interchangeably (i.e., Briel & Getzel, 2001; Main et al., 2019; Ryan et al., 1996; and Wan et al., 2012). Recognizing the transposable nature of these terms across the literature, I reference research that explicitly uses the WIL framework as well as literature examining individual activities which fall within the WIL framework in this review. The extant research on WIL and activities which are included in the framework focus on who has access to these activities, what students get out of these experiences, and overall connections to the workforce. In the following sections I provide a review of this literature and how WIL connects to students' postsecondary goals related to entering the workforce.

WIL and Employment Outcomes

The extant literature shows that participation in WIL generally has a positive relationship with student success, inclusive of outcomes related to the labor market. Literature pairing involvement in experiential learning activities like WIL and student success often look specifically at traditional measures of success such as GPA, retention, and graduation rates (i.e., Huber, 2010; Kuh, 2008; Pascarella & Terenzini, 2005; Waiwaiole et al., 2016). Other studies

show that engagement in experiential activities often leads to greater academic and social outcomes while students are in college (Bowman, 2011; Cabrera et al., 2002; Kilgo et al., 2014; Valentine et al., 2021; Zhao and Kuh, 2004). Many of these studies also look at specific WIL such as internships and field experiences (i.e., Bist et al., 2020; Coker et al., 2017; Jackson & Bridgstock, 2021), providing evidence that these activities are positively related to college success.

Using student-level data, Parker et al. (2016) found that participating in internships led to statistically significant increases in fourth-year GPA, with the strength of the positive relationship varying based on both student and institutional characteristics. Astin et al. (2001) performed a mixed methods study examining the relationship between service-learning and student success. Using longitudinal data, Astin et al. (2001) found significant positive effects of participating in service-learning on measures such as GPA, critical thinking, self-efficacy, and leadership, with most results significantly increasing if the service were directly connected to a course. In both the quantitative and the qualitative case study portion of their study, Astin et al. (2001) found that providing the opportunity to process the experience is important to the impact of the experience on the student. Through a meta-analysis of 62 studies exploring the effects of service-learning on students, Celio et al. (2011) found positive relationships among several outcomes, including self-efficacy, learning, social skills, and academic performance. Similarly, when examining the choice to participate in WIL, Ramirez et al. (2016) found that students' positive perceptions on the likelihood of a co-op influencing employment outcomes affected their choice to participate in the first place. In studies specifically looking at co-ops for engineering majors, both Main et al. (2019) and Ramirez et al. (2015) found that participation increased GPA as well as the likelihood of graduating within the engineering major.

In addition to contributing to traditional measures of student success, these studies provide evidence connecting participation in WIL to career readiness. Bist et al. (2020) interviewed senior managers who stated that interns possessed career readiness skills such as self-management, critical thinking, and a will to learn. Also using survey data, Jackson and Bridgstock (2021) asked graduates about what they valued from their participation in WIL activities. The survey responses revealed that graduates valued the experiences and skills gained from their WIL activities, with internships being perceived as enhancing employability. Even so, student success in these studies seems to only go as far as being prepared for a job and does not make the connection to actual employment outcomes. In a longitudinal study of hospitality and tourism students with internship placements in Taiwan, Wan et al. (2012) found that students' participation led to personal growth and students obtaining career-related competencies.

In a study surveying business school alumni from an institution in the United States, Gault et al. (2000) found that students who participated in internships said their internships provided them career preparation in the areas of computer applications, creative thinking, job interviewing, job networking, and relationship building. In a survey study using the terms internship and practicum interchangeably, Simons et al. (2012) reported that students participating in practicum increased their multicultural awareness, gained skills in connecting their coursework to the field placement, and both students and supervisors valued the experiences similarly. Simons et al. (2012) also collected qualitative data via their survey, finding that supervisors believed the internship enabled students to develop interpersonal and communication skills and that 38% of interns were hired at their placement site after the internship. By expanding the definition of student success beyond graduation, I was able to find existing literature directly connecting participation in WIL with employment outcomes.

Since the purpose of work-integrated learning is to connect students' learning to their future careers, it makes sense that much of the existing research connects participation in these activities to employment outcomes. Smith et al. (2015) found that employers perceived students who participated in WIL to be more "work-ready" as compared to students who did not participate, citing their attainment of essential skills, ability to connect theory to practice, and commitment to the job and workplace as being positively influenced by their participation. Jackson (2017) found that participation in job placement WIL experiences helped students to develop what they described as a "pre-professional identity".

Using data from a national survey of recent alumni in Canada, Wyonch (2020) found that students who participated in co-ops were significantly more likely to enter the workforce in a field related to their field of study, were less likely to switch jobs within three years of graduation, and have a higher salary than those who did not participate in a co-op. Similarly, in a survey filled out by 155 recent hospitality alumni from a public institution in the U.S., Dickerson and Kline (2008) found that students who participated in a co-op were most satisfied with their job, had higher salaries, and had higher job retention if the co-op was directly tied to a course within the students' curriculum. Gault et al. (2000) also found that students who participated in internships reported both higher starting and current salaries than students who did not participate in internships.

While not all of the studies described above examine direct measures of employment outcomes, they provide positive evidence connecting WIL to various measures of student success, which should ultimately set a student up to be more successful in securing employment. These studies show generally positive evidence connecting WIL and outcomes, yet students with varying characteristics face barriers to WIL participation in the first place.

Differences in WIL Participation

I also explored the literature surrounding WIL access, participation, and outcomes for students with diverse characteristics. I have included WIL literature from international contexts as this research explicitly looks at these activities collectively as a group of activities which should promote better employment outcomes. To understand WIL participation and experiences within the American higher education context, I also considered research on the individual activities which are included under the WIL umbrella.

Data from multiple sources documents the frequency with which students participate in WIL activities. In 2017, NSSE reported the following participation rates for activities considered WIL: 52% of first-year students and 60% of seniors participated in service-learning, while 48% of seniors had done an internship (Kinzie & Gonyea, 2018). According to the 2016-2017 Baccalaureate & Beyond survey over 10% of recent graduates participated in a co-op, 15% in a practicum, 28% in a paid internship, and over 30% in an unpaid internship. These various reports show that many students participate in WIL activities across the nation. But not all student populations participate at similar rates.

Using NSSE data, Kinzie and Gonyea (2018) found that 52% of white senior students participated in internships while the next closest participation rates were 47% for multiracial students and 44% for Asian students. These differences are especially stark when compared to the fact that around 70% of first-year students of all races expected that they would participate in an internship (Kinzie & Gonyea, 2018). Baccalaureate & Beyond (NCES, 2019a) results show that participation differs not only by demographics, but also by WIL type. The survey results show that only 10-15% of students participate in activities they considered co-ops or practicum while approximately 30% of students participated in some form of internship. When it comes to

internships the results of the Baccalaureate & Beyond survey show that males, non-URM, non-Pell, and business majors reported being paid for their internship while females, URMs, Pell-eligible, and humanities majors cited unpaid internships at higher rates (NCES, 2019a).

The extant literature provides sparse information related to which students participate in WIL by field of study. Itano-Boase et al. (2021) found that the majority of WIL opportunities available in Canada were in business or STEM fields. Findings from the 2016-17 Baccalaureate & Beyond show that participation by field of study varied depending on the type of WIL activity, but internships were consistently the activities with the highest participation (NCES, 2019a). While internships were the most common WIL activity, students in science and business participated in paid internships more often while students in social sciences and humanities participated in unpaid internships at higher rates (NCES, 2019a). Data from NSSE similarly indicate that STEM, education, and health majors were more likely to participate in WIL activities such as internships or field experiences than students in the humanities or social sciences (NSSE, 2021).

Participation rates in WIL are generally lower for students who identify as women (Moylan & Wood, 2016; Newhook, 2016; Taylor et al., 2015; Walters & Zarifa, 2008), with differing abilities (Cocks et al., 2015; Cocks & Thoresen, 2013) and those who identify as LGBTQ (Messinger, 2004). Using an ecological approach within Canada, Itano-Boase et al. (2021) found that WIL participation was lower for marginalized populations, but most significantly so for women and Indigenous students. Using NSSE data, McCormick et al. (2017) found that Native Hawaiian or other Pacific Islander identifying students participated in service-learning at the higher rates as compared to their peers. While McCormick et al. (2017) found this result for service-learning, they found that white students overall participated in “high-impact

practices" at the highest rates, with American Indian or Alaska Native students participating at the lowest rates.

First-generation students also consistently reported lower rates of participation in WIL activities than their continuing-generation peers (NCES, 2019a). This finding is also supported by NSSE reports which consistently find that first-generation students participate in WIL such as internships at lower rates than their peers (Kinzie & Gonyea, 2018). Continuing-generation students were 1.3 times as likely to have participated in an internship or field experience, a finding that has been rather consistent since 2007. Nevertheless, first-generation students are more likely to be involved in service-learning, but less likely to have participated in any other WIL activities on the NSSE (2021) survey. NSSE's most recent report shows that only 54% of first-generation students participate in what NSSE calls "high-impact practices" (which include WILs like internships, field experience, and service-learning), as compared to 67% of their continuing-generation peers (NSSE, 2021). Collectively, this body of literature shows that participation in WIL activities is lower for traditionally underserved groups across the board.

Just as participation in WIL differs across student populations, so too do the outcomes associated with participation.

Differences in WIL Outcomes

Evidence shows there may be differential effects of participating in these activities for students with varying identities. The extant literature provides ample evidence that there are differences in participation rates by race and ethnicity as well as recognizes the possibility that students with minoritized identities may be discriminated against during, and even barred access to, these activities by structural barriers (Finley & McNair, 2013; Patton et al., 2015). Building on this literature, McCormick et al. (2017) examined levels of satisfaction with these activities

for students with minoritized identities. Alternative to some of the prior research, the findings showed that students with these minoritized identities rated their satisfaction with their college experience at higher rates than their same-race peers who did not participate in WIL activities.

Finley and McNair (2013) explored participation in high impact practices, including those considered WIL, and found that first-generation students had around 10-15% higher perceived gains in their learning for every additional practice they participated in as compared to first-generation students who did not participate. When examining participation in 1-2 practices, compared to their continuing-generation peers, first-generation students reported higher perceived gains in general education (2.57% point difference), practical competence (2.39% point difference), and personal and social development (1.79% point difference). The results related to the practical competence category are particularly intriguing, as this category directly connects with future employment. The authors also found that transfer students had similar perceived gains to first-generation students, and while underrepresented racial minorities also had positive perceived gains from participation, they were not as large as the effects found for first-generation or transfer students (Finley & McNair, 2013). Finley and McNair (2013) concluded that the differential gains found for traditionally underserved students who participated in these activities as compared to their peers speak toward the idea that these experiences provide "equity effects" with regard to learning (p.27).

In their study on labor market outcomes for students who participated in co-ops across Canada, Wyonch (2020) also found "equity effects" for marginalized students as compared to Canadian men. Wyonch (2020) reported that graduates with visible minorities or immigrant status received similar wages to their white male peers who also participated in co-ops. The findings from the national survey also showed that women who participated in co-ops received

similar wages to their white male peers who did not participate. For students with any of the aforementioned marginalized statuses, Wyonch (2020) found that they were more likely to have full-time employment than their peers with similar characteristics who did not participate in a co-op. This means that high impact practices and activities which fall under the WIL framework could be an avenue to provide more equitable student success outcomes for our traditionally underserved students.

Expanding upon the evidence provided in the literature above, I explore theories which can help explain the mechanisms at play for both differential participation and outcomes related to WIL in the next section.

Guiding Theories

To guide my examination of the connection between participation in WIL and post-baccalaureate student success measures, I drew from concepts in the fields of higher education and human resources development. Specifically, I examine how capital theories as described by Bourdieu (1986), Yosso (2005), and Schultz (1961) connect the benefits of WIL with employment outcomes. Together, these theories outline how WIL activities may help students engage in career-related opportunities while in college, which may provide them with important skills, knowledge, and relationships which in turn may benefit them beyond graduation. The theories also provide a mechanism to make sense of the differential access to and outcomes associated with WILs.

Bourdieu

Pierre Bourdieu's theories and concepts surrounding capital and education have been developed and used over the last several decades. In 1986, Bourdieu outlined three forms of capital – economic, cultural, and social – and how they are interrelated. In his description of the

various forms of capital, Bourdieu (1986) posited that cultural and social capital can ultimately turn into economic capital, which is the transactional form of capital directly related to money. As I focus on employment outcomes in this study, I emphasize various forms of cultural and social capital, with the idea that they can result in increased chances of favorable post-baccalaureate outcomes, ultimately turning into economic capital.

Cultural Capital

As defined by Bourdieu (1986), cultural capital can take on three states: embodied, objectified, and institutionalized. Embodied cultural capital focuses on the mind and body rather than physical objects, and this form of cultural capital is typically transferred to a person as they grow up from their family. Alternatively, objectified cultural capital takes the form of physical goods such as pictures and books (Bourdieu, 1986). While this form of cultural capital is not necessarily reliant on being in a family which can transfer knowledge, these forms of cultural goods tend to be more available to families who have the cultural knowledge, and economic capital, to attain them. The third form of cultural capital, institutionalized, is the form of cultural capital in which Bourdieu (1986) suggests people can gain even if they do not have the other forms. The institutionalized state of cultural capital comes in the form of educational credentialing, so the more schooling or licensure someone has, the more institutionalized cultural capital they attain. Bourdieu (1986) specifically mentions how institutionalized cultural capital in the form of educational degrees is more easily transformed into economic capital, as there is a market value based on what a person can do with their degree.

Social Capital

Bourdieu (1986) defines social capital as an accumulation of relationships, and it takes form as the resources available to a person due to their networks of relationships. Bourdieu

(1986) recognized that a person also possesses social capital based on their belongingness to a specific group such as their family, a tribe, or an organization. A person's social capital depends both on the size of their networks as well as their ability to use those connections to their own benefit. Bourdieu (1986) recognizes that social capital can be situational, with some relationships being more useful in different circumstances.

Ultimately, Bourdieu (1986) argues that social and cultural capital are most important when they are converted into economic capital. While Bourdieu's (1986) theory on capital is widely used, it has also been criticized because of its failure to recognize alternate forms of capital which individuals may leverage to their own benefit, particularly individuals who hold marginalized identitites.

A Critical Review of Bourdieu

While Bourdieu's theory on capital was not explicitly developed to influence educational policy and practice, it has been used in this way for several decades. Within the education context, Bourdieu's concepts of capital, especially cultural capital, have been used to examine students' capital prior to college (e.g., Lareau, 2003; Pitman, 2013), their experiences during college (e.g., Clegg, 2011; Morrison, 2017), and how their possession of capital translates beyond college (e.g., Bathmaker, 2021; Tomlinson, 2017). Nonetheless, Bourdieu's theories have also been criticized for their deterministic nature and emphasis on the traditionally dominant culture being the only culture which has worth. These studies often recognize how Bourdieu's various concepts of capital can be used to explain the status quo reproduced by the dominant culture and oppressive systems, but they also emphasize how this view can be harmful for students with minoritized identities and tend to take away any agency a student may have to increase their own capital (Lingard et al., 2006; Nash, 2006; O'Shea, 2016).

