The Time it Takes: Bachelor's Degree Completion for Latine Students

Robert E. Kunicki

Urban Education Ph.D. Program
The Graduate Center, CUNY

Dissertation Committee

Professor Juan Battle (Chair), The Graduate Center, CUNY
Professor Anthony Picciano, Hunter College & The Graduate Center, CUNY
Professor Limarys Caraballo, Teachers College, Columbia University & The Graduate
Center, CUNY

Abstract

Latine bachelor's degree completion has grown in the last several decades but has not kept pace with other racial and ethnic groups. Millions of Latines have successfully navigated higher education, yet not enough is known about the conduits and barriers to timely degree completion. This proposed study employs LatCrit, anti-deficit achievement, and intersectionality as theoretical frameworks; employs secondary analysis of a City University of New York dataset; and utilizes hierarchical regression modeling to examine the relative impact of college completion programs, academic momentum, and key demographic variables on time-to-bachelor's-degree for Latine students. Further, to see how these relationships operate differently for transfer versus first-year students, analysis will be conducted for those two groups separately. Given the findings, recommendations will be provided for four-year institutions and university systems to improve Latine bachelor's degree outcomes.

Contents

The Time it Takes: Bachelor's Degree Completion for Latine Students

Background

This section of the dissertation discusses the national scope of Latine degree attainment. It explicates the unique trajectory most Latine students traverse in order to complete a bachelor's degree. Community colleges are the primary entry point into higher education for Latine students (Hussar et al., 2020) which means that most Latine students pursuing bachelor's degrees do so as transfer students. Investigating bachelor's degree completion must consider the unique paths of both transfer students and first-year students at four-year colleges. This section presents the case for using the City University of New York as a research site to investigate bachelor's degree outcomes for Latine students following both paths to degree. More specifically, it considers the value of investigating time-to-degree as a possible avenue for further exploration to improve bachelor's degree completion.

Concerning language, the term Latine is used to refer to persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race. Latine is an alternative to the term Latinx which was introduced as a replacement for the term Latino. Latinx acknowledged the identities that exist beyond the gender binary of male/female and Latino/a, replacing the "o"/"a" (which typically, but not always, mark the feminine and masculine gender in Spanish in nouns and adjectives utilized to describe people) with an "x" (Vidal-Ortiz & Martínez, 2018). However, the "x" in Latinx can be unpronounceable and not conjugatable in Spanish. The term Latine has emerged as a replacement for Latinx that is both gender-expansive and aligned with Spanish linguistic practices. For example, the -e can be applied to other words in Spanish in place of the masculine -o and feminine -a to describe people. In this dissertation, the words Latino and Latina are used to explicitly refer to male-

identifying and female-identifying Latines, respectively. Though this dissertation primarily uses the word Latine to refer to persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race, much of the national statistics available refer to this population as Hispanic or Latino. This definition is aligned with the U.S. National Office of Management and Budget, which determines the federal definitions of racial and ethnic groups for the classification of federal data (Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity, 1997). For the purpose of this dissertation, statistics presented use the word Hispanic to avoid confusion with instances when the word Latino is used to refer to male-identifying Latines.

Statement of the Problem

The number of Latine students with college degrees has increased over the last several decades, but the proportion of the Latine population with a college degree has not kept pace with other racial and ethnic groups (Carnevale & Fasules, 2017). Latines are the second-largest racial and ethnic group in the United States but have the lowest college attainment rates compared to White, Black, and Asian Americans (Schak et al., 2019). Latine access to higher education increased 148% between 2000 and 2018 (Hussar et al., 2020). Despite increases in college access, Latines lag behind in degree completion. From 2000 to 2019, the percentages of 25- to 29-year-olds who had attained a bachelor's degree or higher increased for those who were White (from 34 to 45 percent), Black (from 18 to 29 percent), and Hispanic (from 10 to 21 percent) (Hussar et al., 2020). Latine adults, however, have lower degree attainment than non-Hispanic White adults. Only 23% of Latine adults have earned a college degree compared to 47% of non-Hispanic Whites (Hussar et al., 2020). Latines may be lagging behind in degree attainment because of the amount of time it takes them to complete bachelor's degrees. Nationwide, Latines

are less likely to complete their degrees on time (Zarifa et al., 2018). The more time a student spends in school, the less likely they are to graduate (Princiotta et al., 2014).

Increasing Latine college completion is critical, given that college completion is a growing necessity to access the 21st-century labor market. The United States is fourth in the Organization for Economic Cooperation and Development nations rankings of the percentage of the population age 25 to 64 who has attained any postsecondary degree (Hussar et al., 2020). For the U.S. to regain the top ranking in the world for college degree attainment, Latines will need to earn 6.2 million degrees by 2030 (Excelencia in Education, 2021). Though the number of Latine students with a college degree has grown, Latines are underrepresented among bachelor's degree holders (Schak et al., 2019). Growth in Latine college completion has been mainly concentrated at the certificate and associate levels, limiting access to the economic benefits of a bachelor's degree (Excelencia in Education, 2019) and restricting Latines from a competitive advantage in the form of higher credentials (Chase et al., 2014). Associate's degree holders have lower wages and lower employment rates than bachelor's and graduate degree holders (Schak et al., 2019).

While there are certainly benefits to earning an associate's degree, having a bachelor's degree leads to a greater likelihood of full-time employment and greater economic returns. The percentage of labor force participants who worked full-time, year-round, increased among those with a bachelor's degree from 77% in 2000 to 80% in 2018. In contrast, those with an associate's degree remained flat at 73% from 2000 to 2018 (Hussar et al., 2020). Additionally, median earnings for those with a bachelor's degree were 36.75% higher than those with an associate's degree and 50.69% higher than those with some college but no degree (Hussar et al., 2020). Earning a bachelor's degree carries significant economic benefits, yet most Latines in higher education must first navigate their path through the community college.

The majority of Latines across the United States begin their collegiate journeys at community colleges. Across the United States, Latines currently enrolled in college are more likely to be represented at the certificate and associate level compared to all students (54% compared to 38%) (Hussar et al., 2020). Community colleges serve as a gateway to higher education and the first step towards earning a bachelor's degree. Among a nationally representative sample of first-time beginning community college students, 35.8% of Hispanic students indicated that they intended to earn a bachelor's degree, and 49.6% of Hispanic students indicated that they intended to earn above a bachelor's degree. However, after six years, only 8.2% of Hispanic students had earned a bachelor's degree (Horn & Skomsvold, 2011). Latine students who begin at community college intend to pursue degrees beyond the associate's level, yet few achieve their goal after six years. Part of the issue is related to leaks in the transfer pipeline, yet a subset of achievers manages their way through bachelor's degree completion.

Bachelor's degree outcomes for Latine students who begin at a community college are drastically different from those who begin a bachelor's degree-granting institution. Among a nationally representative sample of Hispanic students who began college for the first time in a bachelor's degree program, 58% had earned a bachelor's degree after six years (U.S. Department of Education National Center for Education Statistics, 2017). Starting college in a bachelor's degree program leads to a greater likelihood of bachelor's degree completion after six years compared to starting at a community college. Community college, however, is the primary entry point into higher education for Latine students. Increasing Latine bachelor's degree completion rates must take into account the unique trajectories of those students who start as first-year students and those who start in bachelor's degree programs as transfer students.

More specifically, attention must be paid to how long it takes students to complete their degrees once they enroll in a bachelor's degree program. Latine access to higher education has increased, but they are not graduating at the same rate as their peers (Hussar et al., 2020). Part of this may be due to the fact that Latines take longer to complete their degrees (Zarifa et al., 2018). Research suggests that college completion programs (Kolenovic et al., 2013; Todorova, 2019), academic momentum (Attewell et al., 2012; Clovis & Chang, 2019), and varied social identities such as gender, class, citizenship, and language ability (Núñez, 2014) influence educational outcomes. However, it is not clear how these factors influence the length of time it takes students to complete a bachelor's degree. Timely degree completion is often defined at graduation within four-years at bachelor's degree-granting institutions. Institutional graduation rates are reported based on six-year graduation rates, allowing students extra time to earn a traditional four-year degree. If a student transfers credits from a previous institution, they would presumably take fewer than six years to graduate. Transfer students, however, may face a myriad of obstacles to degree completion that distinguishes their journey at bachelor's degree-granting institutions from those students who start as first-year students (Bahr et al., 2013).

As the college-going population has become increasingly diverse, many students have needed longer than four or six years to complete a bachelor's degree (Attewell et al., 2007). The longer students take to graduate, the less time they spend on the labor market earning a wage (Attewell et al., 2007). Delayed graduation also carries an earnings penalty once students manage to graduate (Witteveen & Attewell, 2021), and puts students at increased risk of non-completion (Princiotta et al., 2014). Additionally, better-rewarded jobs require postgraduate credentials, a drawn-out undergraduate career may limit the chances that a student will continue to climb the educational ladder (Attewell et al., 2007). Understanding how various factors influence time-to-

degree for Latine students may inform institutional policies to improve their bachelor's degree

outcomes. To that end, this dissertation investigates the following research questions.

Research Questions:

1. What is the relative impact of college completion programs, academic momentum, and

    key demographic variables on the length of time it takes Latine students to earn a

    bachelor's degree?

2. How do these domains impact time-to-degree for transfer students and first-year students

    respectively?

Rationale

The key to increasing Latine degree completion rates is an understanding of the conduits

to their success. Research must focus on bachelor's degree completion both for students who

start at a four-year college as first-year students and those beginning as transfer students. Since

most Latines begin their collegiate journey at community colleges, their path to bachelor's

degree completion is most likely to begin as a transfer student. Millions of Latines are graduating

from colleges and universities each year. By understanding the conduits to success for Latine

students who are graduating, higher education institutions can close the equity gaps in college

completion rates, providing even more Latine students the benefits of a college education.

Studies seeking to address educational disparities are often framed to examine what students

lack, preventing them from completing a college degree. Rather than highlight failure, scholars

have called for explicitly asset-based frameworks for studying communities of color in education

(Carales & López, 2020; Harper, 2010). Asset-based frameworks center on the achievement and

resilience of students of color as they navigate educational environments. To that end, this

dissertation will focus on Latine students who have completed their bachelor's degree from the

City University of New York. Investigating students who have already navigated completion of a bachelor's degree can shed new insights into the conduits and barriers to the length of time it takes students to complete their bachelor's degrees.

The City University of New York (CUNY) provides a unique research site to investigate bachelor's degree completion for Latine students who begin as first-year students and transfer students. CUNY is the nation's largest urban university with 25 different campuses spread across the five boroughs of New York City. Rooted in a historic mission of access and excellence, CUNY provides affordable education to students regardless of backgrounds or means. CUNY serves 275,000 students, 31.7% of whom identify as Hispanic (City University of New York Office of Institutional Research & Assessment, 2020). Undergraduates have access to seven colleges that offer associate's degrees, nine that offer bachelor's degrees, and three that offer both.

As an integrated system, students who begin at a community college can transfer to any four-year college to pursue a bachelor's degree. Indeed, as of Fall 2013, all credits taken at any CUNY institution can transfer to another CUNY institution (Logue, 2017). Between 2013 and 2017, an average of 74% of associate degree graduates from CUNY transferred to a bachelor's degree program within CUNY (City University of New York Office of Institutional Research & Assessment, 2020). This metric does not account for associate-degree-seeking students who transferred to a bachelor's degree program before earning their associate's degree. Nationwide, most community college students do not earn an associate's degree before transferring to a four-year institution (Glynn, 2019). While 74% of associate degree graduates transfer to bachelor's degree programs, the overall percentage of CUNY community college students (regardless of degree status) who transfer to a bachelor's degree program is higher. The high percentage of

CUNY community college students who transfer to a bachelor's degree program allows for

simultaneous investigation into the unique paths to bachelor's degrees for both first-year and

transfer students.

In addition to a large population of transfer students, CUNY colleges have some of the

highest percentages of Hispanic enrollment in New York. CUNY colleges account for the

greatest number of undergraduate Latine students enrolled in New York state; additionally,

CUNY also has the top five institutions in the state for awarding bachelor degrees to Latines

(City University of New York, 2021a). CUNY is also home to 16 of the 34 Hispanic Serving

Institutions in New York State (City University of New York, 2021a). CUNY is uniquely

situated to provide insight into the factors that influence how long it takes Latine students to

complete a bachelor's degree as first-year students or transfer students. This study aims to

investigate the conduits and barriers to time-to-bachelor's-degree for Latine first-time freshmen

and Latine transfer students at four-year colleges at the City University of New York.

Theoretical Framework

This section outlines the theoretical frameworks used to understand bachelor's degree

completion for Latine students at CUNY. Specifically, this dissertation will explore the relative

impact of college completion programs, academic momentum indicators, and key demographic

variables on time-to-bachelor's-degree. The theoretical model below provides an illustration of

how multiple theoretical perspectives are connected. Perna & Thomas (2008) note the need to

integrate multiple theoretical perspectives when conceptualizing indicators of student success,

such as college completion. To that end, this section begins with an overview of theoretical

perspectives on college completion. LatCrit (Solorzano & Yosso, 2001) is introduced along with

the Anti-Deficit Achievement Framework (Harper, 2010) as the macro-level theoretical

perspectives informing this analysis. A general summary of intersectionality (Crenshaw, 1991)

follows along with an explanation of quantitative methodological extension.

Theoretical Perspectives on College Completion

Several scholars have provided frameworks to study the college experience (Astin, 1999;

Braxton & Lien, 2016; Kuh & Love, 2016; Tinto, 2012). Tinto is one of the most notable

scholars in college completion to the point that his framework for studying departure from

college has gained near paradigmatic status (Museus, 2014). Tinto's (1993) framework provides

researchable dimensions to understand the reasons for student departure, including student

attributes, institutional experiences, and goals/commitments. The central tenets of Tinto's

original framework are the concepts of academic integration and social integration. Loosely

operationalized by researchers, academic and social integration essentially refers to the extent to

which students feel connected to the academic experiences in college (classroom interactions,

meeting with faculty for office hours, serving as a research assistant) as well as how socially they

are connected to an institution (club involvement, student leadership opportunities, friend groups,

group work in class). Tinto's (1993) model posits that the more students experience academic

and social integration, the less likely they are to drop out of college. Scholars have found mixed

support for the connection between academic and social integration and persistence toward

degree (Crisp et al., 2015). Despite mixed evidence to support these theoretical foundations,

Tinto's theory of departure is one of the most referenced frameworks regarding college

completion.

However, Tinto's Institutional Departure Model (1993) is not appropriate for studying the

City University of New York. Tinto acknowledged that his theory is inappropriate for studying

student departure at non-residential institutions or commuter colleges (Melguizo, 2011). As an

overwhelmingly non-residential university, Tinto's academic and social integration concepts are not the most appropriate measures to apply when investigating degree completion at CUNY.

Beyond the disconnect regarding institution type, scholars have noted additional shortcomings of Tinto's theoretical model. Museus (2014) categorizes major critiques of Tinto's institutional departure model into four dimensions. The Cultural Foundations Critique problematizes the notion that students must sever ties with their culture of origin to integrate into a college community fully. The Institutional Departure Model model does not consider the value of students' cultural backgrounds and places an undue burden on students to cut ties with their home communities to succeed in college. The Self-Determination Critique casts light on the responsibility of institutions for student success. Tinto's model places too much onus on the student and the extent to which they academically or socially integrate into an institution. How institutions structure their environments and support services impacts students' journey to completing a degree. The resources and supports made available to students matter just as much as students' individual effort. The third dimension is the Integration Validity Critique. There is modest empirical evidence of the salience of academic integration in college completion, the relevance of social integration is questionable at commuter institutions, and the dichotomy between academic integration and social integration might be arbitrary. Academic programs and projects can foster both academic and social connections, such as group service-learning projects or learning communities that link two courses with supplementary programming. The last critique that Museus (2014) notes is the Psychological Dimension Critique. Much of the research using Tinto's theory relied on behavioral observations of social or academic integration. "Yet, because empirical research that examines Tinto's theory has not typically incorporated a psychological dimension or an element of quality into measurements of students' connections to

their institutions, it has failed to generate a sufficient understanding regarding how various types

of environments, curricula, programs, and practices affect success among diverse populations"

(Museus, 2014, p. 199). Despite these shortcomings, Tinto's model remains prominent in studies

on higher education (Crisp et al., 2015; Museus, 2014).

Acknowledging the theoretical limitations of his theory, particularly as it relates to

informing institutional practice, Tinto (2012) developed an institutional framework that

institutions can use to create programs that increase degree completion. He argues that most

efforts to increase completion rates have focused on the "margins of students' educational life"

(Tinto, 2012, p. 5). College completion efforts should instead focus on the one place where most

students engage in socio-academic experiences--the classroom. In classrooms, students engage

with their peers in shared learning experiences and have the opportunity to develop relationships

with institutional agents (faculty). Supportive social networks are essential for Latine college

student success, and a classroom is a place where those networks can be nurtured. Tinto laid out

four conditions for student success: expectations, support, assessment and feedback, and

involvement (Tinto, 2012). Expectations include both what the student expects of themselves and

the expectations established by the institution and faculty. These expectations must be matched

with academic, social, and, in some cases, financial support. Without the necessary support to

meet the high expectations of college, students struggle to succeed. When this support is

combined with effective assessment and feedback, students understand how to adjust their

behaviors. Feedback from faculty helps students understand how to be successful in class.

Feedback from assessment helps faculty and staff adjust their practices to better enable student

success. Lastly, through involvement, students engage academically and socially with faculty,

staff, and peers, increasing their ability to succeed. Tinto argues that when all four conditions

exist, students are more likely to remain in college. However, Tinto's four conditions for college completion are meant to inform institutional practice rather than research. His model offers just one conceptual model through which college completion is understood.

The theoretical foundations of college completion and student success vary across disciplines. Theoretical perspectives from fields such as psychology, sociology, and economics explain the mechanisms behind college student success. Perna & Thomas (2008) argue that the varied methodological and conceptual approaches by each of the disciplines limit researchers', practitioners', and policy makers' understanding of student success. Perna & Thomas (2008) define student success as completion or effective exercise of ten indicators, including persistence to degree completion. The conduits or barriers to college completion vary according to the theoretical perspectives that guide research that ultimately informs policy and practice.

Perna and Thomas (2008) proposed an overarching conceptual framework to guide research, policy, and practice surrounding student success. Their model is meant as a tool to understand the ways researchers, policymakers, and practitioners can integrate multiple areas of research to generate a more comprehensive understanding of student success processes for different groups of students. This model offers practical implications for studying Latine bachelor's degree completion. Perna and Thomas (2008) note that one of their intentions in producing this conceptual framework is to inform research, policy, and practice to reduce equity gaps. Here, equity gaps are conceptualized as differences in performance between groups of students. In this case, the gaps in college graduation rates for racial and ethnic groups. Disparities in performance between racial and ethnic groups traditionally referred to as achievement gaps are conceptualized as equity gaps to acknowledge the role institutions play in facilitating student success. The concept of achievement may be associated with individual effort or lack thereof.

Reframing achievement gaps as equity gaps places more of the onus on institutions to rethink policies and practices to align with their students' needs (Malcom-Piqueux & Bensimon, 2017).

Perna & Thomas' (2008) conceptual model displays the interconnectedness of policy, school, family, and internal contexts that impact student success indicators. Their model assumes that the path to student success may vary across racial, ethnic, or other groups due to differences in culture, family resources, school contexts, or public policies. These contexts are in a feedback loop with the success indicators. The attainment of one success indicator (i.e., college enrollment or transfer) shapes the contexts for future success indicator attainment (i.e., college graduation). In other words, enrolling in college may change the social or school contexts in which a student exists. The college environment is subject to different local policies than a student's high school and introduces a new social environment. Family dynamics may shift as a result of the increased workload from high school to college. A child who usually arrived home by the afternoon on a school day may now take classes at various times, spending most of their day on campus. Students' internal contexts, such as their attitudes and behaviors, may adjust to the new demands of college life. Their pride and commitment to earning a degree may motivate studious behavior as they complete coursework. These shifted contexts shape the process of attaining a college degree. The process continues beyond degree completion as the contexts may once again change post-graduation.