Tichavakunda (2019) specifically compared Bourdieu's theories to critical race theory (CRT), arguing that while traditional interpretations of Bourdieu can be problematic, the theories themselves are not necessarily at odds. In this comparison, Tichavakunda (2019) presents that both theories fight against deficit-based thinking, provide mechanisms in which society reproduces inequality, and specifically pay attention to how culture and structure interact. Tichavakunda (2019) emphasizes that the issues typically brought up with the use of Bourdieu's theories stem from the fact that his theories were specifically created using the French education system as context and cannot account for the complexities of oppression among the various identities present in American society. Tichavakunda (2019) recognizes that Yosso's (2005) cultural community wealth model is often seen as the most prevalent critique of Bourdieu, as it is founded in CRT, but argues instead that it is more of an adaptation, which can work with the complexities of the U.S. population. For this reason, I extend my review on capital theories by emphasizing the applicability of Yosso's (2005) model in this study.

Yosso

Yosso (2005) explicitly references issues with Bourdieu's (1986) concepts of capital, arguing there is too much emphasis on the capitals which only middle- and upper-class students could have in the eyes of a "hierarchical society" (p.70). In her review, Yosso (2005) references scholarship that has argued differences in educational outcomes can be attributed to the lack of cultural and social capital held by marginalized people. Yosso (2005) explains that this form of deficit thinking has led to the idea that people of color, and other marginalized people, are disadvantaged. Using critical race theory (CRT) as a lens, Yosso (2005) extended Bourdieu's theory on capital by proposing a model of community cultural wealth, which offers definitions

for various forms of capital students of color likely possess in which Bourdieu (1986) did not account for in his work.

Forms of Capital in the Cultural Community Wealth Model

Based on research among students of color, Yosso (2005) proposed six forms of capital which students may possess: aspirational, linguistic, familial, social, navigational, and resistant. Yosso's (2005) definitions of social capital connects with Bourdieu's (1986) definition of having networks of relationships. The other five forms of capital presented by Yosso (2005) extend beyond the capitals identified by Bourdieu (1986) to create a comprehensive concept of community wealth. Aspirational capital refers to a person's ability to remain hopeful for the future even when faced with barriers while linguistic focuses on the communication skills a person possesses if they have grown up speaking more than one language. Yosso's (2005) definition of familial capital emphasizes a sense of community commitment and knowledge. Navigational capital refers to the ability to navigate situations and landscapes, particularly those which were not created to be accessible for that person based on their identities. Lastly, resistant capital focuses on the skills needed to challenge inequality (Yosso, 2005). While some of these forms of capital are similar to those defined by Bourdieu (1986), Yosso's (2005) community wealth model emphasizes forms of capital which may not have been historically valued by society but can be valued across cultures and settings if recognized.

A Critical Review of Yosso

Yosso (2005) intentionally created the cultural community wealth model in response to Bourdieu's theory's limited ability to encapsulate the wealth of capital minoritized students possess. Yosso's (2005) model has been used in studies exploring the various forms of capital minoritized students bring with them to college, often with an intersectional lens. These studies

often look at the combination of identities such as underrepresented racial minorities, low socioeconomic status, and first-generation college goers, and how these identities foster certain forms of capital.

Using Yosso's (2005) model, Boettcher et al. (2002) ran focus groups to examine the assets which rural Black and Latinx students bring with them to college. The students reported having assets in the areas of familial, social, aspirational, and navigational capitals. Boettcher et al. (2022) concluded that the students used different capitals for various aspects of the college-going process, including but not limited to: familial to help with finding a school and major, navigational for the actual transition to campus, and social when building connections with fellow students and members of their transition program. When examining the capital held by first-generation college students and their influence on their college experiences, Okolo (2019) quantified aspirational capital using the Educational Longitudinal Study of 2002 (ELS:2002) dataset. Okolo (2019) find that first-generation students were 28.5% more likely to enroll in college and 25.6% more likely to be retained through their second year for every one standard deviation increase in aspirational capital. Similarly, O'Shea (2016) explored the experiences of first-generation college students in Australia but used a qualitative method and collected data via interviews. Among the responses from the 23 participants, O'Shea (2016) found an emphasis among aspirational, resistant, and navigational capitals, with each playing a role in how students maintained the goal to attend college as well as persist through their degree. Wick et al. (2019) took an intersectional lens to explore the use of Yosso's (2005) model with first-generation Latinx students studying abroad in Costa Rica. During their experiences, the students reported using linguistic and familial capital to connect with the community as well as aspirational and resistant capital to challenge their privilege and engage with the work they were doing as social

work students during the experience. These studies use Yosso's asset-based model to highlight that students with minoritized identities are not deficient but bring capitals with them which can influence their ability to succeed in college.

While Yosso's model is important for identifying capitals held by students from marginalized populations, it does not eliminate the relevance of Bourdieu's forms of capital, especially within a society which emphasizes cultural and social capital. Students who identify as underrepresented racial minorities, first-generation, and low socioeconomic status may come to college with various forms of capital as described by Yosso (2005), but they also stand to gain the forms of capital as described by Bourdieu (1986). For the present study, I look to both Bourdieu (1986) and Yosso (2005) for a theoretical foundation on the forms of capital students come to college with, can gain from their experiences in college, and which could help them traverse the transition between college and a job after their degree. In using guiding theories around various forms of capital, it is important to also include human capital from the field of human resource development (HRD). Similar to various definitions provided by Bourdieu (1986) and Yosso (2005), human capital directly relates to increasing the knowledge and skills of a person but more explicitly from the perspective that this investment can lead to a more productive individual and member of society.

Human Capital

Alternative to both Bourdieu's (1986) and Yosso's (2005) models of capital, human capital is conceptualized as something that is purely gained through experiences and education, and is directly convertible to an economic value. The first definition of human capital appeared in the human resource development literature by Schultz in 1961. Schultz (1961) defines human capital as an investment in humans which results in increased capacity and productivity. Schultz

(1961) provides five categories of human capital: health services which increase the lifespan; "on-the-job training"; formal education; adult extension programs; and migration patterns toward job opportunities (p. 9). Schultz (1961) argues that by investing in human capital across these five categories, both individuals and societies will benefit. While Schultz (1961) was the first to define human capital theory (HCT), Nafukho et al. (2004) reviewed the various definitions of the term across the decades that followed. Nafukho et al. (2004) synthesized the definitions of HCT across the field of human resource development, placing an emphasis on HCT's focus on education and training as investments into human resources. In these definitions of HCT, humans are considered a form of capital themselves (Nafukho et al., 2004).

A Critical Review of Human Capital

Critiques on the use of HCT in education research focus on several different areas. Jamil's (2004) critique on using HCT in education emphasizes that there are non-educational factors at play, which influence job attainment and salary. This critique does not argue that education is not a form of investment that should be valued, but rather focuses on the idea that education cannot be the only factor examined when looking at what leads to job attainment and salary. Specifically, Jamil (2004) emphasizes the need to take discriminatory practices, differences in measurement, and differences across countries into account. Similarly, Marginson (2015; 2019) argues that HCT is fundamentally flawed as it uses a linear pathway to connect education to the workforce, ignoring all of the other factors that affect employment, earnings, and status. These studies do not present arguments that HCT should not be used, but rather it needs to be used critically, as labor force outcomes do not happen in a bubble and education is only one piece of the puzzle.

Almost as if in response to the common critiques of HCT, literature supporting the use of HCT as it relates to graduate employability often combine HCT with other forms of capital and emphasize the skill development which can occur during specific experiences, especially on the job learning (Clarke, 2018; James-Constantine, 2018). While acknowledging the critiques of human capital theory, I chose to focus on its emphasis on education, training, and increased capacity of a person to do tasks. These factors directly relate to investing in a student during their experiences and how that investment connects to their employment outcomes.

The combination of these various forms of capital provides a foundation for understanding how participation in work-integrated learning can lead to increased likelihood of securing a job offer, especially for minoritized students. Some of the capitals our underserved students come to college with – for example, linguistic – are valued by employers. Yet there are other forms of capital valued by employers, which they may need to gain during their time in college – i.e., cultural, social, and human. In combining theory and the following empirical evidence, I argue that all students may be able to increase the capital sought by employers via WIL, and students with certain identities may find differential benefits from participation in these activities as compared to their peers.

Connecting WIL to Capital Theories

Existing research which connects WIL and capital theories emphasizes gains in capital as one of the mechanisms which makes WIL valuable for both student learning and graduate employability. Consideration of the varied forms of capital can help make sense of the differential rates of participation and unequal benefits of WIL.

General Benefits of WIL

There are theoretical and empirical reasons to believe participation in WIL should improve employment outcomes. Work-integrated learning provides students with the opportunity to learn in an applied setting where they may gain skills and connections they may not have access to in a traditional classroom. Theories related to various forms of capital can help to explain how WIL activities provide students with these resources, which may increase their chances of reaching their goals related to securing a job. Theories of social and cultural capital coined by Bourdieu (1986) and Yosso (2005) as well as human capital (Shultz, 1961) pair particularly well with the resources a student can gain from WIL participation.

For example, Ng et al. (2022) found that participation in WIL and development of human capital through these activities increased students' perceived employability. Students also report that the networks they establish through WIL have helped prepare them for the workforce and transition to workplace environments (Wan et al., 2012; Wyonch, 2020). Lastly, students emphasize their gain of cultural capital via WIL participation through their students' reflections on WIL making them feel more prepared to enter the workforce as well as their attainment of competencies valued by employers (Gault et al., 2000; Wan et al., 2012). Through survey and interview data, students and employers report their perceptions that WIL is an effective way to gain the various capitals needed to be successful as they enter the workforce (Bist et al., 2020; Jackson & Bridgstock, 2021; Low et al., 2016).

Differential Participation and Outcomes

Evidence shows that students with minoritized identities can have greater benefits from participating in WIL (Finley & McNair, 2013; Wyonch, 2020), yet these students are consistently participating at lower rates (i.e., Cocks et al., 2015; Messinger, 2004; Moylan &

Wood, 2016). Specifically, students who identify as first-generation or as an underrepresented racial minority are the ones seemingly missing out the most (McCormick et al., 2007; NCES, 2019a; NSSE, 2021). The lower rates of participation may be exacerbated by economic factors, as financial issues are often cited as reasons for not participating (Finley & McNair, 2013; Main et al., 2019). In interview data, students have reported that these activities can increase the time to graduation and even cost money through needing to pay for such items as rent or professional clothing (Finley & McNair, 2013; Main et al., 2019). Additionally, minoritized students may have to work while in college, limiting the time they have available to participate in WIL (Finley & McNair, 2013).

Beyond economic capital, minoritized students may not come into school with the necessary social and cultural capital needed to succeed, let alone access WIL. Ma and Shea (2019) found that campus connectedness had a significant effect on first-generation college students' perception of barriers and career outcomes, with lower connectedness leading to more barriers and worse outcome expectations. Kim et al. (2021) found that first-generation female college students face social capital challenges, as they do not always have support systems to help them navigate college experiences. Additionally, these students often do not come into school with the cultural capital related to higher education knowledge/preparedness, and often find cultural differences which make succeeding in these systems difficult (Strand, 2013). Dumais and Ward (2010) found that if a first-generation student did receive help from their parents during the application process and if their family had forms of cultural capital other than education, then they were significantly more likely to enroll in and persist through college. Schuyler et al. (2021) reviewed the literature on barriers faced by first-generation students of color and identified that institutions can increase transitional, academic, and mental health

supports, which will help provide first-generation students with the social and cultural capital needed to succeed in college.

Through a combination of quantitative analysis and student interviews, Finley and McNair (2013) found that students with minoritized racial identities and those who are first-generation lack cultural capital needed to participate, specifically in the sense that they may not know how to get involved in the activities or may not even know the activities exist. Getting involved in WIL also requires adapting and fitting into the social and cultural environments of the placements (Choy & Delahaye, 2011), and this can often be difficult for students who did not have access to cultural and social capital when entering college.

By presumably not having the economic capital to be able to take unpaid internships, have the time outside of working to participate in WIL, or have the money to increase their time to graduation, students of minoritized identities face an immediate barrier to participating in WIL (Baccalaureate & Beyond, 2019; Finley & McNair, 2013; Main et al., 2019). On a more conceptual level, students with minoritized identities may encounter access issues as they do not have pre-existing connections to possible WIL activities or workplaces without the social capital which is possessed by their more privileged peers. Lastly, just knowing that these activities exist and how to initiate the process is a form of cultural capital which may not be readily available to students with first-generation, URM, or low SES identities (Finley & McNair, 2013; Strand, 2013). These issues regarding traditionally valued forms of capital put minoritized students at a disadvantage when trying to access WIL. This is especially problematic as students holding these identities are the ones who could reap the most benefits from participating in these activities (Finley & McNair, 2013; Wyonch, 2020).

When examining differential outcomes for students participating in WIL, Finley and McNair (2013) spoke toward the "equity effects" of these activities for students with minoritized identities, especially for students who identify as first-gen or a racial minority. While students with minoritized identities could be bringing various forms of capital to school with them as described by Yosso (2005), they may not be coming into school with the specific kinds of capital emphasized by employers or know how to leverage the capitals they possess to fit employer expectations. Their linguistic, navigational, and resistant capital connect with competencies such as communication skills and critical thinking, which are cited by employers as skills graduates should possess (i.e., Abbasi et al., 2018; Bist et al., 2020), but not knowing the processes of a workplace setting or how to connect with prospective employers creates barriers for these students from the start.

By participating in WIL activities, these students can develop economic, social, cultural, and human capitals, adding them to the valuable capitals they already possessed when they started college (Simons et al., 2012; Smith et al., 2014; Wan et al., 2012; Wick et al., 2019). If minoritized students are able to access WIL, they stand to gain capitals which their peers may already hold, essentially helping them to "catch up" (Finley & McNair, 2013; Wyonch, 2020). The gain of these traditionally valued capitals (Bourdieu, 1986; Schultz, 1961) along with the cultural community wealth (Yosso, 2005) they already possess will ultimately make these students excellent candidates for securing a job after graduation.

Connecting the extant literature on WIL with various capital theories, I have developed the hypotheses below to guide my study on examining the influence of WIL participation on employment outcomes, with an emphasis on the differential effects which may exist for students with minoritized identities.

Hypotheses

I developed the hypotheses for this study based on the extant literature on WIL and capital theories. Previous research shows positive relationships between participating in WIL and employment outcomes, especially for traditionally underserved students. Based on this, I developed the following two hypotheses which guided my study's methodology:

1. General Benefit: If a student participates in WIL, they will have increased likelihood of securing a job.
2. Differential Effects: The benefits of WIL will be larger for minoritized students than those without these identities.

Summary

In this chapter, I examined both theoretical and empirical reasons to expect that participation in work-integrated learning (WIL) will improve students' employment outcomes. Bourdieu (1986), Yosso (2005), and Schultz (1961) provide theories of capital which suggest how WIL can lead to increased chances of securing a job offer after graduation. The extant body of empirical literature indeed suggests that participation in WIL may be broadly connected with student success, but that those relationships may be different for students with minoritized identities, especially as they relate to race and first-generation status. I have built hypotheses from these theories and empirical evidence which model the connections between student characteristics, capital, participation in WIL, and employment outcomes. In the next chapter, I describe the method of this study based on these hypotheses, which I used to quantitatively examine the relationship between WIL and employment outcomes.