Perna and Thomas's conceptual framework's relevant application is the recognition of the need to integrate multiple perspectives to produce new insights regarding the conduits and barriers to student success. To create the model, they reviewed literature in economics, psychology, sociology, and education to understand how each discipline described the characteristics of and approaches to research on student success. The resulting model is meant to

show how to integrate different disciplinary perspectives to inform our understanding of the

processes impacting college degree completion and other student success indicators. Increasing

Latine bachelor's degree completion requires a multidimensional approach to the current

conduits to success. "By considering multiple theoretical lenses together, research can address

the limitations that are present in any one perspective" (Perna & Thomas, 2008, p. 31).

Education research, in particular, is well suited for an integrated theoretical approach because of

the myriad contextual interactions that shape the attainment of student success indicators. For

example, drawing from economics, researchers can examine the role of financial aid programs

on degree attainment. Research that explores the correlation between individual motivation,

attitudes, and beliefs on persistence to graduation draws from psychology. Sociologically

speaking, the various characteristics of a college, such as students' sense of how welcoming the

campus feels, social networks, or student/faculty relationships, influence degree attainment for

different groups. Education research that can integrate multiple theoretical perspectives is

comprehensive and provides more policy-relevant understandings of student success (Perna &

Thomas, 2008).

Despite the recognition of a need for multiple theoretical frameworks, much of the

research on Latine college student success remains undertheorized or reliant on Tinto's (1993)

institutional departure model. Crisp, Taggart, & Nora (2015) conducted a systematic review of

research identifying factors contributing to undergraduate Latine students' academic success

outcomes. They found that (a) sociocultural characteristics; (b) academic self-confidence; (c)

beliefs, ethnic/racial identity, and coping styles; (d) pre-college academic experiences; (e)

college experiences; (f) internal motivation and commitment; (g) interactions with supportive

individuals; (h) perceptions of the campus climate/environment; and (i) institutional

type/characteristics are related to academic success outcomes for Latine students. Their research

asserts that there is no unifying theory for studying Latine academic outcomes in higher

education, including degree completion. Their literature review confirmed that there had been

either an overreliance on Tinto's Institutional Departure Model or no theory at all. Their review

confirms the need for education researchers to integrate existing theories regarding Latine

college students to guide a line of inquiry. This analysis integrates LatCrit, Anti-Deficit

Achievement, and Intersectionality to investigate Latine bachelor's degree outcomes. Figure 1

illustrates the connection between LatCrit, Anti-Deficit Achievement, and Intersectionality.

Figure 1

Theoretical Model
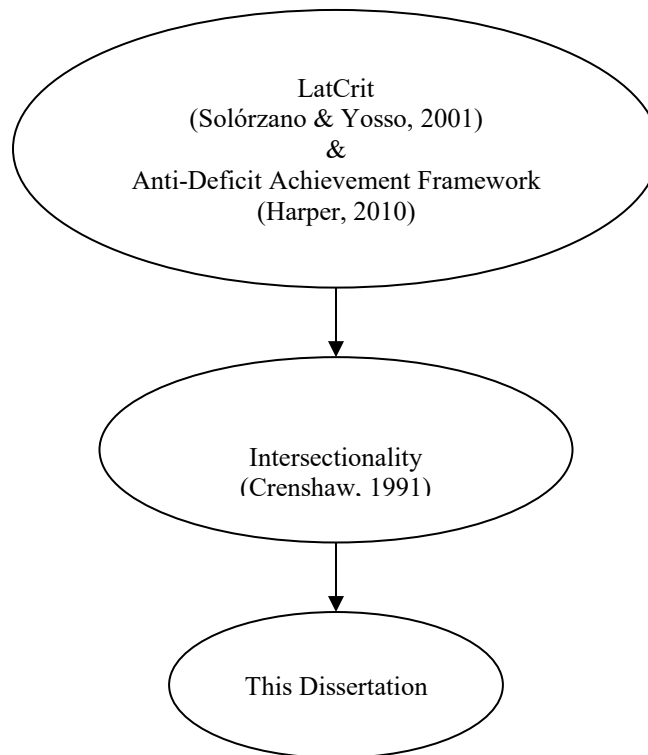
LatCrit & Anti-Deficit Achievement

Ladson-Billings and Tate (1995) called for a critical race theoretical perspective in education. Critical Race Theory is a framework or set of basic perspectives, methods, and pedagogy that seeks to identify, analyze, and transform those structural, cultural, and interpersonal aspects of education that maintain the marginal position and subordination of students of color (Solórzano & Yosso, 2002). The adoption of Critical Race Theory in education requires that we identify and analyze those aspects of education that maintain a marginal position for students of color and transform them (Jay, 2003).

As an extension of CRT, LatCrit is both supplementary and complementary to CRT. LatCrit helps to analyze issues beyond the traditional notions of CRT like language, immigration, ethnicity, culture, identity, phenotype, and sexuality. LatCrit allows researchers to better address the intersectionality of racism, sexism, classicism, and other forms of oppression (Villalpando, 2003). Defining elements of both CRT and LatCrit include the centrality of race and racism, the challenge to dominant ideology; a commitment to social justice and praxis; and a historical context and interdisciplinary perspective (Villalpando, 2003). These defining elements shape CRT and LatCrit as a framework, providing researchers with the lens to approach research that seeks to counter deficit ideologies with a particular focus on the interaction between various social identities.

This study employs an explicitly asset-based stance to address the equity gaps in Latine bachelor's degree completion. Studies seeking to address educational disparities are often framed to examine what students lack, preventing them from completing a college degree. Rather than highlight failure, scholars have called for explicitly asset-based frameworks for studying

communities of color in education (Carales & López, 2020; Harper, 2010). Asset-based frameworks center on the achievement and resilience of students of color as they navigate educational environments.

Responding to the decades of scholarship focused on deficit, Shaun Harper (2010) introduced an Anti-Deficit Achievement Framework as a lens through which to explore the enablers of student achievement in STEM. The framework places emphasis on reframing deficit-oriented research questions regarding students of color. This framework is informed by theories from psychology, sociology, and education, including Critical Race Theory. Harper's multidisciplinary integration is aligned with Perna and Thomas's (2008) recommendation for an overarching conceptual model of student success. The Anti-Deficit Achievement Framework provides researchers with a series of possible questions to explore to understand better how students of color persist and successfully navigate the educational pipeline.

The Anti-Deficit Achievement framework moves beyond deficit perspectives by highlighting institutional agents, policies, programs, and resources that helped students achieve desired educational outcomes across institution types (Harper, 2013). This framework is most helpful in reframing the types of questions asked in educational research on students of color. For example, instead of asking "Why are Black male students' rates of persistence and degree attainment lowest among both sexes and all racial/ethnic groups in higher education?" researchers using this framework should ask, "What resources proved most effective in helping Black male achievers earn GPAs above 3.0 in a variety of majors including STEM fields?" (Harper, 2010). Though there are suggestions of researchable dimensions within each pipeline point, these are meant to guide what might be possible. This framework's most important application uses its tenets to frame research questions that amplify achievement rather than

failure and deficit. Analyzing a sample of Latine students who have completed their bachelor's

degree contributes to Harper's call for a focus on amplifying achievement. Combining LatCrit

(Solorzano & Yosso, 2001) and the Anti-Deficit Achievement Framework (Harper, 2010) allows

for an explicitly asset-based approach to Latine degree completion that considers the unique

dimensions of their identity. To examine these dimensions, this analysis employs

intersectionality (Crenshaw, 1991) as a mid-level framework.

Intersectionality

Intersectionality provides the analytical lens through which scholars can investigate

multiple dimensions of power and identity. This approach is related to both CRT and LatCrit in

its commitment to social change. Carbado and colleagues (2013) note that the goal of

intersectionality is not "simply to understand social relations of power, nor to limit

intersectionality's gaze to the relations that [are] interrogated therein, but to bring the often

hidden dynamics forward in order to transform them" (p. 312). Crenshaw (1991) first introduced

the concept of intersectionality to note how Black women experience multiple minoritized

identities**.** Crenshaw explored the race and gender dimensions of violence against women of

color. Her analysis examined how U.S. institutions, such as the legal system and the social

discourses of feminism and antiracism, fail to consider the vulnerability of women of color.

Crenshaw's work offered important insights into how social identities such as race, gender, class,

and immigration status interact to shape outcomes. Many scholars have since extended

Crenshaw's work to consider a range of issues and social identities, including Latine educational

attainment (Covarrubias et al., 2018; Covarrubias & Vélez, 2013; Núñez, 2014)**.**

Intersectionality is meant to be a structural and political critique to identify how policies

might change to address structural inequalities. Intersectionality has also been extended as a

methodological tool to guide analysis. Quantitative Intersectionality (Covarrubias, 2011) offers

scholars methodological tools to examine the interdependent relationship of race/ethnicity,

gender, and other social identities such as class. The majority of studies using intersectionality as

a theoretical framework have relied heavily on qualitative methods (Harris & Patton, 2019;

Núñez, 2014). Policy in higher education, however, tends to be driven by findings from

quantitative analysis. Quantitative intersectionality invites the possibility of producing the type

of research framed within sociohistorical contexts and aligned with the type of methodological

expectations of research that policymakers are looking for (Covarrubias & Vélez, 2013). When it

comes to quantitative analysis, Covarrubias & Velez (2013) challenge the notion that "numbers

can speak for themselves." Statistical modeling relies on a system of estimation informed by an

analyst's ontological and epistemological grounding. The purpose of quantitative

intersectionality is not to provide a definitive interpretation of phenomena but to contextualize

findings with the researchers' understanding of how the world operates (Covarrubias & Vélez,

2013). Lopez and colleagues (2018) note that employing quantitative intersectionality requires an

ongoing self-reflexivity of one's positionality. My positionality shapes my research as a

multiracial Latino from a working-class background who was the first in his family to graduate

college. As a higher education administrator, I am keenly interested in policies and practices that

support students along the path towards graduation. I want my research to inform university

policy and shape institutional practices to increase Latine college student success.

Literature Review

This chapter reviews relevant literature related to bachelor's degree completion and time-

to-degree for Latine students. The central questions of this study relate to the relative impact of

college completion programs, academic momentum indicators, and key demographic variables

on time-to-bachelor's-degree. Further, this dissertation examines how these relationships operate differently for transfer students versus first-year students. The sections that follow synthesize literature relevant to the research study. Broader concepts and empirical studies are used to ground the domains used in this study.

More specifically, this section will address bodies of literature related to bachelor's degree outcomes for first-year students compared to transfer students. Following an overview of scholarship on bachelor's degree completion and time-to-degree, literature on transfer student experiences is reviewed, underscoring the need to investigate multiple paths to a bachelor's degree. Then, research on college completion programs and academic momentum is introduced to explicate potential conduits to timely degree completion. Finally, incorporating elements of LatCrit (Solorzano & Yosso, 2001), this section synthesizes research on gender, citizenship, language, and socioeconomic status and their influence on educational outcomes. Together, these bodies of literature inform the methodological approach for this dissertation.

Bachelor's Degree Completion & Time-to-Degree

Bachelor's degrees carry higher economic value and better labor market outcomes. Beyond economic outcomes, Bachelor's degrees have also shown to carry intergenerational benefits. Attewell and Lavin (2007) showed that if a mother earns a BA, her children's chances of educational success significantly increase. Their study followed women 30 years after they graduated from the City University of New York to examine the relative impact of college enrollment on their life outcomes and the outcomes of their children. The analysis highlighted the intergenerational benefits of college enrollment and degree completion, particularly for women of color and women from low-income backgrounds. Scholars have placed increased attention on the relative impact of various factors on whether or not students complete their

degrees (Crisp et al., 2015; Freeman & Martinez, 2015; Tinto, 2012). While understanding the conduits and barriers to degree completion is necessary to increase overall degree completion, little research considers the length of time it takes students to earn degrees (Witteveen & Attewell, 2021; Yue & Fu, 2017; Zarifa et al., 2018).

Research demonstrates that the longer students remain enrolled in post-secondary education, the less likely they are to graduate (Princiotta et al., 2014), yet few studies explore how institutions can shorten students' time-to-degree. Over the last thirty years, most students have taken longer to complete a post-secondary degree (Bound et al., 2012). Turner (2004) compiled empirical evidence that potentially explained the extension of time-to-degree. Over the last several decades, college-aged students have had to increasingly combine college enrollment and employment. More students are working while attending college to cover college costs and living expenses. Moreover, the rising costs of college degrees eroded the capacity for families from the lowest income quintile distribution to afford the cost of a degree. Turner (2004) also points to the decline in state appropriations for higher education as a possible explanation for lengthening time-to-degree because of reductions in the supply of faculty, staff, and student services available. Declines in state appropriations for higher education were particularly acute following the 2008 financial crisis. Even as the US economy began to recover, by 2014, forty-eight states--all except Alaska and North Dakota--were spending less per student than before 2008 (Mitchell et al., 2015). Reductions in state appropriations are typically met with cuts to faculty and reductions in student services. Colleges also tend to increase tuition to make up for lost revenue, creating additional barriers for low-income students. For example, between 2008 and 2014, tuition for four-year public colleges in New York increased by 21.3% (Mitchell et al., 2015). State funding for higher education in New York increased incrementally following the

2008 recession. In 2017, New York unveiled the Excelsior Scholarship, a four-year last-dollar

tuition waiver for families making less than $125,000 per year. While the program addressed the

rising cost of tuition, it did not provide additional institutional funding for additional advisors,

faculty members, or student services. Between fiscal years 2016 and 2021, New York State

appropriations for higher education increased 6.9% but have declined 1.9% over the last two

fiscal years in response to the coronavirus pandemic (Grapevine, 2021). It is not yet clear how

short-term investments of federal stimulus funds in response to the pandemic will impact the

overall student support infrastructure, and in turn, time-to-degree.

According to a national analysis of time-to-degree, the average time enrolled for

associate and bachelor's degree earners was 3.3 years and 5.1 years, respectively (Shapiro et al.,

2016). Outside of the most selective colleges, time-to-degree has increased, particularly at public

colleges. Among four-year public colleges, only 37.5% of graduates earned their degree within

four years (Shapiro et al., 2016). Some of this phenomenon is explained by increasing faculty to

student ratios, declining funding for student services, and increases in student employment

(Bound et al., 2012). Most students take longer to complete their bachelor's degrees, which is

related to increased risk of non-completion. Shortening time-to-degree is likely to improve

overall completion rates.

Shortening time-to-degree can give students access to the economic and interpersonal

benefits of a degree much sooner. Increasing time-to-degree has significant opportunity costs;

each year of increased study results in lost wages over the course of a lifetime. Comparing the

wages of current college enrollees aged 20–25 against current BA holders aged 20–25 from the

Current Population Survey, each additional year represents on average $23,081 in lost earnings

(Huntington-Klein & Gill, 2020). An analysis of a national representative sample found that even

after graduation, those who took longer to complete experienced an earnings penalty. In other words, those who took longer to graduate earned less than their peers who graduated sooner. The authors found that even after controlling for family background, types of institution attended, student major, and GPA, there remained a significant association between earnings and time-to-degree (Witteveen & Attewell, 2021).

It is not clear from the current literature how time-to-degree operates for Latine students explicitly. Timely completion of a bachelor's degree is an additional marker of stratification in higher education; Hispanic students are less likely to complete their degrees within four years (Zarifa et al., 2018). Among the 2015-2016 first-time bachelor's degree recipients, Hispanic students took longer to complete their degrees than students who identified as Asian, White, and Other or Two or More Races. The median number of months from first enrollment to bachelor's degree completion for Hispanic students was 58 months (or 4.8 years), compared to 52 months for White students, 48 months for Asian students, and 57 months for students who identified as Other or Two or More Races; the median number of months for bachelor's degree completion for Black students was 64 months (U.S. Department of Education, National Center for Education Statistics, 2019a). Latines take longer to complete their degrees, which puts them at increased risk of not graduating (Princiotta et al., 2014) and restricts access to some of the economic benefits of a bachelor's degree (Witteveen & Attewell, 2021). The longer time to bachelor's degree may be explained by the population of Latine students who begin at a community college before earning their degree. About a third of all students attend multiple institutions before completing their bachelor's degree (Shapiro et al., 2016). Enrolling in multiple institutions complicates students' pathways because they first have to negotiate the transfer process of enrolling in a new institution, transferring credits, and adjusting to a new institutional context.

Slower progress to a degree may also be explained by broader social or economic challenges. As Perna & Thomas (2008) note, social, economic, and policy contexts operate at the broadest level and shape what happens within school contexts. A LatCrit (Solorzano & Yosso, 2001) and Intersectionality (Crenshaw, 1991) lens call for analysis to focus on the interaction of various sociocultural contexts within schools and broader social dynamics. In their critique of time-to-degree as a measure of academic success, McCormack and colleagues (2014) detailed the economic, social-emotional, and dependent-care burdens disproportionally faced by students who attend public two- and four-year colleges. They argue that a longer-than-average time-to-degree should not be construed as failure on a student's part, but rather as a distinctive, but acceptable, trajectory for those whose lives have been fraught with academic, home-life, and economic struggles. These scholars conducted a meta-analysis of three qualitative studies of students at the City University of New York to uncover the most important factors that impeded timely degree completion. In all three of the studies analyzed, there were a number of students whose academic progress had been delayed by economic factors and the need to earn a full-time living before earning a college degree. Children and family also emerged as obstacles to earning an associate's degree within two years and a bachelor's degree within four years. Children were both a source of motivation and an obstacle; parents reported pursuing a college degree to give their children access to more opportunities but also spoke about the challenges of managing childcare while enrolled in classes. Respondents reported the support they received from family members but noted how family members did not always know the best way to support them as college students. These students also reported instances of racism and trauma along their educational journeys. The authors concluded that work and class status, parenting and family

issues, as well as mental and social health challenges impede students' ability to graduate within traditional time frames.

While timely degree completion should not be treated as the sole marker of academic success, institutions must work to accommodate students' complex lives to improve degree outcomes. As Latines enter higher education more must be done to increase the proportion of students who complete their degrees. One avenue to increase degree completion is to shorten the length of time students take to complete their degrees. Shortening the amount of time it takes students to earn bachelor's degrees needs to take into account broader societal and institutional contexts, including potential barriers or conduits to timely degree completion. To that end, this dissertation focuses on those broader contexts to illuminate the levers by which time-to-degree may be improved. The approach is also informed by what is known about Latine students' current path towards a bachelor's degree and institutional practices that have shown promise in improving student outcomes. Namely, this research will consider the unique experiences of transfer students compared to first-year students at bachelor's degree institutions, the impact of college completion programs, the role of academic momentum, and the interaction of various sociocultural contexts on the length of time it takes Latines to complete their degrees. The following sections explain what is currently known about the relationship between these concepts and time-to-degree.

Transfer Student Experiences

Studies on bachelor's degree completion tend to focus on first-year student cohorts that begin college at the institution from which they graduate. There are benefits to concentrating on first-year students in analyses of degree outcomes; they all start college for the first time, making it easier to compare cohorts across time. Institutional retention and graduation rates are reported

to the federal government through the Integrated Postsecondary Education Data System at the National Center for Education Statistics based on outcomes for first-time, full-time first-year students. Additionally, college rankings are calculated based on first-year student outcomes. Transfer student outcomes tend not to be systematically collected in the same way that data on first-year students are gathered. The pursuit of increased rankings may explain part of this phenomenon. Institutional admission rates, retention rates, and graduation rates are reported based on cohorts of entering first-year students. In pursuit of improved rankings, some institutions allocate their limited resources to improving the experience of students who "matter" most to rankings (Tobolowsky & Cox, 2012). Higher rankings can lead to an improved reputation, greater alumni giving, and interest from more academically qualified students.

　　　　Serving transfer students, however, is a matter of social and racial justice. Higher education magnifies the racial and ethnic inequality it inherits from the K-12 educational system. Across the United States, most Latine students attend two-year public institutions (Excelencia in Education, 2019). However, racial and ethnic minority students are less likely to transfer to four-year institutions than their White peers. Thus, transfer serves a stratifying function at the intersection of sectors of higher education, permitting only select groups of students a competitive advantage in the form of higher credentials (Chase et al., 2014). Most research on transfer students tends to focus on the role of community colleges in facilitating the transfer process, but four-year institutions and university systems play in role in facilitating student's success once they transfer institutions (Bahr et al., 2013). Chase et al. (2014) call for transfer to be viewed as a matter of educational opportunity and outcome equity, where equity invokes not only greater access but also equal transfer outcomes among racial and ethnic groups. One of those critical outcomes must be time-to-degree.