CHAPTER 3

METHODS

In this study, I aimed to investigate the relationship between participation in work-integrated learning (WIL) during a student's time in their undergraduate studies and their employment outcomes immediately after graduation. I used historical data from a large, public institution in the United States, which surveys its graduating seniors on such topics each year. These survey data are used in conjunction with institutional records related to demographics and undergraduate academic achievement. My main research question for this study was:

> *RQ1: Are students who participate in WIL more likely to get a job offer immediately prior to graduation than their peers who did not?*

In addition to my main research question, I also examined whether the effects, if any, differ on the basis of minoritized identities:

> *RQ 2: Does a student's identity as being first-generation or an underrepresented racial minority moderate any relationships between work-integrated learning and employment outcomes?*

Research Design

To answer my research questions, I used inverse probability weighted regression adjustment (IPWRA), a quasi-experimental approach using a logistic regression model to find the probability of participating in WIL and then using these propensity scores to weight each case in the next model to predict employment outcomes. IPWRA is a doubly robust approach, as it uses the two-step regression model with inverse probability weights to reduce sensitivity to potential model specification (Caldera, 2019; Mokher et al., 2021; Morgan & Winship, 2014). This approach was selected because students are not randomly assigned to participate in WIL,

meaning traditional regression approaches might not adequately account for unobservable and/or unmeasured factors that might otherwise bias resulting parameter estimates. This IPWRA quasi-experimental design enables me to examine the relationship between participating in WIL and employment outcomes, as well as investigate various factors which may influence this relationship.

Guiding Theories and Concepts

In this study, I combined theories related to various forms of capital with the work-integrated learning framework to explore how participation in WIL relates to rates of employment for graduates. Based on extant literature related to differences in overall employment outcomes, participation in WIL, and effects of participating by student demographics, I explored 1) whether there is a relationship between WIL and employment outcomes and 2) whether these relationships differ specifically for students with minoritized identities. My review of the existing literature on WIL and theories of capital guided the development of my research questions (listed above) as well as the following two hypotheses:

1. General Benefit: If a student participates in WIL, they will have increased likelihood of securing a job immediately after graduation.
2. Differential Effects: The relationship between WIL participation and receiving a job offer immediately after graduation will be larger for first-generation students or URM students than for students without these identities.

Analytic Approach

As I used historical data for this study and the students were not randomly assigned to participating in WIL or not, I am unable to use an experimental design. Using a quasi-experimental design is my best choice for answering my research questions, as it allows me to

more closely approximate causal relationships between my variables without having actual random assignment. This study used the statistical approach of Inverse Probability Weighted Regression Adjustment (IPWRA). This is a two-step approach using regression analysis. The first step is to see how all of the control variables predict whether or not a student will participate in the main independent variable of interest – participation in WIL (Caldera, 2019; Mokher et al., 2021; Morgan & Winship, 2014). The second step then runs a regression model with the main dependent variable of interest – secured job offers – with all of the predictor variables in the model, including participation in WIL. In this second model, each case is inversely weighted based on the probability of treatment for the treated students and the probability of not receiving treatment for the un-treated students (Caldera, 2019; Mokher et al., 2021; Morgan & Winship, 2014). I used logistic regression for both steps in the IPWRA process, as both my dependent and independent variable of interest are categorical.

The choice to use IPWRA instead of traditional propensity score matching (PSM) has several benefits. Using the quasi-experimental approach of Inverse Probability Weighted Regression Adjustment, I am able to account for the differing likelihood of participation in WIL by weighting individual cases (Caldera, 2019; Mokher et al., 2021; Morgan & Winship, 2014). I also chose to use IPWRA for this study rather than traditional Propensity Score Matching, as it allowed me to have a propensity score for each individual student rather than having to match them to other students (Reynolds & DesJardins, 2009). This enables me to include students in my analysis that I would otherwise drop if they were not properly matched using traditional PSM.

Being able to include students with minoritized identities is vital for my examination of the existence of differential effects from participating in WIL for students with these

characteristics. My emphasis on exploring how WIL can provide equitable outcomes for minoritized students is dependent on the inclusion of traditionally underserved students in my analyses, with an emphasis on those who may have multiple minoritized identities. If I were to use traditional PSM, these students may be dropped from the study entirely (Reynolds & DesJardins, 2009). Traditional PSM matches participants between the treated and untreated groups by matching them on multiple characteristics, yet if students have multiple minoritized identities then they will not easily match with someone in the other group and are likely to be dropped out of the analysis. While IPWRA makes up for a few issues found in PSM, it is a fairly new approach that does not have a strong foothold in the field like several other quasi-experimental approaches do. Therefore, this study contributes to the methodological literature on IPWRA in the field of higher education.

Sample

This study is performed using data from two graduating cohorts from 2018 and 2019 from a large, public, four-year institution in the Southeast United States. The selected institution provides a survey to graduating students each yea,r which specifically asks about post-baccalaureate plans as well as engagement throughout their undergraduate degree. The use of this survey by the institution provides a unique opportunity to look at participation in WIL and employment outcomes across multiple cohorts.

The sample for this study included graduating students at the institution in the 2017-18 and 2018-2019 cohorts. The 2017-18 graduating cohort consisted of 8,623 students and the survey had a survey response rate around 92%, resulting in 7,894 responses. The 2018-2019 graduating cohort consisted of 8,460 students and the survey also had a response rate around 92%, resulting in 7,766 responses. Across the two cohorts, a total of 15,660 graduating students

completed the survey. As I looked specifically into students' WIL experiences while at this particular institution, I first limited my sample to first time in college (FTIC) students and excluded transfer students from my main model. As transfer students would have a different amount of time to be able to participate in WIL activities, and their demographics may be fundamentally different from FTIC students, I chose to only include transfer students in my supplementary analyses. This reduced my potential sample to 10,103 students. I then filtered out students whose primary plan was something other than employment, reducing the potential sample to 6,125 students. Lastly, I excluded any students who did not actually apply for a job, as they would be counted as false negatives for not receiving a job offer when they never even applied. This results in my final analytical sample of 5,417 students. I chose to examine these two cohorts together as one sample, as the survey instrument was the same between the two years, they were the last two cohorts who completed school before the beginning of the COVID-19 pandemic, and the demographic profiles of the students were similar (see Table 3.1).

Descriptive statistics related to demographics and other characteristics of my dataset are provided in Table 3.1 below.

Table 3.1
Sample Characteristics

Student Characteristics	2017-2018	2018-2019	Total
Job Offers[a]	65.59%	63.44%	63.67%
WIL	58.90%	56.57%	57.76%
First-Gen	21.60%	25.04%	23.28%
URM	29.18%	29.26%	29.22%
Gender (female)	58.29%	58.69%	58.48%
Field of Study			
Business	32.50%	34.44%	33.45%
Science	29.65%	31.68%	30.64%
Social Science	25.53%	23.41%	24.50%
Humanities	12.31%	10.46%	11.41%
Pell	18.17%	22.05%	20.07%
ACT (mean)	27.22	27.06	27.13
Accelerated Cred Hrs (mean)	18.19	17.57	17.84
GPA (mean)	3.24	3.28	3.26
Time to Degree (mean)	3.92 years	3.92 years	3.92 years
Residency (In-State)	90.65%	89.80%	90.23%
Employed During School	75.59%	74.06%	74.84%

Note. WIL = work-integrated learning; First Gen = first-generation; URM = underrepresented racial minority; and Work = Employed During Degree.

While I only used data from a single institution, making it not generalizable to other institutions, this study provides valuable evidence on the potential influence of WIL experiences. Further, it provided a cross-sectional look at multiple cohorts of students at a public institution which is an emerging Hispanic-Serving Institution. The data are limited by being from one institution but provide a foundation for looking into the relationship between WIL and employment outcomes of a diverse array of students, which could be expanded to other contexts in later studies.

Measures and Data

In partnership with the university's department of Institutional Research (IR), I collected data related to WIL and securing employment at the time of graduation from the institution's annual survey of graduating seniors (see Appendix A). Additionally, I collected data from the IR department related to the students' demographics. My main independent variable of interest was whether or not a student participated in WIL while my dependent variable of primary interest was an indicator of whether the student had secured a job offer immediately after graduation. Based on the existing literature related to equity effects for traditionally underserved students (Finley & McNair, 2013), I used variables indicating students' first-generation status or underrepresented racial minority status to examine differential effects of WIL on employment outcomes. All other variables referenced in Table 3.1 are used as control variables.

Dependent Variables

The outcome/dependent variable for my main analyses was a dummy-coded indicator of whether the student had secured a job offer. In supplemental analyses only, I also considered an alternate outcome variable of accepted job offer. Both of these variables were directly pulled

from a question asking about the students' primary plan after graduation on the survey for graduating students at this institution.

Students were first asked for their primary plan after graduation (See Q14 in Appendix A). If they responded to the question with employment as their primary plan, they were then asked questions regarding whether they have applied for a job. To create the variable indicative of having *received* a job offer and the one indicative of having *accepted* a job offer, the IR office used a combination of responses from a question asking, "Which statement best describes your current employment status?" on the survey (Question 92 is also shown in Appendix A). A student was coded as having received a job offer if they respond to Q92 that they: (1) Have accepted a position to begin in the coming months (including residency and internship positions), (2) Have been offered a position or multiple positions, but declined offers and still searching for preferred position, (4) are Considering one or more offers, or (7) are Working in a position I plan to continue after graduation.

The difference between the received job offer and accepted job offer variables is the acknowledgement that they have already accepted an offer. A student is coded as having accepted a job offer if they respond to Q92 that they: (1) Have accepted a position to begin in the coming months (including residency and internship positions) or (7) are Working in a position I plan to continue after graduation. All of the associated questions were forced choice in the survey design, so if a student submitted the survey, then there would be no missingness within these variables.

The received job offer variable was chosen as the post-baccalaureate student success measure of primary interest in my study because it connects with the literature on students' goals for college (Eagan et al., 2016). It also matches with the WIL emphasis on the connections

between a students' curriculum and the workplace, with the goal to help connect students to employment upon graduation (Cooper et al., 2010). In using various capital theories as a guide for my study (Bourdieu, 1986; Schultz, 1961; Yosso, 2005), I recognize that there are both observable and unobservable factors that could be at play in the difference in these variables. For this reason, I am used job offers as my employment outcome because if a student has secured a job offer, they have essentially secured employment, if they so choose. This outcome was chosen rather than the variable of accepted job offer, as getting a job offer is a universally necessary prerequisite to actually becoming employed. It is also a point where students are more in control of their employment future as they are guaranteed employment if they want that particular job, yet their decisions about whether to accept a job offer may be a function of several unobserved variables. For example, some students may be able to take their time and weigh different offers, as they may possess more economic capital, and this would lead to them having a job offer but not having secured employment at the time of the survey. Preliminary data from different cohorts show that there are nearly 6% more students who respond that they have secured job offers than accepted a job offer, showing that the variables are different and leading to my decision to run supplemental analyses exploring accepted job offer as an alternative outcome.

Independent Variable of Primary Interest

My primary independent variable of interest is a dummy-coded indicator of whether a student participated in any of the 7 WILs listed in the survey. The work-integrated learning framework as described by Cooper et al. (2010) directly connects with questions on the survey about students' experiential learning experiences. Table 3.2 maps items from the survey to the activities considered WIL. I chose to examine participation in WIL as a single dichotomous variable indicative of whether the student had participated in at least one activity considered

WIL. This decision is supported by the fact that the terms are often used interchangeably by scholars and students alike (Cooper et al., 2010), and WIL has been examined as a category of activities across the literature (i.e., Clegg, 2011; Choy & Delahaye, 2011; Ferns et al., 2014; Smith et al., 2015; Tomlinson, 2008).

The WIL variable is derived from one question on the survey and includes practicum, internship, fieldwork, cooperative education (co-ops), clinical experiences, student teaching, and apprenticeships. The responses of clinical experiences, student teaching, and apprenticeships are terms identified on the survey and not direct terms outlined in the WIL framework by Cooper et al. (2010), but "clinical experiences" and "student teaching" fit within the WIL term of "field education" and "apprenticeships" fit withing the WIL terms of "internship" or "practicum" (shown in Table 3.2). As these terms can be used interchangeably based on Cooper et al.'s (2010) WIL framework, I use them collectively. I created my work-integrated learning variable by counting a student as having participated in WIL if they responded "yes" to any of the activities in the experiential learning question (Q95, shown in Appendix A). In Model 4, I use an alternative version of the WIL variable called WIL total, which is a continuous variable counting how many types of WIL activities in which a student indicated they participated.

The only two experiences from the WIL framework I do not use are "sandwich course" and "service learning." A sandwich course is an experiential learning opportunity taken between semesters, and this is not a term used within the American higher education context. Additionally, there is a question later on in the survey which asks about service-learning course participation, but this question is not forced choice and the IR Office stated that data related to this question are not reliable. For these reasons, 7 out of 9 WIL activities are represented in my study.

Table 3.2
WIL Terms by Corresponding Survey Items

WIL Term	Corresponding Survey Item
Practicum	Practicum, Apprenticeship
Internship	Internship, Apprenticeship
Fieldwork	Fieldwork
Cooperative Education	Co-ops
Field Education	Clinical Experiences, Student Teaching

Note. WIL = work-integrated learning; Co-ops = Cooperative Opportunities.

Moderating and Control Variables

To examine the relationship between participation in WIL and employment outcomes, I also used demographic variables from the survey and institutional records. All 6 of my analytic models included a variety of control variables: gender, field of study, Pell, concorded ACT scores, accelerated credits, cumulative GPA, time to degree, residency, and employed during degree. All of the control variables except for employed during degree are pulled directly from institutional records. To create the field of study variable, I first used a crosswalk provided by the Office of Institutional Research which transforms the individual major CIP codes into 7 fields of study: Business, Health, Science, Social Science, Education, Fine Arts, and Liberal Arts. These fields of study are determined by the state's university system. For the purpose of this study and to create fewer comparison groups, I further collapsed the data into only 4 categories: Business (Business), Science (Science and Health), Social Science (Social Science and Education), and Humanities (Fine Arts and Liberal Arts). I created a time to degree variable by counting the number of years in between students' first and last semesters in their bachelor's program. This time to degree variable follows the state university system's definition. To create the employed

while in college variable, I combined responses to two questions on the survey, which asked if a student was employed on campus and if a student was employed off campus during their degree. I created the employed during college variable by counting "Yes" responses to either question.

Two additional variables – first-generation and underrepresented racial minority (URM) – were included as control variables but were also used to explore potential moderation effects of WIL on receiving a job offer. The first-generation variable comes directly from institutional records. The IR office defines first-generation based on the FAFSA and university's application questions, leading first-generation to be defined as any student whose parents do not hold four-year college degrees. To create the URM variable, I took the race/ethnicity variable from institutional records, which uses the National Center for Education Statistics' IPEDs definitions, and scored a 0 for students who identify as White or Asian, a 1 for students who identify as American Indian or Alaska Native, Black or African American, Native Hawaiian or Other Pacific Islander, or Two or More Races, and a 2 for Race Unknown. The decision for this scoring is based on NCES reports which show that White and Asian students make up a majority of the college student population while the other mentioned categories are minorities in this population (NCES, 2022). I created separate dummy codes for URM and Race Unknown to differentiate those groups of students from the White and Asian students. A list of all variables and how they are coded can be seen in Table 3.3.

Table 3.3

Coding of Variables of Interest

Variable	Code
Job Offer	0 = No
	1 = Yes
WIL	0 = No
	1 = Yes
First Gen	0 = No
	1 = Yes
URM	0 = White or Asian
	1 = American Indian or Alaska Native, Black or African American, Native Hawaiian or Other Pacific Islander, Two or More Races
	2 = Race Unknown
Gender	0 = Male
	1 = Female
Field of Study	1 = Business
	2 = Science
	3 = Social Science
	4 = Humanities
Pell	0 = No
	1 = Yes
ACT	Score, 0-36
Accelerated Credit	# of Credit Hours
GPA	0 – 4.00
Time to Degree	# of Years
Residency	0 = Out-of-State
	1 = In-State
Work	0 = Not Employed
	1 = Employed
Total WIL[a]	# of WIL Activities (0-7)
Accepted Job Offer[a]	0 = Has Not Accepted Job Offer
	1 = Accepted Job Offer
Admit Type[a]	0 = Transfer
	1 = FTIC

Note. WIL = work-integrated learning; First Gen = first-generation; URM = underrepresented racial minority; and Work = Employed During Degree.