Students who change institutions along their postsecondary journey will inherently take longer to complete their bachelor's degrees than students who stay at the same college. Degree programs may not be aligned across institutions; the credits a student must take at one institution may not apply to a comparable degree plan at another institution. Additionally, a receiving institution might not accept all of the credits a student earned while at their previous college. Even if all credits are accepted, transfer credits may only be applied as elective credits rather than credits that fulfill degree requirements. There are unique credit articulation challenges that lengthen a transfer student's time-to-degree, but understanding the transfer pathway to bachelor's degree completion is critical for improving Latine bachelor's degree outcomes.

Since most Latines begin their collegiate journey at community colleges, their path to bachelor's degree completion is most likely to begin as a transfer student. The community college path to a bachelor's degree is just one path a transfer student may follow. Students may also transfer from one four-year college to another to earn their desired degree. One study found that some students not admitted to their first-choice college chose to move to another institution to complete their degrees (Jones-White et al., 2010). However, much of the research on transfer students focuses on community college transfer students (Bahr et al., 2013). Regardless of the path a student follows, once they arrive at a bachelor's degree-granting institution, they are classified as transfer students. Since this dissertation is focused on time-to-bachelor's-degree completion, it seeks to shed light on the mechanisms available to four-year colleges and university systems to improve time-to-degree for Latine students. Furthermore, given the unique trajectories of transfer students versus first-year students, each population must be considered separately.

Not enough research has looked at the role of four-year institutions in supporting transfer students; most research focuses on the role of two-year colleges in facilitating transfer even though four-year colleges are equal partners in facilitating transfer student success. Bahr and colleagues (2013) reviewed the literature on community college students' transition processes and outcomes in four-year institutions. They focused on concepts that often appear in studies on transfer students, including integration, involvement, environmental pull, capital, and transfer receptivity. In general, they found that the conclusions drawn on what works for transfer students varied according to institution type, population served, and how the researcher operationalized and defined the concept. Concerning academic integration, community college transfer students' experiences vary and may be largely contingent on student characteristics, type of receiving institution, the institution's academic culture, and program of study amid other factors. The extent to which transfer students experience social integration at four-year colleges seems to vary depending on the student, program, and institution. The research suggests a high level of variability in the degree to which community college transfer students feel academically or socially connected to the receiving four-year institution (Bahr et al., 2013). Generally speaking, the literature homogenizes transfer students, and few studies consider the unique experiences of Latine transfer students once they arrive at four-year institutions (Bensimon & Dowd, 2009; Viramontes, 2020). Moreover, there is a dearth of research on how long it takes transfer students to earn bachelor's degrees once they transfer to a four-year institution.

Once students transfer, they must contend with a new institutional context, including new policies, curricula, organizational culture, and social environment. Many students experience transfer shock, the sudden drop in GPA in their first semester at a new institution (Glass Jr & Bunn, 1998). First semester GPA is predictive of bachelor's degree completion (Gershenfeld et

al., 2016; Zhang, 2019); the drop in GPA due to transfer shock puts transfer students at risk of

non-completion. Research suggests that lower GPAs signal a slower accumulation of credits and,

therefore, a longer time-to-degree (Yue & Fu, 2017), but it is not clear if that mechanism

operates in the same way for transfer students as it does for first-year students. Transfer students

can arrive with any number of credits, so it is not clear if lower GPAs are a direct indicator of

slower progress towards a degree. However, loss of credits between institutions and changing

programs have been shown to delay graduation (Giesey & Manhire, 2003).

Transfer students are expected to take longer to earn their bachelor's degrees, but

institutions can intervene to improve their degree outcomes. In one of the few studies that

examined time-to-degree for transfer students, the researchers found a relationship between

students' perceptions of the quality of support services available and the time required to

graduate with a bachelor's degree (Glass Jr & Bunn, 1998). These findings suggest that the level

of support available to transfer students may impact how long it takes them to complete their

degrees. Support services can take the form of advising, counseling, tutoring, mentoring, or a

combination of services through coordinated college completion programs. There is a dearth of

research that examines the relationship between state appropriations for higher education and

time-to-degree but one analysis found increases in time to degree relatively concentrated in states

that have experienced rapid growth in the size of the college-age population and dilution in

resources per student at many public colleges (Lovenheim et al., 2007). Indeed, research

suggests a link between declining state appropriations and cuts to student support services

(Mitchell et al., 2015). Tobolowsky and Cox (2012) discuss how four-year institutions

rationalize their neglect of transfer students by focusing limited resources on the students whose

outcomes matter most for institutional rankings. Transfer students, however, benefit just as much

as first-year students from access to advisors, student affairs professionals, and college support services that can help them navigate "the cultural border" between their previous and receiving institutions (Bensimon & Dowd, 2009).

College Completion Programs

Studies show that student's time to degree is often lengthened because they take the wrong courses (Giesey & Manhire, 2003), take too few courses (Huntington-Klein & Gill, 2020), struggle academically (Yue & Fu, 2017), do not know the proper study habits to use in class (Hailikari et al., 2018, 2020), or struggle to balance the complexities of their personal life and college (Mccormack et al., 2014). Time-to-degree has been shown to be growing because of declining college resources which results in less access to advisors and student support services (Bound et al., 2012; Lovenheim et al., 2007). While there is no panacea for improving degree outcomes, studies suggest the value of advising and comprehensive college completion programs for improving degree completion (Dadgar et al., 2014; Holcombe & Kezar, 2020; Kezar & Holcombe, 2020a, 2020b; Tovar, 2015; Winograd et al., 2018). Two key examples of integrated college completion programs at CUNY are the Percy E. Sutton Search for Education, Elevation, and Knowledge (SEEK) Program and the Accelerated Studies in Associate Programs (ASAP).

College completion programs aggregate multiple student services that have proven to be effective in advancing academic outcomes. They are a form of integrated programs that simplify access to support services like advising, tutoring, mentoring, and financial aid. Comprehensive, integrated transition programs that connect coursework with co-curricular supports have shown promise in improving outcomes for students historically underrepresented in higher education (Holcombe & Kezar, 2020; Kezar & Holcombe, 2020a, 2020b). One study found that integrating summer bridge programs, which prepare academically underprepared students for college-level

coursework, with first-year experience programs and learning communities makes it easier for students to navigate their transition to college (Kezar & Holcombe, 2020a). Integrating multiple college services into a seamless program increases the likelihood that students will access the appropriate support needed along their college journey, leading to improved academic outcomes (Kezar & Holcombe, 2020b; Winograd et al., 2018). One of the key features of many college completion programs is a dedicated advisor who can help students navigate the college environment and coordinate access to tutoring, mentoring, or financial support. Increased access to advising and counseling-intensive supports influences students' success and intent to persist (Tovar, 2015). It is likely that increased access to advising also positively influences time-to-degree.

The Percy E. Sutton SEEK Program is one example of a college completion program. In the late 1960s, as enrollment in CUNY continued to grow, many poorer Black and Latine students were not being accepted because of restrictive admissions requirements. In 1964, a program called College Discovery launched at CUNY community colleges to show that with proper advisement and support services, students who were being excluded from CUNY because of tight admissions standards could succeed (Picciano & Jordan, 2017). The following year, SEEK launched as an equivalent program at the four-year colleges. SEEK provides students with financial support, access to tutoring, and socio-emotional support through counselors and peer mentors. SEEK opened CUNY to students who had been historically excluded from higher education (Francis et al., 1993). Sorrentino (2006) found that combining mentorship and tutoring increased students' academic progress when compared to tutoring alone or no additional support. These results point to the benefit of integrating services into one comprehensive college completion program (Butler, 1999).

Most of what is known about SEEK comes from outcomes data presented by CUNY (Todorova, 2019). The six-year baccalaureate graduation rate of SEEK students who begin at a four-year college has grown from 44.7% for the Fall 2009 cohort to 58.2% for the Fall 2013 cohort (CUNY Office of Institutional Research & Assessment, 2020c). Comparatively, the system baccalaureate graduation rate for all students at CUNY within those same cohorts was 61.6% and 64%, respectively (CUNY Office of Institutional Research & Assessment, 2020b). The graduation rate of students who begin in College Discovery at a two-year college and then transfer into the SEEK program once they begin a baccalaureate program has also grown from 5.2% to 7% from Fall 2009 to Fall 2013 (CUNY Office of Institutional Research & Assessment, 2020a). It is not surprising that SEEK students graduate at a lower rate when compared to the entire CUNY population, given that many of them come from high schools that did not prepare them for the rigors of college (Picciano & Jordan, 2017). However, SEEK mitigates some of the social and financial challenges these students face and significantly contributes to student retention (Todorova, 2019; Winograd et al., 2018). In one study, students in the SEEK program reported receiving emotional, financial, and academic support within an environment that helps them feel at home (Todorova, 2019). These findings are consistent with the concept of sense of belonging, which has been shown to increase the likelihood of retention and degree completion (Strayhorn, 2012). Despite evidence of the influence of SEEK on educational outcomes, little is known about how participation in SEEK influences time-to-degree. One dissertation analysis found that participation in SEEK decreased time-to-graduation for Black and Hispanic students (Verley II, 2020), but it is not clear how participation in SEEK impacts first-year students and transfer students respectively.

Another example of a college completion program is the Accelerated Study in Associate Program (ASAP). CUNY launched ASAP in 2007 to increase community college graduation rates by removing common barriers to degree completion. The services in ASAP consist of full-time enrollment, block scheduling, learning communities, cohort models to increase student engagement, mandatory advising, free textbooks, tuition waivers, tutoring, required student success seminars, and a free MetroCard to travel the New York City public transit system (Picciano & Jordan, 2017). Participation in ASAP is significantly positively related to retention, credit accrual, transfer, and degree attainment (Kolenovic et al., 2013). The advising component, in particular, is most influential in predicting student outcomes. Evaluations of ASAP highlight the effect of linking student services and academic support for community college students. A random control trial study from MDRC, a nonprofit policy research center, found that students who had the opportunity to participate in ASAP had nearly double the three-year graduation rate of control group students, at 40.1 percent versus 21.8 percent (Scrivener et al., 2015). The study also found that ASAP students had higher rates of enrollment every semester, higher rates of full-time enrollment, higher levels of total credit accumulation, and higher rates of transfer to four-year colleges.

Though ASAP is a program that exists only for associate's degree-seeking students, evidence suggests that participation in ASAP can influence bachelor's degree outcomes. ASAP increases students' chances of graduating with an associate's degree and transfer to a baccalaureate program (Scrivener et al., 2015). Following the success of ASAP, CUNY launched the Accelerate, Complete, Engage (ACE) program in 2015 at four-year colleges. ACE provides intensive academic advisement, career development, tuition scholarships, textbooks, and transportation assistance to students pursuing bachelor's degrees (City University of New York,

n.d.-c). ACE currently operates at two CUNY senior colleges, and preliminary findings suggest positive correlations with program participation and persistence, GPA, and credit accumulation (City University of New York, 2021b). ASAP, however, is available at every CUNY community college and comprehensive college and has been more widely evaluated. While it is known that participation in ASAP predicts transfer to a bachelor's degree program, it is not clear if there are any carry-over effects once students start at a four-year college. Does previous participation in ASAP benefit students at bachelor's degree-granting institutions? More specifically, how might involvement in ASAP influence the length of time it takes students to earn a bachelor's degree? Further investigation into college completion programs like SEEK and ASAP may shed new light on the mechanisms available to colleges and university systems to improve Latine degree outcomes.

Academic Momentum

In addition to college completion programs, a large and growing body of literature has investigated the relationship between academic momentum and degree outcomes. The theory underlying momentum is that the more students are engaged in the academic life of an institution, the more they interact with institutional agents, and the less time they have to focus on other aspects of their lives. The concept of academic momentum was first introduced by Cliff Adelman (1999, 2006) in an investigation of factors that contribute to degree completion for a nationally representative sample of college students. Adelman found that one of the biggest predictors of bachelor's degree completion is whether or not students earned a significant number of credits in their first year of college. Adelman defined momentum broadly to also include precollegiate courses, transitioning immediately from high school, course load, and early academic achievement. Attewell and Monaghan (2016) extended Adelman's initial work to

define academic momentum as "the speed of progress towards a degree resulting from the rate of credit accumulation" (p. 684). It is important to note that some of their conceptualization of the underlying theory of academic momentum traces back to Tinto's academic and social integration theory, which has been critiqued for implying that students have to disassociate from their home cultures in order to succeed in college. Research on academic and social integration has since been updated to underscore the value of social and academic interactions on campus rather than an implicit assumption that students need to disconnect from their home cultures. In his 2012 work, Tinto notes the classroom as the primary driver of student connection to the institution, and while not a theoretical stance, several scholars have noted the value of increased academic interactions on degree completion (Cole & Griffin, 2013; Gonzalez, 2015; Tovar, 2015). Tinto's theory of integration is not what matters here, but instead, that research shows positive relationships between increased academic engagement and degree completion. Students do not need to separate themselves from their home culture to do well academically. Scholars such as Yosso (2005) and Museus (2014) note the value of the cultural wealth students bring to college and how that is used to navigate degree completion.

Most bachelor's degrees require the completion of at least 120 credits to graduate; students need to earn at least 30 credits each academic year to graduate within four years. Federal financial aid policies define full-time enrollment as 12 credits per semester, or 24 credits for the academic year. Mathematically speaking, pursuing a full-time courseload without enrolling in summer or winter courses extends students' time-to-degree beyond four years. Advocates for academic momentum encourage enrolling in at least 15 credits each semester to increase "on-time" degree completion. One of the critiques of academic momentum is that the increased course load can harm students who need to work or those with weaker academic

backgrounds. An analysis of a nationally representative sample of college students, however, found that enrolling in 15 credits in semester one increases chances of graduation and shortens time-to-degree regardless of gender, race, and socioeconomic status (Complete College America, 2013). While increased courseloads early on in an academic career have been shown to improve degree outcomes, there is a point at which the need to work clashes with students' ability to establish early momentum. In Attewell and Monaghan's (2016) analysis, they found that taking 15 credits rather than 12 in the first semester is particularly beneficial for Black and Hispanic students, first-generation college-goers, and students with lower levels of academic preparation. However, they found no evidence that students employed for 30 or more hours per week benefit from an increased course load.

Research suggests the benefits of academic momentum for improving Latine bachelor's degree outcomes, but most of the literature focuses on first-time-in-college students (Davidson & Blankenship, 2017). In addition, there is limited scholarship on how academic momentum operates at four-year institutions for transfer students compared to first-year students (Huntington-Klein & Gill, 2020). Much of the research also does not explicitly consider the impact of academic momentum on time-to-degree for Latine students. Clovis and Chang (2019) found that higher first-semester credits earned and first-semester GPA are associated with higher rates of associate's and bachelor's degree completion for students beginning college at two-year institutions. In addition, they found that race/ethnicity was no longer a significant predictor of degree attainment once academic momentum was added into their statistical model. Their findings suggest the promise of academic momentum of improving degree outcomes for Latine students who transfer to a four-year college, but their research is limited to students' first year at a community college.

There is a dearth of research on the impact of academic momentum on transfer students at four-year institutions. Zhang (2019) addressed this gap by investigating how early academic momentum and students' sociodemographic characteristics impact transfer student's degree attainment in science, technology, engineering, and mathematics (STEM) fields of study at four-year colleges. Zhang found that gender, age, family income, and early academic performance at the four-year college were significantly related to obtaining a degree. Their study demonstrates that early academic experiences post-transfer are important predictors of bachelor's degree attainment. The number of credit hours that transfer students attempt in their first semester at a four-year college significantly predicts degree attainment, but it is unclear how academic momentum impacts time-to-degree. It is also unclear if Zhang's findings are generalizable beyond the one four-year institution used in their analysis or if the findings are consistent for non-STEM degree-seeking students.

Much of the research on academic momentum underscores the relationship between early academic performance and degree completion (Attewell & Monaghan, 2016; Clovis & Chang, 2019). However, few studies have investigated the relationship between academic momentum and time-to-degree (Belfield et al., 2016; Volkwein & Lorang, 1996). Using data from a four-year college in California, Huntington-Klein & Gill (2020) confirmed that increased course-load improves time-to-degree. Their investigation focused on first-time first-year students and found no evidence that taking additional credits harms academic performance. In other words, taking additional credits shortens students' time-to-degree and does not lower their GPAs. Their study looked at increased course load across a student's journey at a four-year college. They found that students taking an additional class each term take on average 1.1 fewer years to graduate (Huntington-Klein & Gill, 2020). These findings suggest the benefit of colleges encouraging

students to enroll in 15 credits each term instead of the 12 credits required to maintain full-time enrollment. While their findings looked at increased course load across a student's journey, they suggest a positive relationship between early academic momentum and shorter time-to-degree for first-year students. However, what is not yet clear is how academic momentum impacts time-to-degree for transfer students once they arrive at a four-year institution. Huntington-Klein and Gill (2020) recommend an analysis comparing the effects of course load for transfer students instead of first-year students. This dissertation attempts to address this gap in the literature. It is likely that taking more credits and having a higher GPA earlier on in a bachelor's degree career will shorten the amount of time it takes a student to earn their degree regardless if they begin as a transfer student or first year student. Further analysis is needed to confirm this hypothesis.

Demographic Considerations

Incorporating both first-year and transfer students into an analysis of Latine degree outcomes provides a broader picture of the potential policy levers available to colleges to improve overall Latine bachelor's degree completion. In addition to considering these distinct educational trajectories, research must also consider demographic differences within the Latine community. Núñez (2014) contends that it is becoming increasingly important for higher education scholars to pay attention to differences in college access and success among Latines based on several social identity categories and how varied social contexts impact access and success. LatCrit provides a lens through which researchers can investigate the intersections of gender, citizenship, language, and class (Solorzano & Yosso, 2001; Villalpando, 2003). Given the theoretical framework, these particular social identities and their impact on educational outcomes will receive attention here. First, Latina women are more likely to earn a degree than Latino men (Covarrubias, 2011; Núñez & Kim, 2012). Second, Latines represent most of the

undocumented population estimated to be enrolled in higher education in the United States (New American Economy et al., 2021). Many Latines also have a direct connection to immigration as second-generation Americans or documented immigrants (M. M. Suárez-Orozco & Suarez-Orozco, 2008). Third, Latines tend to share certain cultural orientations. These include (a) strong family ties; (b) an emphasis on familial and social relations through respect, trust, and moral education; (c) an emphasis on religious faith and spirituality; and (d) a view of the Spanish language as a critical part of their heritage (Núñez et al., 2013). Many Latines are multilingual and have access to a level of linguistic capital (Yosso, 2005) that can serve as a benefit along their educational journeys. Finally, socioeconomic status is correlated with degree completion and time-to-degree (Zarifa et al., 2018). Low-income students tend to take longer to graduate than students from higher socioeconomic backgrounds. These demographic considerations present a more nuanced depiction of Latine bachelor's degree outcomes.

Gender

Nationally, men trail women in higher education outcomes; the trend is consistent across racial and ethnic groups (U.S. Department of Education, National Center for Education Statistics, 2019b). Latino male representation in college is lower than Latina females. In Fall 2016, Latino males represented 42% of Latino undergraduates, and Latina females represented 58% (1.34 million vs. 1.82 million) (Excelencia in Education, 2019). Latinas also earn degrees at higher rates than Latino men. For example, in 2019, the national Latina associate's degree attainment rate was nine percentage points higher than Latino males,' and the national Latina bachelor's degree attainment rate was five percentage points higher (Hussar et al., 2020). Across all racial and ethnic groups, females outperform males in bachelor's degree completion. Research demonstrates that there are institutional practices that advantage Latinas more than Latinos and

vice versa (Abrica & Martinez, 2016; Aragon, 2018; Crisp et al., 2015; Estrada & Jimenez, 2018;

Pérez II & Sáenz, 2017; Rodríguez & Oseguera, 2015; Saenz et al., 2016; Villaseñor et al.,

2013). These findings underscore that the conduits to degree completion vary for Latinas and

Latinos, pointing to the need for an intersectional approach to studying degree outcomes.