[a]These three variables are used in supplemental analyses, not the main model: Total WIL, Accepted Job Offer, and Admit Type.

Data Reliability

As the survey specifically asks about individual WIL activities as well as employment outcomes, the data are a good match for my constructs of interest. According to the IR department, the survey is also filled out by approximately 92% of graduating seniors each year, making it a sample which closely approximates the whole population of each cohort. While the survey is filled out by the majority of the graduating cohort, it must be noted that the survey is filled out by the students and represents their employment status at a single point in time, around the time of graduation. The questions regarding participation in WIL – a dichotomous yes/no type response – are up to the respondent to self-define whether an activity they may have done falls within the category choices. All other variables were collected from institutional data (i.e., GPA and demographics), meaning they were coded consistently across both cohorts by the office directly responsible for their collection. The data used for this specific analyses underwent multiple rounds of additional review both by me and staff in the IR office to ensure accuracy. Finally, the use of data from the IR office meant there was no missing data on the variables included in my analytic models. Additionally, the survey were sent out to graduating seniors at the same time in their final semester, approximately 3 weeks before the semester ended, no matter which semester they graduated.

IPWRA Regression Models

I answer this study's research questions following an IPWRA approach similar to that employed by Mokher et al. (2021). IPWRA is a two-step approach, with the first step estimating the probability of a student participating in work-integrated learning, while the second step uses a weighted logistic regression to predict securing a job offer. In this study, my "treatment" group

was those who participated in at least one WIL (*T*=1), while those who did not participate were considered the "untreated", or comparison, group (*T*=0).

The first step of IPWRA is to use a logistic regression model to estimate the probability of participating in WIL. The following model was estimated for each student *i*:

$$P(T_i) = \frac{e^{\beta_{0i}+\beta_i X}}{1 + e^{\beta_{0i}+\beta_i X'}}$$

P is the predicted probability of selecting into the treatment (*T*) while β_{0i} represents the intercept and X stands for the matrix of covariates: first-generation, URM, gender, field of study, Pell grant eligibility, ACT composite score, accelerated credit at time of admit, final college GPA, time to degree, state residency, and employment during college. Following guidance from Reynolds and DesJardins (2009) and Morgan and Winship (2014), instead of matching students for comparison based on propensity scores as would be done in traditional propensity score matching (PSM), I re-weighted each observation according to the inverse of their propensity to participate in Work-Integrated Learning.

The observation weights (W) represent the inverse of the generalized propensity score and can be found using the following equation:

$$W_{iT} = \frac{1}{P(T_i)}$$

Once the first stage of IPWRA was complete, I then used weighted regression adjustment to predict the probability of securing a job offer. Model 1, my logistic regression model predicting this dichotomous outcome can be seen below:

$$logit(JobOffer_i) = \gamma_{0i} + \gamma_i + bX$$

In this model, y_i represents the outcomes of interest (secured job offer, where secured = 1 and not secured = 0), γ_0 represents the intercept, γ_i is the effect of participating in WIL, and X is

once again the matrix of covariates representing student characteristics, with inverse probability weights (W_{iT}).

After running my models to examine the relationship between participating in WIL on securing a job offer (for Research Question 1), I then adjusted the models to examine the moderating effects of first-generation and URM status on these relationships. To answer my second research question - *Does a student's identity as being first-generation or an underrepresented racial minority moderate any relationships between work-integrated learning and employment outcomes?* – I extended my original analysis by running two additional models in which I interacted WIL participation with either first-generation or URM. The equations for these secondary analyses can be seen below:

$$logit(JobOffer_i) = b_0 + b_1 WIL_i + b_2 firstgen_i + b_3 WILxfirstgen_i + bX$$

$$logit(JobOffer_i) = b_0 + b_1 WIL_i + b_2 URM_i + b_3 WILxURM_i + bX$$

Supplemental Analyses

As a robustness check to assess the consistency of my main findings, I ran three supplemental analyses replicating Model 1's structure but with alternate versions of the key variables in my primary analyses. In the first supplemental analysis (Model 4), I replaced the dichotomous WIL indicator (my main independent variable of interest) with a continuous variable reflecting the total number of WIL activities in which the student reported participating. I created this WIL total variable by counting the number of "Yes" responses to the experiential learning question (Q95) on the survey. The examination into the number of activities is supported by previous research which shows increased positive relationships when students participate in more activities (Finley & McNair, 2013).

For the second robustness check (Model 5), I reran my model with transfer students as opposed to first time in college students. While transfer students are excluded from my main

model due to difference in time at the institution and possible differences in demographics, they are a fairly large portion of the student population and their experiences with WIL and securing employment should be examined as well. Additionally, if the findings of the transfer student model are consistent with my main model, they will support the overall results of this study.

For my final robustness check (Model 6), I changed the dependent variable to be an indicator of whether the student had *accepted* a job offer. As described previously, the received job offer and accepted job offer variables are similar in construction, with the difference being whether a student was still considering offers or had already accepted one at the time of graduation. Using my guiding theories, I believe there are reasons related to capital or other phenomena which may lead to students with certain characteristics being able to sit on a job offer and not accept it at that point. In my robustness check, I looked at accepted job offer as an outcome to see if the findings are consistent with the main secured a job offer model. Performing each of these supplemental analyses provided insight into whether variations of my variables or sample provide consistent results with my main model, and ultimately support the findings of the study.

While I am able to run multiple supplementary analyses with my data as a partial test of the robustness of my primary findings, I am unable to examine every variation of the data due to the structure of the dataset. For example, the survey does not ask students when they participated in WIL activities, only whether they did or did not. For this reason, I was unable to examine timing of participation in WIL. Likewise, I have no way to measure the number of job offers a student received, only whether they have received any at all.

Strengths/Limitations

There are various strengths and limitations to this study. There are limitations related to the study being performed at a singular institution, as this makes the results not generalizable to populations at other institutions. As I use multiple sources of data and providing various controlling variables, the design of this study reduces many threats to internal validity. While a major limitation to the study is that the survey data are self-report, and responses to the questions about WIL and securing employment or education are dependent on how the student interprets the survey questions, I used institutional records for all controlling variables, which ensures consistent categorization of all other student characteristics being used. Additionally, evidence in the literature suggests that students with minoritized identities will have a lower likelihood of participating in WIL (i.e., McCormick, 2007; NCES, 2019a; NSSE, 2021), which leads to my choice of the IPWRA method, which helps account for potential selection bias and imbalanced treatment and control groups.

While the use of IPWRA helps to adjust the models for differences in participation, the statistical method cannot fully account for unobserved characteristics between the WIL participants and non-participants. I use variables such as working while in college or Pell eligibility which may be used as proxies for characteristics such as reasons why students may not participate (i.e. non-traditional age, have families, do not have time for certain activities, etc.). These variables may be able to help adjust for some unobservable characteristics but are ultimately not able to account for everything. Most specifically, IPWRA may not be able to account for selection bias based on who participates in WIL. While the regression adjustment is meant to help balance the treatment and control groups, it may not be able to account for large variations due to characteristics such as a student's field of study, which can influence

participation rates. Despite the methods I used to adjust for these characteristics, my models will never be able to account for all variables which may make the WIL participant and non-participants different from each other.

This study is also unique for its use of WIL as a framework within the context of US higher education, as well as its focus on actual post-graduation employment outcomes. The work-integrated learning (WIL) framework has been increasingly used over the last decade, yet it has been primarily used in an international context. Even though the WIL framework has been explored internationally, it has not been adopted as much within American higher education research. Research on American higher education students often explores individual activities which fall within the WIL framework such as internships (i.e., Gault et al., 2000; Simons et al., 2012) and co-ops (i.e., Dickerson & Kline, 2008), but there is a paucity of research on these activities as a collective framework in the U.S.

Studies which do use the WIL framework often focus on career readiness or traditional measures of student success such as GPA rather than actual outcomes (i.e., Bist et al., 2020; Huber, 2010; Jackson & Bridgstock, 2021; Wan et al., 2012). Similar to research using the WIL framework, research focusing on individual activities also tend to only go as far as career readiness (i.e., Gault et al., 2000; Simons et al, 2012; Smith et al., 2015) with few extending student success to actual employment outcomes (i.e., Dickerson & Kline, 2008; Wyonch, 2020).

A major strength of this study is that it provides a robust, quasi-experimental examination of the relationship between participation in WIL and employment outcomes for a diverse sampled of over 5,000 graduating students. This study helps to fill two main gaps within the literature – 1) using WIL in an American context and 2) extending student success beyond career readiness to actual labor market outcomes. By filling these gaps, I also add to the existing

literature while also providing evidence which can inform both practice and policy related to WIL in higher education.

Positionality

The framing and interpretation of the study is affected by my positionality. As author of this study, I recognize that I have experience with undergraduate WIL and how they affected my trajectory after college. Additionally, I have experience with experiential learning activities in general and recognize that my opinions on these experiences helped lead me to this study in the first place. Lastly, as a first-generation student, conversations around the worth of a degree are commonplace in my life. These factors all contributed to my desire to focus on the relationship between WIL and employment outcomes as well as how that relationship may be moderated by various student characteristics.

Knowing my connection to the subject material, I must acknowledge several assumptions regarding access to and utility of WIL, as well as how the variables may interact together. One such assumption is the actual attainment of a job immediately after graduation is more important than career readiness, especially for students who identify as first-generation or underrepresented racial minorities. I also believe that while experiences in college can support "career readiness", much of the knowledge and skill needed for professional success can be acquired on the job. But these graduates need to secure a job in the first place to begin their careers and be able to support themselves financially after graduation. Additionally, I expect that participating in WIL activities should increase a students' chances of securing a good job, as they are supposed to be designed to improve students' career readiness as well as connections to their future careers. These assumptions can especially affect how I built the models and how I interpreted the results.

Conscious of my positionality, I have taken several steps to address potential biases arising from these assumptions. First, my framing of the study, as well as the selection of variables and the structure of models, maps closely onto extant literature related to WIL, student employment outcomes, and how student characteristics may influence the relationship between the two. Second, I have used data derived largely from institutional records to ensure data consistency. Third, I have employed statistical methods that explicitly account for or directly test my assumptions regarding the value of WIL and the role of personal characteristics in accessing and (potentially) benefitting from WIL. Fourth, I ran multiple supplemental analyses as checks to assess the robustness of my primary findings. Finally, throughout my discussion, I make sure to connect the findings back to the literature at each step.

Summary

The purpose of this study was to explore whether there is a relationship between participation in WIL and employment outcomes immediately after graduation. Based on evidence in the literature on differential participation and outcomes related to WIL, I also examined whether first-generation or underrepresented racial minority status may moderate any relationship between WIL and job offers. To do so, I used the quasi-experimental approach of IPWRA with a sample of two graduating cohorts from a large public institution, pulling data from a survey and institutional records. Findings from my analyses can be found in the next chapter.

CHAPTER 4

RESULTS

In this chapter, I present the results of the study. I first provide a descriptive overview of the sample. Then, I provide a summary of the relationships between key variables in my analysis. Last, I review the results of my logistic regression models in which I used the IPWRA approach to answer my research questions. Within this last section, I also include results of my supplemental analyses, which I ran for robustness checks. I end the chapter with a summary of the results presented. The research questions driving this study were:

RQ1: Are students who participate in WIL more likely to get a job offer immediately prior to graduation than their peers who did not?

RQ 2: Does a student's identity as being first-generation or an underrepresented racial minority moderate any relationships between work-integrated learning and employment outcomes?

Sample Descriptive Statistics

The primary analytical sample was made up of 5,417 students who graduated in 2017-18 or 2018-19. The sample includes first-time in college (FTIC) students whose primary plan after graduation was employment and who had applied for jobs by the time they took the graduating survey. Within this analytical sample, 63.67% of the students had received a job offer and 57.76% of students had participated in WIL. Additionally, 23.28% of the students in the sample were first-generation and 29.22% of the students identified as an underrepresented racial minority (URM). While a full table describing my sample is presented in Chapter 3 (Table 3.1), I have provided a few tables below (Table 4.1 and 4.2), which show breakdowns of the sample when it comes to my main dependent and independent variables by first-generation and URM status.

Table 4.1
WIL Participation by First-Generation Status and URM Status

Variable	Participated in WIL
First-Gen Status	
Not First-Gen	58.71%
First-Gen	54.64%
URM Status	
Not URM	59.90%
URM	53.27%
Race Unknown	49.61%

Note. WIL = work-integrated learning; First Gen = first-generation; and URM = underrepresented racial minority.

Table 4.2
Secured Job Offer by WIL, First-Generation Status, and URM Status

Variable	Secured Job Offer
WIL Participation	
No WIL	74.21%
WIL	55.96%
First-Gen Status	
Not First-Gen	64.89%
First-Gen	59.64%
URM Status	
Not URM	64.92%
URM	60.65%
Race Unknown	63.57%

Note. WIL = work-integrated learning; First Gen = first-generation; and URM = underrepresented racial minority.

As shown in the above tables, there appear to be differences in both WIL participation and job offer rates by the selected student identities. In the section below, I explore relationships between my variables via Pearson correlation and examine differences in the distribution of key variables across various identity groups via chi-square tests.

Comparison of Key Variables

In Table 4.3, I present a correlation matrix of all variables in my main model. In this matrix, I find that several variables are significantly related, but none sufficiently so as to raise concerns about multicollinearity. The highest correlation coefficient occurs between Pell eligibility and first-generation status ($r = .358$, $p < .05$), yet this is only a moderate correlation and should still be included in the regression models.

Table 4.3

Correlation Matrix of Variables of Interest

Variables	Job Offer	WIL	First Gen	URM	Female	Field	Pell	ACT	Accel. Credit	Final GPA	TTD	In-State	Work
Job Offer	1.00												
WIL	-.187*	1.00											
First Gen	-.046*	-.035*	1.00										
URM	-.035*	-.065*	.179*	1.00									
Female	-.037*	.067*	.063*	.035*	1.00								
Field	-.138*	-.051*	.071*	.054*	.094*	1.00							
Pell	-.014	-.019	.358*	.203*	.054*	.075*	1.00						
ACT	.010	-.012	-.158*	-.134*	-.161*	.008	-.143*	1.00					
Accel. Credit	-.022	-.033*	.023	.015	.023	.046*	.028*	.237*	1.00				
Final GPA	.046*	.098*	-.099*	-.080*	.213*	-.030*	-.056*	-.013	.131*	1.00			
TTD	.017	-.048*	.015	.013	-.123*	.016	.005	.072*	-.234*	-.321*	1.00		
In-State	.001	-.024	.099*	.022	-.002	.025	.103*	-.013	.120*	-.113*	.050*	1.00	
Work	.072*	-.021	.073*	-.001	.065*	.046*	.081*	.018	.053*	-.046*	-.010	.072*	1.00

Note. WIL = work-integrated learning; First Gen = first-generation; URM = underrepresented racial minority; Field = field of study; TTD = time to degree; In-State = in-state residency; and Work = employed during degree.

*p<.05

As my key variables were job offer, WIL, first-gen, and URM, the correlations between these variables were especially important to examine. Job offer had a negative, and significant, relationship with all three independent variables of interest: WIL (r = -.187, $p < .05$), first-gen (r = -.046, $p < .05$), and URM ($r(5416)$ = -.035, $p < .05$). Participation in WIL also had a negative and significant relationship with both first-generation (r = -.035, $p < .05$) and URM (r = -.065, $p < .05$). I further explored these relationships using chi-square tests.