Nationally, men and women have similar average number of enrolled and elapsed time at

a four-year institution before earning a degree (Shapiro et al., 2016). However, given Latina

women's higher rate of degree attainment, the difficulties males experience in terms of

educational attainment (Zarifa et al., 2018), and calls for intervention to improve degree

outcomes for men of color (Brooms et al., 2018; Saenz et al., 2016), more must be known about

how time-to-degree operates for Latino men compared to Latina women. In addition, it is

important to recognize that males and females represent only two gender identities and do not

account for the full spectrum of experiences within the Latine community. However, further

investigation into the experiences of men and women can shed some light on ways institutions

can improve Latine degree outcomes.

Citizenship

Citizenship and immigration status shape and constrain students' educational trajectories.

Scholars have recommended including immigration status as a dimension when researching

postsecondary outcomes (Ballerini & Feldblum, 2021). Students with temporary immigration

status report a higher fear of deportation for themselves, fear of family members being deported,

psychological distress, and higher self-esteem than those with stable status (Alif et al., 2020).

These feelings can negatively impact students' educational experiences. Citizenship bestows a

layer of protected status that is linked to positive educational outcomes. For example, Bean et al.

(2011) found that each legal status transition (e.g., from undocumented to legal noncitizen and

from legal noncitizen to naturalized citizen) generates an educational premium for the children of Mexican immigrants, with citizenship conferring the greatest educational benefits. Whether or not a student has citizenship is vital to examine in light of considerations such as "environmental pull" for completing college owing to financial capital, the need to work, the need to remain at home, and the need to support family members (Nora & Crisp, 2009). Compared to students with legal status, McWhirter and colleagues (2013) discovered that undocumented students had lower vocational expectations and predicted greater impediments to continuing higher education.

Other studies on undocumented students have pointed to their resilience in accessing resources to complete higher education (Borjian, 2018; Huber, 2009; Yasuike, 2019). In one study using CUNY data, researchers found that undocumented students significantly outperform their citizen peers and perform as well as their peers with legal permanent resident status (Hsin & Reed, 2020). The authors found different outcomes for students who began at a community college compared to students who started at a four-year college. Undocumented students significantly outperform their citizen peers in terms of college GPA and graduation rates. However, after controlling for high school GPA, birth country, and socioeconomic status, undocumented students outperform their peers with legal status at community colleges but underperform their peers with legal status at four-year colleges (Hsin & Reed, 2020). These findings suggest a potential differing impact of citizenship status on first-year students compared to transfer students. Citizenship status is known to impact academic outcomes, but it is not clear how citizenship status affects how long it takes students to complete their degrees.

Language

Communicating in English, Spanish, or both languages represents an important element of ethnic expression and identity for Latine students (Taylor et al., 2012). Communicating in and

being exposed to multiple languages carries cognitive benefits (Fan et al., 2015). Furthermore, research indicates that Latine bachelor's degree completion is influenced by primary language at home (Carales, 2020). The number of Latine English-Language Learners (ELLs) enrolling in higher education continues to grow (Flores & Park, 2013; Medina & Posadas, 2012; Zarate & Burciaga, 2010), but not much is known about how language ability, more specifically multilinguality, contributes to Latine educational outcomes. Studies suggest that taking English as a Second Language courses delays graduation (Giesey & Manhire, 2003). Many ELLs must improve their English language skills before enrolling in courses that count towards a degree (Crisp & Nora, 2010; C. Suárez-Orozco et al., 2019). Scholars have theorized that students of color acquire linguistic capital from their home communities that help them navigate educational institutions (Yosso, 2005). Carales (2020) found that students who indicated that English was the primary language spoken in the home were more likely to complete a bachelor's degree. Carales also found that students who grew up speaking Spanish or another language were more likely to persist towards graduation. These findings suggest a positive relationship between being multilingual and degree outcomes. However, to date, research has not considered the relationship between language and time-to-degree.

Socioeconomic Status

Socioeconomic status influences postsecondary access, retention, transfer, and completion (Diemer & Li, 2012; Doren & Grodsky, 2016; Goldrick-Rab, 2006; Goldrick-Rab & Pfeffer, 2009; Hamilton, 2013, p. 201; Mendoza, 2012). Socioeconomic status is predictive of educational outcomes (Carales, 2020) and has been shown to be more predictive than race, particularly for Latine students (Battle & Pastrana, 2007). Students from lower socioeconomic backgrounds likely have to work to pay for college and cover living expenses. Social class has

also been shown to impact student engagement in college. Students from higher-income backgrounds are more likely to interact with their professors outside of class, which leads to better academic outcomes (Jack, 2016). Few studies have considered how socioeconomic status influences the length of time it takes to complete a degree. Some scholars have found that students from lower socioeconomic backgrounds take longer to earn their degrees (Bound et al., 2012; Zarifa et al., 2018). Socioeconomic status plays a crucial role in time-to-degree for students attending urban, public universities (Mccormack et al., 2014). Some research suggests the possibilities of financial aid programs to help improve time-to-degree (DesJardins et al., 2002; Mabel, 2020). Despite the availability of aid programs nationwide, students from lower-income families have experienced the most significant increase in time-to-bachelor's-degree, especially those who start in two-year colleges and those who start in less-selective public four-year colleges (Bound et al., 2012). While it is known that socioeconomic status influences time-to-degree, it is not yet clear how socioeconomic status operates for Latine students explicitly. It is also unclear how socioeconomic status influences timely degree completion when considered with other social identities and contexts.

Contribution to the Field

Scholars have called for a multidimensional analysis of student success (Núñez, 2014; Perna & Thomas, 2008). From a theoretical standpoint, this dissertation is grounded in the Anti-Deficit Achievement Framework to amplify promising practices and LatCrit to ground the analysis in the unique power structures that undergird Latine student's pathway towards a degree. In addition, intersectionality is employed as a mid-level theoretical lens to investigate how various social identities and sociocultural contexts impact degree outcomes. Specifically, this dissertation will analyze a CUNY dataset to understand the relative impact of college

completion programs, academic momentum, and demographic characteristics on time-to-bachelor's-degree for Latine students. Furthermore, this dissertation will consider the unique path to degree employed by Latine transfer students and first-year students at bachelor's degree-granting institutions.

Current research highlights the positive influence of college completion programs and academic momentum on degree outcomes. The literature also notes how various social identities shape students' paths to a degree. What is not yet clear is how all of these factors, when considered together, influence the length of time it takes students to complete a bachelor's degree. Furthermore, it is unknown how these factors influence the pathways for transfer students compared to first-year students. While there is growing research on Latine educational outcomes, few scholars have explicitly taken up the topic of time-to-degree for Latines. The Latine community is not monolithic; various social identity categories and social contexts impact college access and success (Núñez, 2014)**.** There is a need for an intersectional approach to uncover the various systems of power that constrain or elevate what is possible along a student's college journey.

This dissertation will yield new insights into how college completion programs, academic momentum, and various social identities influence time-to-degree for Latine students at four-year colleges. The findings will yield new theoretical perspectives on how these factors interact to shape time-to-degree. The results will also carry policy implications at the college and university system level and inform potential policy at the societal level (Perna & Thomas, 2008). This dissertation will extend the knowledge base on achievers and advance the dialogue on studying students of color from an anti-deficit lens. Ultimately, the findings will highlight potential mechanisms to shorten time-to-degree for Latine students from various social identity groups.

The more known about conduits and barriers to time-to-degree, the more university administrators and policymakers can implement programs to help even more Latine students access the benefits of a bachelor's degree.

Methodology

This section describes the methods used for this study. The section begins with an introduction to the dataset, the variables under investigation, and the processes used to prepare the dataset for evaluation. Next, it will describe the analytical plan, including defining the independent variables and summarizing the statistical tests performed. Finally, the section presents a logic model and the hierarchical regression models used to investigate time-to-bachelor's-degree for Latine students at the City University of New York.

Procedure

The data for this analysis come from the City University of New York Office of Institutional Research and Assessment Policy Tracking Cohort (PTC) dataset. The CUNY Office of Institutional Research & Assessment maintains a research and reporting data warehouse used to prepare reports on student performance and progress through college. The warehouse captures snapshots of data from multiple sources at several points throughout an academic year, organized primarily by academic term (Fall and Spring). Frozen data snapshots are taken from operational and transactional systems, such as the Student Information System, CUNYfirst, at two points during an academic term. The first snapshot captures data when students are about 20% of their way through classes at the beginning of a term. The second snapshot captures data at the end of a term once grades are submitted. The data are organized, cleaned, and set up in tables for analyses in the CUNY Institutional Research Database (IRDB).

The central Office of Institutional Research and Assessment of the City University of

New York manages the IRDB. The Institutional Research Database (IRDB) is a warehouse of

CUNY's official student data that combines information from all colleges in a single relational

database (City University of New York, n.d.-b). The purpose of using this specific dataset is

because it captures information from multiple college campuses and various points in time. The

broader sample allows for a multi-institutional analysis. The multiple data capture time points

allow for exploration of variation in educational outcomes based on student performance at the

beginning of a semester compared to the end of a term. In addition to various data points on

student performance, the IRDB also captures student demographic variables and student

participation in support programs. The Policy Tracking Cohort, the dataset used for this analysis,

contains deidentified student record data from the IRDB. The variables in this dataset allow for

multi-level analysis of Latine student educational outcomes. This dissertation analyzes and

interprets specific variables that impact bachelor's degree outcomes for transfer and first-year

students at four-year colleges.

Analytical Plan

This section describes the variables, domains, and key concepts selected for this study.

First, the dependent variable (time-to-bachelor's-degree) is defined. Second, the college

completion programs domain is defined and the specific programs considered in this analysis.

Then, the academic momentum domain is defined along with the fundamental indicators of early

academic progress. Next, the demographics domain is defined, including variables for gender,

citizenship, language, and socioeconomic status. A complete listing of variables used for this

analysis can be found in Appendix E. Finally, this chapter concludes by explaining the rationale

for the statistical analyses used, the tables created, the research model, and the models used in

each statistical analysis. Figure 2 depicts the logic model for this analysis.