The proportion of students who reported that they participated in WIL activities was significantly lower for those who identified as first-generation, 58.71% (not first-gen) versus 54.64% (first-gen), $\chi^2 = 6.57$, $p < .05$ (see distributions in Table 4.1). The proportion of students who reported that they participated in WIL activities was also significantly lower for those who identified as URM, 59.90% (not URM) versus 53.27% (URM), $\chi^2 = 19.7$, $p < .001$.

The proportion of students who reported securing a job offer differed significantly by WIL participation, with those who participated in WIL securing job offers at lower rates, 74.21% (no WIL) versus 55.96% (WIL), $\chi^2 = 190.4$, $p < .001$. (see distributions in Table 2) Students who identified as first-generation secured job offers at lower rates than their continuing-generation peers, 64.89% (not first-gen) versus 59.64% (first-gen), $\chi^2 = 11.57$, $p < .01$. Students who identified as URM also secured job offers at lower rates than their peers who identify as non-URM, 64.92% (not URM) versus 60.65% (URM), $\chi^2 = 8.636$, $p < .01$.

The results of Pearson correlations and chi-square tests show significant negative relationships, and differences, in securing job offers and participating in WIL by both first-gen and URM status. These relationships are further explored in the regression models below.

Regression Models

Using the IPWRA method, a two-step regression approach, I then examined the relationship between securing a job offer and participating in WIL as well as any possible

interaction effects between WIL and first-generation or URM status. After running the models for my research questions, I ran supplemental analyses as robustness checks. In this section, I first present the results of my main model, then my model for moderating effects, and end with my supplemental analyses. Results are presented in odds ratios and predicted probabilities.

Research Question 1: Main Model

In my main model, I examine the relationship between participating in WIL and securing a job offer while controlling for the following variables: first generation status, URM status, gender, field of study, Pell Grant eligibility, ACT scores, pre-college accelerated credit hours, final cumulative GPA, time to degree, state residency, and whether a student was employed while they were in school. As I used the IPWRA approach in this study, the first step of my analyses predicted participation in WIL while the second step then predicted securing a job offer.

Step 1: Predicting WIL Participation

The first step model predicts participation in WIL using all of the other covariates that were included in the main model in step 2 (presented in Table 4.4). The results of this model show that the following variables were significant negative predictors of WIL participation: being an URM (OR = .832, $p < .01$) and Race Unknown (OR = .678, $p < .05$); majoring in Business (OR = .500, $p < .001$), Social Science (OR = .694, $p < .001$), Humanities (OR = .759, $p < .01$); and having Accelerated Credit (OR = .996, $p < .05$). Additionally, identifying as Female (OR = 1.27, $p < .001$) and students' Final GPA (OR = 1.40, $p < .001$) were significant positive predictors of participating in WIL. In the IPWRA approach, the propensity of each student participating in WIL is inversed and used as a case weight in order to predict the relationship between WIL and securing a job offer in step 2.

Table 4.4

Regression Results Predicting WIL Participation (Step 1 of IPWRA)

WIL	OR	*SE*	*p*	95% CI
First Gen	.943	.068	.421	[.819, 1.09]
URM				
URM	.832	.054	.005	[.732, .946]
Race Unknown	.678	.125	.036	[.473, .974]
Gender - Female	1.27	.075	.001	[1.28, 1.42]
Field of Study				
Business	.500	.036	.001	[.434, .577]
Social Science	.694	.053	.001	[.598, .806]
Humanities	.759	.074	.005	[.626, .919]
Pell	1.04	.079	.623	[.894, 1.21]
ACT	1.01	.010	.157	[.995, 1.03]
Accelerated Credit	.996	.002	.040	[.992, 1.00]
Final GPA	1.40	.099	.001	[1.21, 1.60]
Time to Degree	.966	.032	.294	[.906, 1.03]
In-State Residency	.971	.096	.765	[.800, 1.18]
Employed During Degree	.925	.061	.237	[.813, 1.05]

Note. WIL = work-integrated learning; First Gen = first-generation; and URM = underrepresented racial minority.

*OR = Odds Ratio; an Odds Ratio < 1.0 represents a negative relationship

Step 2: Predicting Job Offer

The results of the main model (presented in Table 4.5) show that participation in WIL was a significant negative predictor of securing a job offer, holding all else equal (OR = .374, $p <$ .001). Students who participate in WIL had 62.6% lower odds of securing a job offer than comparable students who did not participate in WIL. I examined predictive probabilities to see the difference in the probability of securing a job offer by WIL participation (shown in Table 4.6). 77.1% of students who had average values on all covariates and did not participate in WIL were predicted to have secured a job offer. In contrast, 55.7% of like-specified students who did participate in WIL are predicted to have a job offer. If an average student in the sample participated in WIL, the probability of them securing a job offer decreased by 21.4 percentage points.

Table 4.5

Regression Results Predicting Job Offer (Model 1)

Job Offer	OR	SE	p	95% CI
WIL	.374	.024	.001	[.330, .423]
First Gen	.829	.064	.015	[.712, .964]
URM				
URM	.897	.062	.115	[.784, 1.03]
Race Unknown	.993	.206	.974	[.662, 1.49]
Gender - Female	.920	.060	.204	[.810, 1.05]
Field of Study				
Business	.487	.040	.001	[.415, .572]
Social Science	.459	.038	.001	[.390, .541]
Humanities	.402	.042	.001	[.328, .492]
Pell	1.06	.088	.458	[.904, 1.25]
ACT	1.01	.010	.382	[.989, 1.03]
Accelerated Credit	.997	.002	.185	[.993, 1.00]
Final GPA	1.57	.119	.001	[1.35, 1.82]
Time to Degree	1.10	.048	.033	[1.01, 1.20]
In-State Residency	1.08	.112	.458	[.881, 1.32]
Employed During Degree	1.58	.111	.001	[1.37, 1.81]

Note. WIL = work-integrated learning; First Gen = first-generation; and URM = underrepresented racial minority.

*OR = Odds Ratio; an Odds Ratio < 1.0 represents a negative relationship

Table 4.6
Predictive Probabilities of Job Offer by WIL Participation

	No WIL	WIL	Percentage Point Difference
Predicted Probability	77.1%	55.7%	-21.4

Note. Predicted probabilities reported in percentages to guide percentage point difference interpretation.

While participating in WIL was the main predictor, the results of the model related to some of the control variables also tell an interesting story. The model shows that first-generation status was a significant negative predictor of securing a job offer (OR = .829, $p < .05$) while URM status was not a significant predictor at the 95% significance level (OR = .897, $p = .974$). Additionally, final cumulative GPA (OR = 1.57, $p < .001$), time to degree (OR = 1.10, $p < .05$), and being employed while in college (OR = 1.58, $p < .001$) were all significant positive predictors of securing a job offer.

Balance of Covariates by WIL

Using guidance from previous research related to regression adjustment (e.g., Mokher et al., 2021; Rubin, 2001; Stuart, 2010; What Works Clearinghouse, 2017), I examined the covariate balance before and after weighting by using the standardized difference of means for students who did and did not participate in WIL. I also examined the variance ratios for each covariate pre- and post-weighting. Regression adjustment is deemed appropriate if the absolute value of standardized difference of means are less than 0.25 and variance ratios range between 0.5 and 2.0 (Rubin, 2001; Stuart, 2010; What Works Clearinghouse, 2017). Before weighting, the standardized difference of means for Science (.251) and Business (.258) were slightly over the appropriate value of .25. All other covariate balances fell withing the appropriate ranges for

standardized difference of means and variance ratios. After weighting, all covariates fell within the appropriate ranges for both measures (see Table 4.7).

Table 4.7
Balance of WIL Participation Rates By Covariate Pre – and Post-Weighting

	Pre-Weighting		Post-Weighting	
	St. DM	VR	St. DM	VR
First Gen	.071	.916	.001	.998
URM Status				
Not URM	.131	.900	.004	.997
URM	.117	.897	.004	.997
Race Unknown	.052	.726	.001	.999
Gender	.136	.957	.001	1.00
Field of Study				
Science	.258*	.814	.001	1.00
Business	.251*	1.21	.001	1.00
Social Science	.029	.966	.002	1.00
Humanities	.041	1.10	.002	.996
Pell	.039	.943	.003	.996
ACT	.024	.917	.003	1.02
Accelerated Credit	.066	.919	.001	1.01
Final GPA	.198	.768	.003	.866
Time to Degree	.097	.403	.002	.775
In-State Residency	.050	1.15	.003	.993
Work	.043	1.05	.001	1.00

Note. St. DM = Standardized Difference of Means; VR = Variance Ratio; First Gen = first-generation; and URM = underrepresented racial minority; Work = Employed During Degree.

*indicates statistic beyond accepted range – St. DM > .25 or VR <.5 or >2.0

However, based on anecdotal evidence on certain programs (e.g., Education majors) who are required to participate in WIL, I took an extra step to examine more granular data related to

field of study. To do this, I expanded my examination of field of study to the 7 categories defined by the state from the 4 I used in my models. In the post-weighting analysis for both standardized difference of means and variance ratios for all 7 fields of study, only one measure fell outside the acceptable range: Education (variance ratio = 3.54). This finding shows that there may be an imbalance for Education majors even after weighting, so interpretation of the results as they relate to Education majors should be done with some caution.

Research Question 2: Moderating Effects

To answer my second research question, I ran the same regression model as my main model with the addition of interaction effects either between WIL and first-generation status (Model 2) or WIL and URM status (Model 3). Results from these regression models are discussed in the following sections and presented in Tables 4.8 and 4.10.

First-Generation Status

The results of this model (presented in Table 4.8) show that there was not a significant interaction effect between WIL and first-generation status (OR = .903, p = .474). In addition to reviewing the p-value for significance at the 95% level, I also looked to the model specifications and predictive probabilities to assess significance. The main model had a Pseudo r^2 = .0720 and Wald chi2 = 400.61 while the model with the first-generation interaction had a Pseudo r^2 = .0721 and Wald chi2 = 403.98. The changes in these model specifications are minimal. As a final check on the interaction, I ran margins to find predictive probabilities. The results of this model did not show any statistically significant interaction at the 95% level. When I ran predictive probabilities of securing a job offer for this model, they continued to show a negative relationship between participating in WIL and job offers (shown in Table 4.9).

Table 4.8

Regression Results Predicting Job Offer with First-Generation Interaction Effects (Model 2)

Job Offer	OR	SE	p	95% CI
WIL	.383	.0279	.001	[.332, .442]
First Gen	.877	.101	.254	[.700, 1.10]
WIL x First Gen	.903	.129	.474	[.683, 1.19]
URM				
URM	.897	.062	.115	[.784, 1.03]
Race Unknown	.989	.205	.958	[.660, 1.19]
Gender - Female	.919	.060	.198	[.809, 1.04]
Field of Study				
Business	.487	.039	.001	[.415, .572]
Social Science	.459	.038	.001	[.390, .540]
Humanities	.402	.042	.001	[.328, .493]
Pell	1.07	.088	.444	[.906, 1.25]
ACT	1.01	.010	.369	[.989, 1.03]
Accelerated Credit	.997	.002	.181	[.993, 1.00]
Final GPA	1.57	.120	.001	[1.35, 1.82]
Time to Degree	1.10	.048	.035	[1.01, 1.20]
In-State Residency	1.08	.112	.463	[.880, 1.32]
Employed During Degree	1.58	.111	.001	[1.38, 1.81]

Note. WIL = work-integrated learning; First Gen = first-generation; and URM = underrepresented racial minority.

*OR = Odds Ratio; an Odds Ratio < 1.0 represents a negative relationship

Table 4.9

Predictive Probabilities of Job Offer by WIL and First-Generation Interaction

	No WIL	WIL	Percentage Point Difference
First Gen			
Not First Gen	77.6%	57.1%	-20.5
First Gen	75.3%	51.3%	-24.0

Note. Predicted probabilities reported in percentages to guide percentage point difference interpretation.

If a student who does not identify as first-generation participated in WIL, their probability of securing a job offer decreased by 20.5 percentage points as compared to those who did not participate in WIL. Similarly, if a student who does identify as first-generation participated in WIL, their probability of securing a job offer decreased by 24.0 percentage points as compared to those who do not participate in WIL. While students' probability of securing a job decreased with participation in WIL and with being first-generation, most of this change was related to WIL participation. Figure 4.1 visually shows that there was not an interaction, as the lines in the graph do not cross. This is consistent with interpreting the p-value from the regression model of WILxFirstGen.

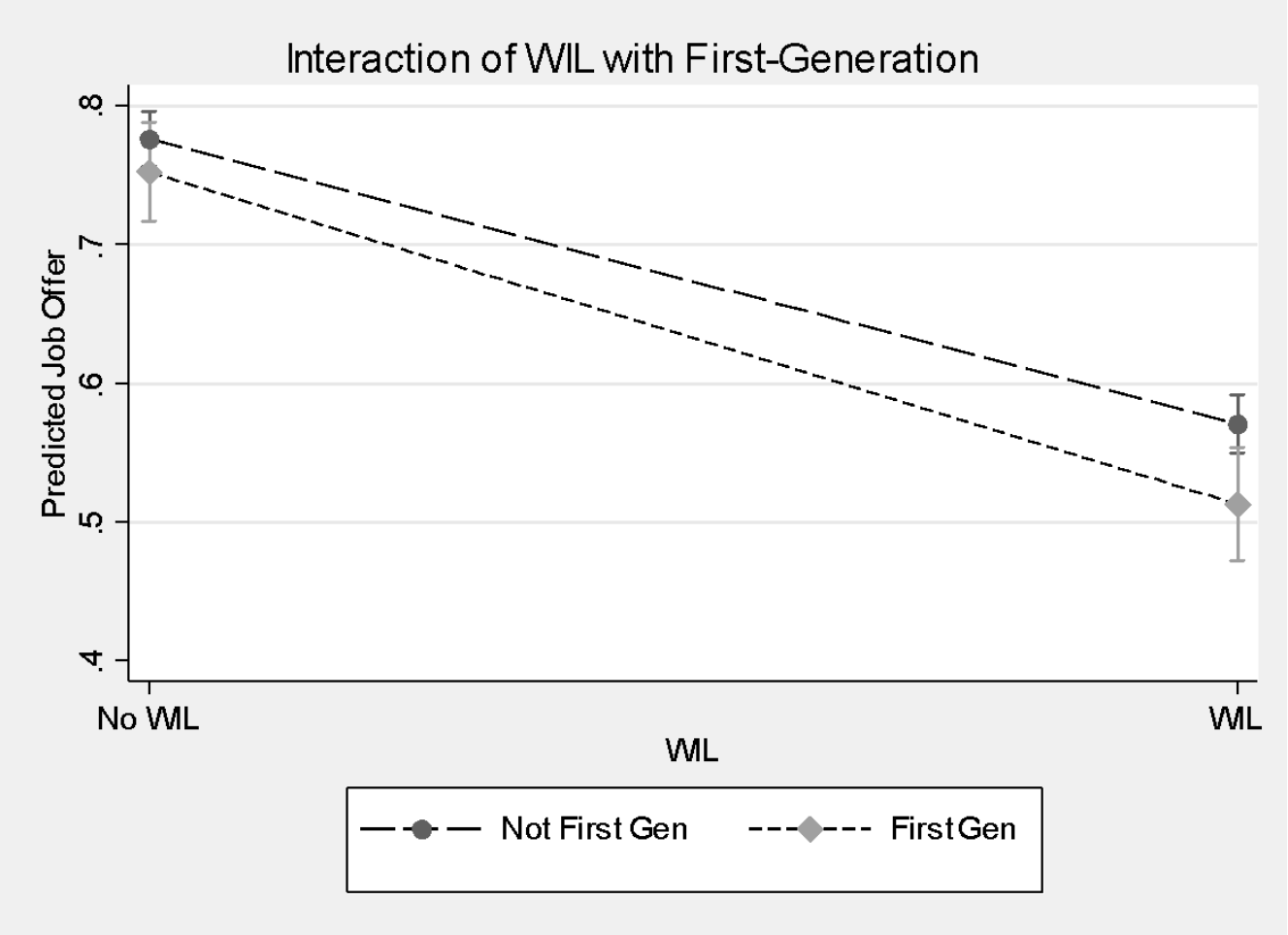

Figure 4.1. This figure shows the predictive probabilities of job offer by interaction of WIL and first-generation status.

Underrepresented Racial Minority Status

For Model 3, I replaced the WILxFirstGen interaction with a WILxURM interaction (see Table 4.10). The results of Model 3 show that there was a significant interaction effect between WIL and URM status at the 95% level (OR = .640, $p < .001$). In addition to reviewing the p-value for significance at the 95% level, I also I ran predicted probabilities (see Table 4.11).

Table 4.10

Regression Results Predicting Job Offer with URM Interaction Effects (Model 3)

Job Offer	OR	SE	p	95% CI
WIL	.424	.032	.001	[.365, .492]
First Gen	.829	.064	.015	[.712, .965]
URM				
URM	1.16	.124	.180	[.936, 1.43]
Race Unknown	.866	.244	.611	[.498, 1.51]
WIL x URM				
WIL x URM	.640	.087	.001	[.490, .836]
WIL x Race Unknown	1.28	.505	.539	[.587, 2.77]
Gender - Female	.918	.060	.190	[.807, 1.04]
Field of Study				
Business	.488	.040	.001	[.416, .573]
Social Science	.458	.038	.001	[.389, .539]
Humanities	.404	.042	.001	[.330, .496]
Pell	1.07	.089	.444	[.905, 1.25]
ACT	1.01	.010	.415	[.988, 1.03]
Accelerated Credit	.997	.002	.182	[.993, 1.00]
Final GPA	1.56	.120	.001	[1.35, 1.82]
Time to Degree	1.10	.048	.031	[1.01, 1.20]
In-State Residency	1.08	.112	.478	[.878, 1.32]
Employed During Degree	1.58	.111	.001	[1.37, 1.82]

Note. WIL = work-integrated learning; First Gen = first-generation; and URM = underrepresented racial minority.

*OR = Odds Ratio; an Odds Ratio < 1.0 represents a negative relationship

Table 4.11
Predictive Probabilities of Job Offer by WIL and URM Interaction

	No WIL	WIL	Percentage Point Difference
URM Status			
Not URM	76.4%	57.8%	-18.6
URM	78.9%	50.4%	-28.5
Race Unknown	73.7%	60.2%	-13.5

Note. Predicted probabilities reported in percentages to guide percentage point difference interpretation.

If a student who does not identify as URM participates in WIL, their probability of securing a job offer decreased by 18.6 percentage points as compared to like-specified students who did not participate. Similarly, the probability of securing a job offer for students whose race is unknown decreased by 13.5 percentage points if they participated in WIL. Meanwhile, if a student who identifies as URM and participated in WIL, their probability of securing a job offer decreased by 28.5 percentage points. Not only did URM students have the largest decrease in percentage points if they participated in WIL (-28.5) as compared to non-URM and race unknown students, but they also went from being the group who had the highest predicted probability of securing a job to the lowest. This evidence is consistent with interpreting the p-value from the regression model of WILxURM as well as the changes across the models showing a better fit when comparing the main model and the URM interaction model. Figure 4.2 visually shows that there was an interaction, as the lines in the graph cross. All of this provides evidence of the interaction between WIL and URM as the significant negative relationship between WIL and securing a job offer was statistically significantly greater for students who identify as URM.

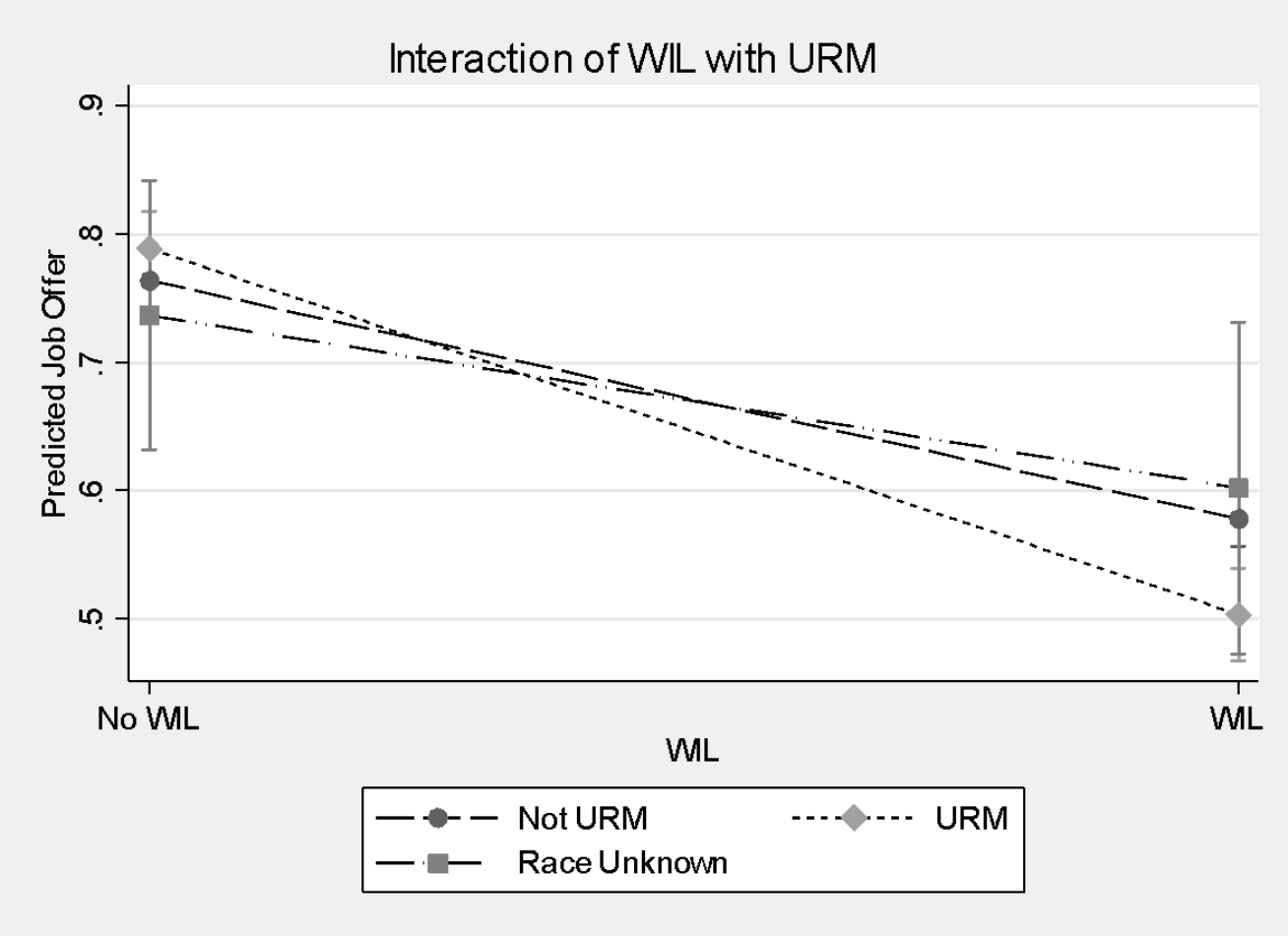

Figure 4.2. This figure shows the predictive probabilities of job offer by interaction of WIL and URM status.

Supplemental Analyses

In addition to the 3 models I ran to answer my research questions, I also ran supplemental analyses to assess the consistency of findings amid minor variations in model specification and sample. I first ran a version of my main model and exchanged my binary WIL independent variable with a continuous version indicating the number of WIL activities independent variable. My second supplemental analysis also used my main model, but instead of examining FTIC students, my analytical sample included only transfer students. My third and final supplemental analysis again used my main model, but in this one I exchanged the dependent variable of *secured* a job offer to *accepted* a job offer. The results of these analyses are presented below.

Change in Independent Variable: Binary WIL to Continuous Number of WIL Activities

Model 4 used all of the same variables as Model 1, with the exception of the WIL total variable rather than the binary WIL variable (see Table 4.12). The WIL total variable is a continuous variable measuring the number of WIL activities in which a student participated. The responses for this variable ranged from 0 to 7 activities. This model continued to show a significant negative relationship between participating in WIL activities and securing a job offer (OR = .565, $p < .01$). This means that for every additional WIL activity in which a student participates, the odds of them securing a job offer decreased by 43.5%.

Table 4.12

Regression Results Predicting Job Offer by Number of WIL Activities (Model 4)

Job Offer	OR	SE	p	95% CI
WIL Total	.565	.023	.001	[.521, .613]
First Gen	.838	.065	.022	[.721, .975]
URM Status				
URM	.895	.061	.106	[.782, 1.02]
Race Unknown	.986	.198	.944	[.665, 1.46]
Gender - Female	.937	.061	.315	[.825, 1.06]
Field of Study				
Business	.527	.042	.001	[.451, .617]
Social Science	.517	.043	.001	[.440, .609]
Humanities	.416	.043	.001	[.340, .509]
Pell	1.07	.089	.433	[.907, 1.25]
ACT	1.01	.010	.333	[.990, 1.03]
Accelerated Credit	.998	.002	.266	[.993, 1.00]
Final GPA	1.68	.128	.001	[1.45, 1.95]
Time to Degree	1.12	.052	.013	[1.02, 1.23]
In-State Residency	1.07	.112	.508	[.873, 1.31]
Employed During Degree	1.62	.113	.001	[1.41, 1.86]

Note. WIL = work-integrated learning; First Gen = first-generation; and URM = underrepresented racial minority.

*OR = Odds Ratio; an Odds Ratio < 1.0 represents a negative relationship

Change in Analytical Sample: FTIC to Transfer Students

With Model 5, the difference from Model 1 was the analytical sample. In this analysis (presented in Table 4.13), I created a new analytical sample to examine transfer students rather than FTIC students. This new sample included 3,446 students. Additionally, I was no longer able to include ACT scores or accelerated credit as predictor variables because these data were not available for transfer students. Otherwise, the model was structured identically to Model 1.

The results of this model continued to show a statistically significant negative relationship between participation in WIL and securing a job offer (OR = .501, $p < .01$). The odds of a transfer student who participated in WIL securing a job offer was 49.9% less than a transfer student who did not participate in WIL.

Table 4.13

Regression Results Predicting Job Offer Among Transfer Students (Model 5)

Job Offer	OR	SE	p	95% CI
WIL	.501	.037	.001	[.434, .579]
First Gen	.910	.073	.244	[.777, 1.07]
URM Status				
URM	.814	.067	.012	[.693, .956]
Race Unknown	.448	.076	.001	[.321, .624]
Gender - Female	.848	.064	.029	[.731, .983]
Field of Study				
Business	.616	.062	.001	[.505, .751]
Social Science	.674	.065	.001	[.558, .813]
Humanities	.454	.059	.001	[.352, .585]
Pell	.877	.074	.120	[.744, 1.03]
Final GPA	1.36	.108	.001	[1.17, 1.59]
Time to Degree	1.09	.038	.009	[1.02, 1.17]
In-State Residency	1.11	.209	0.562	[.772, 1.61]
Employed During Degree	1.21	.098	.019	[1.03, 1.42]

Note. WIL = work-integrated learning; First Gen = first-generation; and URM = underrepresented racial minority.

*OR = Odds Ratio; an Odds Ratio < 1.0 represents a negative relationship

Change in Dependent Variable: Secured Job Offer to Accepted Employment

Model 6 used all of the same predictor variables as Model 1, with accepted employment as the dependent variable rather than secured job offer (presented in Table 4.14). The sample only included the 3,449 students who indicated that they had received a job offer. Results of this model show a negative and statistically significant relationship between participation in WIL and accepting employment (OR = .185, $p < .001$). This means that the odds of students who had participated in WIL, and received a job offer, actually accepting employment were 81.5% lower than the students who did not participate in WIL. When compared to Model 1 (see Table 4.6), Model 6 shows even lower odds for students accepting employment once they have received an offer as compared to securing a job offer in the first place if those students participated in WIL.

Table 4.14

Regression Results Predicting Accepted Employment by WIL (Model 6)

Accepted Employment	OR	SE	p	95% CI
WIL	.185	.020	.001	[.150, .228]
First Gen	.955	.116	.704	[.753, 1.21]
URM Status				
URM	.862	.095	.179	[.695, 1.07]
Race Unknown	.794	.235	.436	[.445, 1.42]
Gender - Female	1.42	.140	.001	[1.17, 1.72]
Field of Study				
Business	.879	.110	.302	[.688, 1.12]
Social Science	.523	.064	.001	[.412, .664]
Humanities	.670	.115	.020	[.478, .938]
Pell	.766	.095	.032	[.600, .978]
ACT	1.00	.015	.909	[.972, 1.03]
Accelerated Credit	1.00	.003	.593	[.995, 1.01]
Final GPA	2.21	.263	.001	[1.75, 2.79]
Time to Degree	1.14	.074	.048	[1.00, 1.29]
In-State Residency	.845	.152	.351	[.594, 1.20]
Employed During Degree	1.22	.141	.089	[.971, 1.53]

Note. WIL = work-integrated learning; First Gen = first-generation; and URM = underrepresented racial minority.

*OR = Odds Ratio; an Odds Ratio < 1.0 represents a negative relationship

Each of the supplemental analyses were consistent with findings from Model 1 even when examining slightly different forms of my independent variable of interest, my dependent variable, and a different subset of students. Collectively, results further support the conclusions from my primary analysis in Model 1: there is a negative relationship between participation in WIL and post-graduation employment outcomes. In the next chapter, I discuss the meaning and importance of these findings.

CHAPTER 5

DISCUSSION

In this chapter, I discuss the findings and implications of the study. I begin the chapter by providing a review of the study and its purpose. I then discuss the findings, examining them by each research question and providing explanations founded in extant literature. I follow the discussion of the findings with sections on this study's contribution to the literature, implications and recommendations, and ideas for future research. I end the chapter with a conclusion of the study.

Review of the Study

The majority of students cite reasons related to securing a job as important to their decision to attend college (Eagan et al., 2016; Pryor et al., 2007). While students across the nation attend college to prepare them for a career, not all students secure jobs after graduation at the same rates. Many institutions offer work-integrated learning (WIL) opportunities for students, which are designed to help students reach their career goals by connecting their coursework to career-related experiences. Evidence from previous research shows that participation in WIL is positively related to traditional student success measures such as GPA and graduation rates (i.e., Huber, 2010; Pascarella & Terenzini, 2005) as well as job-related success such as career preparation and even employment outcomes (Bist et al., 2020; Jackson & Bridgstock, 2021; Simons et al., 2012), yet there is a paucity of research examining direct connections between WIL and securing a job offer. In addition to overall positive relationships between WIL participation and student success, Finley and McNair (2013) and Wyonch (2020) found that participation in WIL activities by students with minoritized identities leads to equity effects related to students' perceptions of learning and securing jobs. In exploring how WIL

connects with student success, multiple studies find that the gain of various forms of social, cultural, and human capital through WIL help the students to succeed (Gault et al., 2000; Ng et al., 2022; Wan et al., 2012).

The data for this study come from a large, public, research institution in the southeastern United States. The analytical sample consists of 5,417 FTIC students whose primary post-graduation plan was employment and who had applied for a job by the time they took the survey for graduating students from the 2017-2018 and 2018-2019 graduating cohorts. Student responses to the survey related to employment plans, employment outcomes, and participation in WIL were paired with institutional records from the Office of Institutional Research.

While there is support across extant literature for the connection between WIL and employment outcomes, the majority of this research has been performed in an international context (i.e., Clegg, 2011; Ferns et al., 2014; Tomlinson, 2008). In this study, I look toward previous research as well as concepts using various capital theories (Bourdieu, 1986; Schultz, 1961; Yosso, 2005) to guide my exploration of any relationship between WIL participation and employment outcomes immediately after graduation at an American institution. In addition to using the WIL framework in an American context, my study contributes to the literature by using the IPWRA analytical approach as well as explicitly exploring the possible moderating effects of first-generation and URM status on the relationship between WIL and employment outcomes. I discuss the findings of these models below.

Discussion of Findings

The results of my main analyses (Model 1) provide evidence of a significant *negative* relationship between participating in WIL activities and securing a job offer by the time of graduation. Model 2 resulted in no interaction effect for first-generation status. Model 3 provided

evidence that there is a significant negative interaction effect for underrepresented racial minorities (URM). Two of the three additional robustness checks (Models 4 and 5) yielded similar results. The results of all five models run contrary to expectations grounded in both empirical and theoretical literature related to WIL, employment outcomes, and capital.

Previous literature sets up expectation that the relationship between WIL and employment outcomes should be positive. Theories of capital suggest that WIL activities should provide students with the necessary capital to secure a job. Policymakers and educational practitioners believe WIL should have a positive influence on students' employment outcomes and continue to broadly offer these activities. Yet, the results of my study run counter to each of these expectations. Instead, my results lend some quantitative credence to findings from qualitative studies showing that URM students – and other minoritized student populations – may face discrimination and other barriers related to WIL (Cocks & Thoresen, 2013; Moylan & Wood, 2016; Patton et al., 2015). For these reasons, I use the following three sections to explore potential explanations for my findings.

Explanations for Findings

The findings of a significant negative relationship between participating in WIL and securing a job offer are contrary to much of the previous literature on WIL and student success as it relates to employment outcomes (i.e., Bist et al., 2020; Coker et al., 2017; Jackson & Bridgstock, 2021; Wyonch, 2020). Most, but not all, of the previous research on WIL provided positive evidence between participating in WIL and securing a job – the exact opposite of the results of this study. The results of my study are also inconsistent with expectations derived from prior literature on social, cultural, and human capitals, which has traditionally shown a positive

relationship between what is gained during college and activities like WIL and employment outcomes (i.e., Bist et al., 2020; Coker et al., 2017; Jackson & Bridgstock, 2021; Wyonch, 2020).

Because my results run contrary to the bulk of previous literature, I revisited the few studies which did not show a positive relationship in hopes they may provide clues as to why WIL might not work as typically expected. I also considered alternate/novel reinterpretations of capital-related theories and their implications. In so doing, I have generated three potential explanations for my primary findings.

Explanation 1: Context/Methods

Perhaps the most straightforward explanation for my findings relates to the context of the study and the methods used for data collection. I performed this study at a single university. As all students in the sample come from the same institution, there may be something about the students or the institution that is atypical. When examining how the context of my study compared to others which supported the relationship between WIL and student success, I found a few differences in the samples and institutional contexts. For example, Finley and McNair's (2013) study included 25,336 students from 38 institutions in the Pacific Northwest and had the following demographic breakdowns (as compared to my study in parentheses): 51% first-gen (vs. 23.3% first-gen) and 22% URM (vs. 29.2% URM). Alternatively, Wyonch's (2020) study used data from the National Graduating Survey that is taken by college graduates not in the US, but in Canada.

Additionally, it is important to note factors within the sample which could be influencing the results. Students receive the survey if they have applied to graduate. Students in degree programs such as Elementary Education can do a 5-year program where they receive their Bachelor's Degree and then their Master's Degree. While education students are participating in

WIL at high rates, they appear to be securing job offers at lower rates. Some of this finding can be connected to students who fill out the survey at the time of their Bachelor's graduation but who are moving on to their Master's Degree immediately after. This is not true for all majors who fall within Education, and there are only 112 Education majors in the study, but it could be influencing the results as they relate to Education majors.

It is also important to note economic fluctuations which may lead to differing results. In 2018, the unemployment rate across the United States dropped to a 49-year low at 4.1% overall and 2.1% for civilians with at least a bachelor's degree (Blank & Edwards, 2019). Since only 63.7% of the analytical sample of this study had received a job offer at the time of the survey, their employment rates were quite different from the national context. The differences in both sample, institutional characteristics, and national context could help to explain why the results of this study vary so much from previous literature.

Adding on to demographic and regional differences, these students may also come to college already possessing much of the economic, human, social, and cultural capital commonly expected to be gained while in college. The sample of this study had fewer first-generation (NASPA, 2019) and fewer Pell-eligible students (NCES, 2022) as compared to the national enrollment. The sample also had an average ACT score of 27.1 while the national average in 2014 (when these students may have taken the exam) was 21.0 (ACT, 2014). These data points are just a few of the sample characteristics, but they all show that the students in the sample are less likely to be first-generation or Pell eligible, and more likely to have higher average ACT scores than college students across the nation. Each of these characteristics point to the students possibly being able to have access to more forms of capital when entering college than the average student.

Beyond demographic differences, the students in the sample may be gaining capital from other experiences while in college, so the opportunity to gain these capitals during WIL are not only limited to WIL activities. There may be requirements set in place for non-WIL coursework, which connects with future careers via social and cultural capital, meaning that students who do not participate in WIL are also gaining these capitals, enabling them to be just as, if not more, successful in their job searches. For example, certain majors may require a first-year seminar or capstone course where professionals in the field come to speak to the students and connect with them. There are also resources on campus such as the Career Center, which offers multiple career fairs and professional development opportunities, such as resume reviews, throughout the academic year. If students are using these resources, then they could be gaining both cultural and social capital without participating in WIL.

In addition to the context of the student population and the institution, the results could be explained in relation to the methods of data collection. First, the survey is sent out to students approximately three weeks before their graduation date. Most surveys are completed within those three weeks before degree conferral. This is a different data point than the data used by the federal government, as the Baccalaureate & Beyond survey looks at employment within a year after graduation (NCES, 2019a) or the National Graduate Survey used in Canada and by Wyonch (2020), which examines employment three years after graduation.

Beyond the timing of the survey, there may be some issues related to the survey instrument and how the students interpret the question related to WIL activities. While there is a singular question on these activities, it just lists the name of the 8 experiential learning opportunities which map onto WIL activities (see Table 3.2) and asks students if they participated in any of the activities during their time at the institution. Since the names of the

activities are not defined in the survey question, a student may not know to call their WIL experiences by those terms. Also, students may have participated in WIL activities early on in their time at college while they are not being asked about their participation until the end of the semester in which they are graduating, leading to a recency issue. These factors could lead to students who had participated in the activities to incorrectly answer that they had not participated.

Nevertheless, several elements of my study cast some doubt on whether methodological and contextual factors can wholly account for the differences between my findings and much of the previous literature. First, I used multiple years of data, had a complete data set, and the results were in line with preliminary analyses using other cohorts. Second, the IPWRA method is a doubly robust approach which ensured the inclusion of all students in the sample, and my robustness checks were largely consistent with the results of my main model. These reasons lead me to consider two further potential explanations for these results: poor WIL implementation or students having negative experiences during WIL, both of which could ultimately influence their ability to gain or use various forms of capital, and subsequently could relate to their likelihood of getting a job.

Explanation 2: Poor WIL Implementation

The nature of these results may come down to the implementation of WIL. Research has shown that the implementation of WIL is more important than just identifying an activity as one which fits within the framework (Kinzie et al., 2020; Kuh & O'Donnell, 2013). There are supposed to be structures in place to encourage students to reflect on their experiences and WILs are supposed to be directly connected to the student's curriculum (Cooper et al., 2010). WIL is expected to help students gain various forms of capital as it directly connects their degree with

their future career (Cooper et al., 2010). The knowledge, skills, and connections which students are expected to gain during WIL directly connect with the forms of social and cultural capital regularly cited by employers when looking for new hires (DiBenedetto & Willis, 2020; Gault et al., 2000; Lisá et al., 2019; Ng et al., 2022; Wan et al., 2013). Thus, when properly implemented, WIL should directly connect students with employers in their field. This connection should occur whether those employers are their WIL supervisors, or their WIL supervisors connect them with future employers. Studies have shown that relationship building during WIL is important to student learning, development, and satisfaction in the workplace environment (Arthur et al., 2022; Wan et al., 2013).

The postsecondary institution providing these WILs is responsible for proper implementation of these facets of WIL. If there is a lack of oversight or connection to the curriculum, then activities assumed to be WIL (or labeled as such) would not actually qualify as WIL within Cooper et al.'s (2010) definition and may not provide benefits to students as they should. Alternately, WILs may be implemented inconsistently and ultimately harm a student's outcomes rather than provide them with benefits. If WIL is implemented poorly, a student may not reflect on their experiences and reach the intended outcomes.

Further, proper implementation requires good communication and partnerships between the institution and the WIL placement. As Choy and Delahaye (2011) found, these partnerships are often difficult to maintain. Lack of oversight from the institution on the implementation of WIL may lead to a disconnect between the curriculum and what is offered to students by the WIL placement. When the two sides of the partnership do not agree, do not communicate, or do not have shared standards for the experience, students may not benefit from these experiences.

If the opportunity to build relationships between students and industry members is not provided because of improper implementation, then students are missing out on gaining vital forms of social capital. In addition to relationship building, WIL offers a unique opportunity to learn from experts in the field in a professional setting (Cooper et al., 2010). Yet, if the opportunity to gain connections with employers and learn from them, as well as reflect on the experience, is hindered by the lack of a proper partnership between the institution and the placement, students will miss out on experiences in which they could gain multiple forms of cultural capital. Without knowing more about the activities students are considering as WIL on the survey, there is no way to tell if those WILs have been implemented in a way which follows the guidance of scholars like Cooper et al. (2010).

Explanation 3: Negative Student Experiences

While poor implementation by the postsecondary institution could undermine WIL effectiveness, so could negative student experiences within the WIL work environment. If a student has a negative experience during their WIL placement, then it is reasonable to assume that they would not want to find employment related to that experience. Two studies (Cocks & Thoresen, 2013; Moylan & Wood, 2016) remind readers that students' experiences as part of WIL are not universally positive. The dataset of my study only asks whether a student participated in a WIL activity and does not ask the student about their experiences during the activity. The structure of the data makes it impossible to know whether a student had a good experience. While I do not have data on the quality of students' experiences, the explanation of them having bad experiences is supported by the lack of equity effects for first-generation status or URM, and even more so for the magnification of negative WIL effects for URM as demonstrated by the interaction effect in Model 3. The negative interaction between URM

identities and WIL participation implies that something is going on which further disadvantages students who are already underserved.

These findings could be explained by students having bad experiences during WIL at multiple levels. WIL is supposed to help students develop career-related skills (Cooper et al., 2010), but if a student is asked to only perform menial tasks, are not trained in advanced skills by their WIL supervisor, or receive poor work supervision during WIL, they will not benefit from these activities as they should. In addition to these practical obstacles to having a good WIL experience, previous research suggests that students with minoritized identities may also experience discrimination during WIL (Patton et al., 2015). There is a documented history on the negative relationships between perceived racial discrimination and factors such as job attitudes, employee health, and perceptions of a diversity climate at work (Triana et al., 2015). Such evidence supports the logic that if a student faces discrimination in their WIL workplace environment, they will not perceive the WIL as a good experience and may reconsider their efforts to pursue a career related to that experience.

The possibility of negative WIL experiences is especially concerning for minoritized students. It is expected that students with minoritized identities may have more capital to gain from these experiences as they have traditionally not had prior access to gaining these forms of social, cultural, and human capital as often as their majoritized peers (Finley & McNair, 2013; Main et al., 2019; McCormick et al., 2007; NCES, 2019a; NSSE, 2021; Strand, 2013). The previous literature suggested participation in WIL would provide first-generation students with the forms of capital which are traditionally valued by employers (e.g., cultural capital via communication and problem-solving skills and social capital via connections with industry members) (DiBenedetto & Willis, 2020; Gault et al., 2000; Lisá et al., 2019; Ng et al., 2022;

Wan et al., 2012). The gain of these employer-cited capitals in addition to the capitals which they already possess – often including things like resistant and linguistic capital– should lead to more equitable outcomes as evidenced by Finley and McNair (2013) and Wyonch (2020). Finley and McNair (2013) found that participation in these kinds of activities led to minoritized students perceiving greater gains in their learning compared to their majoritized peers, especially in the area of practical competence. Indeed, evidence from Wyonch (2020) shows that minoritized students who participated in a co-op secured full-time jobs at higher rates than their similar peers and secured salaries which were comparable to white male co-op participants.

But if a student has a bad experience during their WIL placement, then it also makes sense that they would not build positive professional connections (social capital) or knowledge (cultural and human capital) – commonly reported outcomes of WIL, which would be expected to increase students' ability to get a job. Poor experiences could also be reducing students' ability to gain cultural and human capital as their bad experiences could overshadow any gain of knowledge and skills during the activity. If bad experiences are happening broadly for the students in this sample during WIL, then it could help to explain the main findings of the study. If these bad experiences are more often happening to the students who identify as URM – which is supported by previous research (Patton et al., 2015) – then it could help to explain the interaction effects found in my third model.

Ultimately, the results of the study could be a function of all three explanations. The findings open up inquiry on what about WIL in this context is leading to results which are largely contradictory to prior research and theory. If WIL activities are not designed based on research or theory and are being implemented improperly, then students may have a bad

experience and it could ultimately harm their chances of securing a job. The results of the study warrant caution in telling all students that participation in WIL can help them.

Contribution to the Literature

In this section, I discuss the various contributions my study makes to the literature. I begin the section by discussing the contributions made by my findings. I then provide an overview of the contributions made by my study as it relates to my use of the WIL framework and the IPWRA methodological approach.

Contributions from Findings

While I began this study assuming the results of my main model would support the overwhelmingly positive evidence of the relationship between WIL and employment outcomes which exists in the literature, my results say otherwise. The findings of my study show a significant negative relationship between WIL and securing a job offer. These results are an important contribution to the literature as they challenge common beliefs about the value of WIL. While my findings contradict much of the WIL literature, they do reinforce the small body of previous literature, which rejects the assumption that just doing WIL means there will be good outcomes. Rather, as found by Kinzie et al. (2020) and Kuh and O'Donnell (2013), the actual implementation and careful oversight of WIL activities is needed to ensure students are having good experiences and meeting their learning outcomes.

In addition to my main findings, the results related to moderating effects from first-generation and URM status contribute to the literature in a similar way. My results show interaction effects with URM status but not first-generation status. There is something about these my study's sample/context, institutional implementation, and/or student experiences which do not align with previous literature. The students in this sample appear not to be gaining the

kinds of capital that would lead to positive employment outcomes. Something is happening during WIL within this sample which is either hurting, or just not helping, minoritized students in their pursuit of a career. Further, my results shows that activities like WIL cannot just be put into practice without understanding the unique context of the institution and the specific needs of participating students. My findings also show that more research needs to be done to examine how the implementation of WILs can either lead to significantly positive or significantly negative relationships with employment outcomes.

Use of WIL Framework in an American Context

While there is a multitude of studies which look at WIL activities individually in an American context (i.e., Briel & Getzel, 2001; Main et al., 2019; Ryan et al., 1996; and Wan et al., 2012), the WIL framework as a collective of activities has not been as widely adopted in this country. Therefore, my study contributes to the literature by being among the early studies to explore WIL as a collective framework in the United States. As WIL is used widely in higher education policy and practice in comparative countries such as Australia, the United Kingdom, and Canada, it would be logical if the American higher education system were to adopt this framework as well. Most of the activities which fall within the WIL framework are already provided at U.S. institutions, they are just typically evaluated individually rather than as a collective of activities. The adoption of this framework within American higher education research could be useful as a way to explore experiential learning related to employment across fields of study, as the types of activities often differ by fields but essentially have the same goals – to connect learning to future employment (Cooper et al., 2010). My study provides an example of how the WIL framework may be used at a large, public research institution in the United States, which can be replicated within other American postsecondary contexts.

Use of IPWRA Approach

In addition to using WIL as a framework in my study as a new way to conceptualize career-related experiential learning in American higher education, I also use a methodological approach which has not yet been widely adopted in our field: inverse probability weighted regression adjustment (IPWRA). As my study explicitly examines moderating effects of first-generation status and underrepresented racial minorities on the relationship between WIL and employment outcomes, I needed to use a methodological approach which would include every student in my sample. While traditional matching approaches could be used to answer my research questions, students with multiple minoritized identities would be likely dropped from the study, as they would not match with another student. This would be problematic because it would get rid of the students from my sample who are often underserved, would possibly get rid of the students whose experiences I wanted to explore in my secondary and tertiary research questions, and would ultimately reduce my overall sample. IPWRA allows me to include all students in my sample, ensuring I am able to accurately explore the experiences of students who historically have not had equitable access to college let alone WIL, and who have had lower success rates as they relate to both college and their careers. My study contributes to the higher education literature by using IPWRA, a quasi-experimental methodological approach which allows for the inclusion of traditionally underserved students who often get excluded from quantitative research.

This study contributes to the literature on multiple levels. My findings provide context to the literature related to work-integrated learning and employment outcomes in a higher education setting. The methods I used in the study also provide insight into ways we can ensure traditionally underserved students are not only included but emphasized in quantitative research.

Beyond contributions to the literature, my study has multiple implications related to policy and practice within our field.

Implications and Recommendations

The primary stakeholders in this study are college students. As the majority of students want to go to college to help them in their pursuit of a career (Eagan et al., 2016; Pryor et al., 2007), it is imperative that higher education institutions are helping students meet these goals. Work-integrated learning is supported in the research as a collective of experiential learning activities which help connect students' coursework to their future careers (Cooper et al., 2010). While the majority of previous research shows a positive connection between WIL and student success – both during and after college (i.e., Bist et al., 2020; Coker et al., 2017; Huber, 2010; Jackson & Bridgstock, 2021; Pascarella & Terenzini, 2005; Wyonch, 2020) – my study provides evidence that not all WIL experiences are the same, and the relationship may not always be positive. In framing the implications and recommendations from my study, I explore three areas: practice, policy, and future research.

Practice

Institutions and faculty should be involved in the development and operation of WIL experiences, from start to finish. They should use prior research and data to develop these experiences as well as evaluate them to make sure students are actually getting what they need out of the experience. Evidence shows that proper implementation of WIL activities is more important than just offering the activities (Kinzie et al., 2020; Kuh & O'Donnell, 2013). If activities are to be considered WIL, then they should be directly connected to the curriculum as well as provide students opportunity for reflection on their experiences (Cooper et al., 2010). If

institutions or departments are requiring, or even regularly offering, WIL activities, it is their responsibility to oversee these activities.

As activities in the WIL framework are already regularly offered at institutions across the United States, my biggest recommendation is to immediately institute consistent evaluations and ways to improve WIL. Regular program evaluations would ensure students are receiving the support they need and are having experiences where they are able to connect their coursework to their future careers. When creating or updating WIL activities, institutions and departments can draw upon the WIL framework by Cooper et al. (2010), empirical research on WIL, and even look to the implementation of these activities and related policies in countries where they have been successful, such as Australia, the UK, and Canada. Proper evaluation would allow for institutions to ensure WIL experiences are connected to the curriculum, examine whether students are meeting learning outcomes, and provide opportunity to for continuous improvement. Institutions should look to projects examining the quality of experiences like the HIP Quality Project being led by Indiana University's Center for Postsecondary Research (Kinzie et al., 2020). By using prior research and data to develop WIL and ways to evaluate it, institutions can ensure they are properly implementing the activities and offering experiences to students which can connect them to their future careers.

Policy

While the above recommendations focus more on practice, there are also several implications of my study related to policy at the institutional, and even departmental, level. First, proper implementation requires active communication between the institution and WIL partners. As Choy and Delahaye (2011) found, partnerships are difficult to maintain, but communication between the various parties is vital. If there are policies set from the beginning which create a

structure for WIL and ensuring the institution and WIL partners are regularly communicating, then they could help to ensure proper implementation from the beginning. Assuming these activities already exist in one form or the other, I return to my suggestion that regular evaluation, involving both the institution and the WIL partners, should be implemented immediately. This evaluation will ensure that policies for implementation are being followed and will provide an important aspect of the active communication between all stakeholders.

In addition to policies related to implementation and evaluation, institutions need to have policies set in place if those evaluations uncover issues. Most specifically, my study not only shows a negative relationship between WIL and securing a job offer, but also provides evidence that students who identify as underrepresented racial minorities are having negative experiences during WIL which relate to even more negative employment outcomes as compared to their non-URM peers. These findings connect with research which show that historically underserved students may have bad experiences in their WIL placements (Patton et al., 2015), which can negatively influence the relationship between WIL and employment outcomes. Institutions and need to have processes in place to address issues when they arise, especially if students experience discrimination or a lack of support from their placements. These policies should address the issues by having structures in place to help students who have had bad experiences and to make changes so future student experiences are positive. These policies need to address issues at the student, institutional, and partner levels.

Beyond students, institutions, and WIL partners, several funding sources should also pay attention to the results of this study. WIL experiences require funding and partnerships to succeed, and these forms of support can be provided by individual donors or professional organizations as well as various levels of government. Since WIL connects students to future

careers, the activities require funding to operate, whether it be directly via paying students during internships or indirectly by providing students with materials to complete the experiences. As policies related to providing these opportunities continue to be developed, those who fund these activities will want to make sure their funding is being used properly.

Future Research

Since the main results of the study show a negative relationship between participating in WIL and employment outcomes, future research should be conducted to further explore these findings. In this section, I discuss ideas for future research directly related to my research questions as well as other significant results I found along the way.

WIL and Employment Outcomes

My study did not provide results which were expected based on previous research or my conceptual framework. This may be due to the specific context in which I performed the study. To explore this further, I would suggest that this study's methods be replicated within other American postsecondary institutional contexts. By replicating the methods of the study in other contexts, the results of this study could turn out to be context specific, or if other institutions find the same results, then there might be something about WIL which is fundamentally not working within American higher education. If the latter is found, then I suggest a comparative study be performed to investigate why WIL supports traditional measures of student success as well as employment outcomes in some contexts but not others. Additionally, replication of using securing a job offer as the main outcome could provide more evidence toward the direct relationship between WIL as a possible intervention for increasing job market success. Further exploration into the use of the WIL framework in an American context as well as exploring

relationships specific to employment outcomes hold implications for broadly providing these activities across institutions.

Exploration Into Other Variables

There is not one variable which predicts student success, whether it be during college or afterward. Much of the WIL literature focuses on connecting participation in the activities to traditional student success measures like GPA or graduation rates (i.e., Huber, 2010; Pascarella & Terenzini, 2005). In this study, I chose to expand the definition of student success to employment outcomes. I suggest that another study be performed using this data and look into the relationship between WIL and those more traditional measures of student success as well. I believe this research is especially warranted considering the counterintuitive results of my main model. It would be intriguing to see what the relationship looks like with variables such as GPA or time to degree with WIL within this context. The results of my study related to my other control variables, especially field of study and employed while in college also provide openings for more inquiry related to both WIL and employment outcomes.

Additionally, further research should examine how students who do not participate in WIL spend their time while in college. As seen with the employed during college variable in my study, there could be other activities in which a student participates that could be providing them with similar experiences and forms of capital that I assumed they could gain through WIL experiences. If students who do not participate in WIL are gaining these skills and forms of capital in different ways, then a closer look into how those kinds of activities could help students, especially traditionally underserved students, secure job offers is warranted.

Alternative Methods

I would especially suggest that the relationships between WIL and student success should be explored qualitatively as well as quantitatively. Based on the results from my study, especially with the negative relationship between WIL and so many of my variables, I believe that a qualitative study could dig into the nuance of these results and help to figure out why the results do not tell a straightforward story quantitatively. By using qualitative methods, students' experiences which lead to them participating in WIL, their experiences during WIL, and their experiences connecting these activities to their employment outcomes can be further explored. Further research, both qualitative and quantitative, can help to inform stakeholders on how WIL is being implemented, how students are experiencing them, and how these activities may be leveraged as a possible intervention to help students meet their employment goals.

Conclusion

If students are coming to college with goals directly related to securing employment with their degree, then it is imperative that universities aim to help students meet these goals. While students with a variation of characteristics have these goals, it is also recognized that student success is not equitable for all students. More specifically, employment outcomes differ across student characteristics, with students who are traditionally underserved in higher education securing employment at lower rates than their peers. In this study, explored the relationship between work-integrated learning (WIL) and employment outcomes to see if WIL could be a mechanism to help students reach their employment goals by the time of bachelor's degree completion. Contrary to the majority of research related to WIL and employment outcomes, the results of this study do not indicate a positive relationship between the two. Instead, it provides evidence that a significant negative relationship exists, and that this relationship may be

moderated by certain identities such as URM status. Additionally, supplemental results of this study provide insight into the relationships between securing a job offer and variables such as gender, field of study, and whether a student works during college.

While the main model of this study is contradictory toward the majority of research regarding WIL, it provides insight into the complexity of the relationship between WIL and employment outcomes and the idea that WIL is not a "one size fits all" kind of concept. The results of this study hold implications for both policy and practice at the individual program, institutional, and even governmental levels. This study answers the questions: "Are students who participate in WIL more likely to get a job offer immediately prior to graduation than their peers who did not?" and "Does a student's identity as being first-generation or an underrepresented racial minority moderate any relationships between work-integrated learning and employment outcomes?" and simultaneously opens up more room for inquiry related to work-integrated learning, student success as it relates to employment outcomes, and the intersection of identities with both WIL and employment outcomes. While I have offered three potential explanations for the results of this study, each of these explanations were made in an effort to make sense of the overarching finding that WIL is negatively related to employment outcomes. Whatever the explanation, the finding that WIL is negatively related to employment outcomes raises serious doubts about the efficacy and equity of these experiences.

APPENDIX A

SURVEY INSTRUMENT – SELECTED QUESTIONS

In this study, I use selected questions related to students' participation in work-integrated learning (WIL) and securing job offers from an exit survey sent to all graduating students. Additional data related to student characteristics are collected via institutional record. The selected questions from the survey and their associated response options are included below.

Your "primary plan" is the ONE post-college activity that will be your focus after graduation. If you plan to do more than one of the activities below, you will have an opportunity to share that information later in the survey.

Q14 Please select the statement which MOST CLOSELY describes your PRIMARY plan IMMEDIATELY after graduation.

- ○ Employment (seeking, applying or secured, full-time or part-time, internship, paid or unpaid) (1)
- ○ Continuing education (applying or admitted to graduate school, professional school, or other post-college education) (2)
- ○ Military service (3)
- ○ Volunteering (e.g. AmeriCorps, community service, etc.) (4)
- ○ Starting or raising a family (5)
- ○ Taking time off (6)

Q92 Which statement best describes your current employment status?

- ○ Have accepted a position to begin in the coming months (including residency and internship positions) (1)
- ○ Working in a position I plan to continue after graduation (7)
- ○ Have been offered a position or multiple positions, but declined offers and still searching for preferred position (2)
- ○ Considering one or more offers (4)
- ○ Searching or waiting on offers (5)
- ○ Will begin searching for a position in the coming months (6)

The survey will now present you with a series of questions about any internships or other forms of experiential learning in which you may have participated. Please indicate your participation by checking the boxes next to the activities listed.

Q95 Internships & Experiential Learning

Check the activities in which you were engaged during your time at [Redacted]. (Select all that apply.)

- ○ Internship
- ○ Cooperative education (co-op)
- ○ Practica
- ○ Field Work
- ○ Student Teaching
- ○ Apprenticeship
- ○ Clinical
- ○ Leadership
- ○ Fellowship
- ○ Other _____
- ○ None of the above

APPENDIX B

IRB DETERMINATION CORRESPONDENCE

FLORIDA STATE UNIVERSITY

OFFICE *of the* VICE PRESIDENT *for* RESEARCH

NOT HUMAN RESEARCH

October 18, 2022

Cassandra Kepple

Dear Cassandra Kepple:

On 10/18/2022, the IRB staff reviewed the following submission:

Title of Study:	From College to Career: Connecting Student Participation in Career-Related Experiential Learning Activities with Post-Baccalaureate Outcomes
Investigator:	Cassandra Kepple
Submission ID:	STUDY00003641
Study ID:	STUDY00003641
Funding:	None
IND, IDE, or HDE:	None
Documents Reviewed:	• Citi Training Certificate, Category: CITI Training Completion Documentation; • CRK-SBS Protocol-From College to Career, Category: IRB Protocol;

The IRB staff determined that the proposed activity is not research involving human subjects as defined by DHHS and/or FDA regulations.

IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be

made. If changes are made and there are questions about whether these activities are research involving human subjects in which the organization is engaged, please submit a new request to the IRB for a determination. You can create a modification by clicking **Create Modification / CR** within the study.

COVID-19 Information for Research Involving Human Subjects: Note that the U.S. is operating under the national emergency Proclamation 9994 concerning the COVID-19 pandemic and that this national emergency remains in effect until rescinded or terminated by the President of the U.S. (go here for the Proclamation letter). Conditions are dynamic and related policies or guidance evolve accordingly; as applicable, refer to the U.S. Centers for Disease Control and Prevention website specific for universities or refer to our COVID-19 and Human Research Studies web page to learn more about how you should or may protect persons (whether vaccinated or unvaccinated) involved in any of your in-person research activities.

Sincerely,

Office for Human Subjects Protection (OHSP)
Florida State University Office of Research 2010
Levy Avenue, Building B Suite 276 Tallahassee, FL
32306-2742
Phone: 850-644-7900
Email: humansubjects@fsu.edu OHSP
Web: https://ohsp.fsu.edu

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BIOGRAPHICAL SKETCH

Cassandra R. Kepple (she/her) is a first-generation student from West Virginia. She earned a Bachelor's of Science in Psychology and a Bachelor's of Multidisciplinary Studies (Biology, Child Development and Family Studies, and History) from West Virginia University in 2017. She earned a Master's of Arts in Higher Education Administration from West Virginia University in 2019. Cassandra will complete her Ph.D. in Higher Education from Florida State University in 2023. Cassandra's research focuses broadly on student success using quantitative methodologies, with emphasis on how programming and policy can increase students' access to, and success through, college.