Figure 2

Logic Model
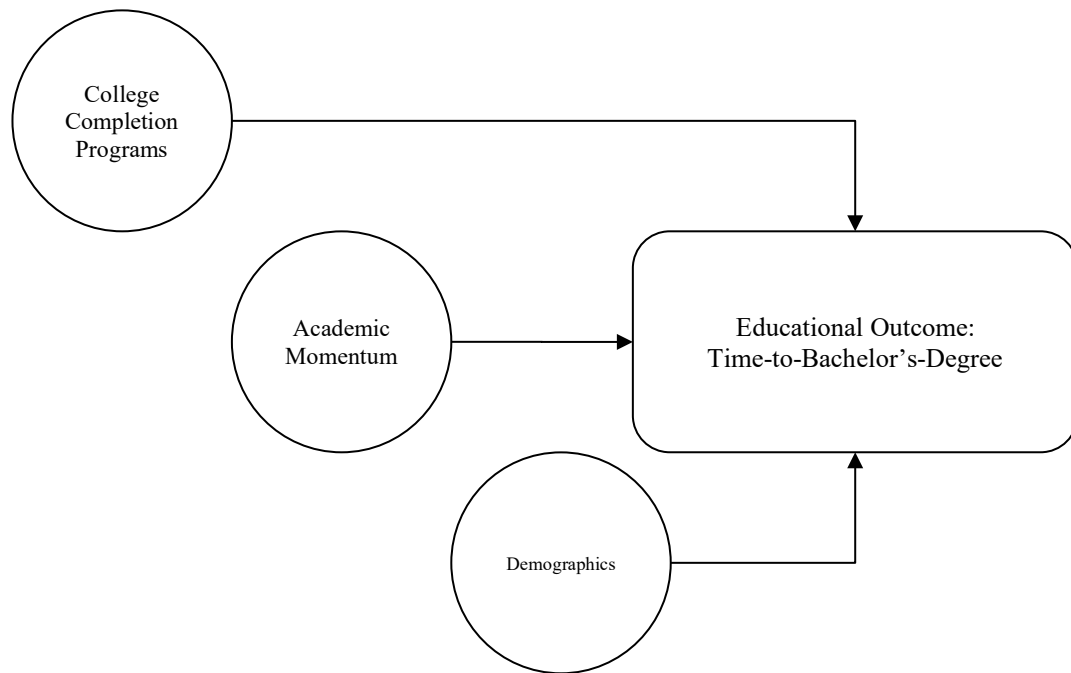
Dependent Variable: Time-to-Bachelor's-Degree

The dependent variable in this analysis is time-to-bachelor's-degree; the variable

measures the number of years from a student's admission to a four-year college until graduation

with a bachelor's degree. As an integrated system, CUNY offers opportunities for students to

take classes for credit at multiple institutions. In addition, all credits taken at one CUNY

institution can transfer to another. As a result, some students experience an enrollment swirl;

they may start their collegiate journey at a CUNY community college, transfer to a four-year

college, and transfer again to another CUNY institution before completing their degree. For this

analysis, time-to-bachelor's-degree will be measured based on the time the student was admitted

to the institution where they earned their bachelor's degree. Earning a bachelor's degree carries significant economic and personal benefits. However, the path to earning a bachelor's degree varies for students who start as transfer students compared to students who start as first-year students. This analysis will investigate this variation by splitting the sample between transfer and first-year students.

Time-to-bachelor's degree is the difference between students' month and year when they earned their bachelor's degree and the month and year they first enrolled at the institution where they earned their bachelor's degree. The variable BA_DATE in the Policy Tracking Cohort (PTC) displays three possible graduation dates for each year: February 1st, June 1st, or September 1st. February corresponds to a Spring semester graduation, June to a summer term graduation, and September to a Fall semester graduation. The data in the PTC are organized mainly by semester. Students' first term in CUNY is coded Semester 01, and they are followed through Semester 20. Each grouping of semester-bound variables contains a variable for COLLEGE_ID, which indicates the college where the student was enrolled. Additionally, a series of dummy variables (GRAD_SEM01 through GRAD_SEM20) track the semester in which a student graduated.

For this analysis, the latest instance of a student's graduation from CUNY will be treated as the semester they earned their bachelor's degree. The semester they received their bachelor's degree will then be matched to their COLLEGE_ID in that same semester to determine the institution from which they earned their degree. So, for example, if a student graduated in Semester 18, their COLLEGE_ID_SEM18 (College ID in semester 18) is the institution from which they earned their bachelor's degree. For cases without a COLLEGE_ID on file for the semester they graduated, the COLLEGE_ID from the previous semester will be chosen.

Independent Variables

Again, this dissertation is particularly interested in the relative impact of college completion programs, academic momentum, and key demographics on how long it takes Latine students to earn a bachelor's degree. Furthermore, this analysis considers each of these domains' impact on time-to-bachelor's-degree for first-year students and transfer students separately. The following section presents the variables used to operationalize each domain, in addition to a brief discussion of the relevant literature to justify their inclusion, and a prediction of whether that particular variable will serve as a conduit or barrier to time-to-bachelor's-degree for Latine students.

College Completion Programs Domain

The College Completion Programs domain measures participation in two programs that provide students with wraparound services. This domain includes two variables: SEEK Status and ASAP Status.

SEEK Status is a dummy variable where those in SEEK or College Discovery (CD) are coded one, and non-SEEK/CD students are coded zero. College Discovery and SEEK provide comprehensive academic, financial, and social support to assist capable students who otherwise might not attend college due to their educational and financial circumstances (City University of New York, n.d.-d). The Policy Tracking Cohort contains a dummy variable, SEEK, to measure student participation in SEEK or College Discovery. Previous research has highlighted the positive impact college completion programs like SEEK have on educational outcomes (Francis et al., 1993; Sorrentino, 2006; Todorova, 2019). However, there is a dearth of research that considers how participation in SEEK influences time-to-degree. SEEK offers comprehensive support services like advising, tutoring, and financial aid, which have been shown to influence

time-to-degree positively; participation in SEEK likely shortens the length of time it takes

students to earn a bachelor's degree.

 ASAP Status is a dummy variable where students who were ever in the Accelerated Study

in Associate Program (ASAP) are coded one; non-ASAP students are coded zero. ASAP is a

comprehensive support program for students pursuing associate's degrees. The program is

available to students at six community colleges and three comprehensive colleges. ASAP

provides students with the academic, social, and financial support to help them graduate with an

associate degree in no more than three years (City University of New York, n.d.-a). Within the

Policy Tracking Cohort, participation in ASAP is tracked using the variable

OTHER_SPECIAL_PROG_CODE (other special program code). ASAP Status is a latent

variable based on "other special program code" to isolate participation in ASAP from

participation in other special programs offered at CUNY. Several studies have demonstrated the

efficacy of the ASAP program in improving associate's degree outcomes and predicting transfer

to a baccalaureate program (Kolenovic et al., 2013; Scrivener et al., 2015; Strumbos et al., 2018).

However, it is unclear if participation in ASAP has carry-over effects once students begin

pursuing a bachelor's degree. Since ASAP students are more likely to have earned an associate's

degree (Scrivener et al., 2015), they are likely to begin a bachelor's degree with upwards of 60

credits completed.

 Additionally, ASAP students likely benefit from the two years of intensive advising

received at the community college level. Advisors help students navigate the intricacies of

college, coach students through approaching coursework and provide guidance on career goals.

Students can translate these skill sets to new institutional settings. Given what is known about the

value of ASAP and advising in general, participation in ASAP is likely to reduce time-to-degree.

Academic Momentum

The Academic Momentum domain contains indicators of student performance in their first semester and first year at the college where they received their bachelor's degree. Latent variables were created to measure early academic progress. This domain includes nine variables: Enrolled Full-Time in Semester 1, Attempted 15+ Credits in Semester 1, Earned 15+ Credits in Semester 1, Attempted 30+ Credits in Year 1, Earned 30+ Credits in Year 1, Earned 24+ Credits in Year 1, Percent of Credits Earned in Year 1, Earned at Least 80% of Credits Attempted in Year 1, and Year 1 GPA.

Enrolled Full-Time in Semester 1 is a dummy variable that measures if a student attempted 12 or more credits in their first semester. Much of the literature concerning academic momentum underscores the benefits of enrolling in 15 credits instead of just the 12 credits needed for full-time enrollment (Attewell et al., 2012; Attewell & Monaghan, 2016; Huntington-Klein & Gill, 2020). However, enrolling in at least 12 credits shortens time-to-degree compared to part-time enrollment (Giesey & Manhire, 2003). Thus, likely, full-time enrollment in a student's first semester at a bachelor's degree-granting institution will shorten their overall time-to-degree.

Attempted 15+ Credits in Semester 1 is a dummy variable that measures if a student enrolled in at least 15 credits in their first term. Enrolling in 15 credits early on in an academic career is the central premise underlying the theory of academic momentum (Attewell et al., 2012; Attewell & Monaghan, 2016; Belfield et al., 2016). While research has not considered the impact of academic momentum on transfer students (Davidson & Blankenship, 2017; Huntington-Klein & Gill, 2020), attempting 15 credits will likely benefit both first-year and transfer students.

Earned 15+ Credits in Semester 1 captures if students earned at least 15 credits in their first term. While it is clear from the literature that 15 credits lead to improved academic outcomes, scholars have not yet considered how attempting 15 credits compared to earning 15 credits impacts degree outcomes. Earning 15 credits in the first semester will likely shorten time-to-degree more than attempting 15 credits. Comparing credits attempted to credits earned may inform how colleges schedule students in their first semester and the support services offered to help students complete their coursework.

Attempted 30+ Credits in Year 1 is a dummy variable that measures when students' credits attempted in semester one, added to credits attempted in semester two are greater than or equal to 30. For this analysis, Year 1 will be measured based on Fall and Spring semesters. This variable extends the analysis of momentum beyond a student's first semester. Research suggests that early momentum across the first year is associated with higher rates of bachelor's degree completion (Clovis & Chang, 2019), particularly for students who begin at a community college and later transfer. Research has not yet considered the impact of early momentum for both transfer students and first-year students at four-year colleges. However, it is likely that attempting at least 30 credits during the first year of enrollment at a four-year college will shorten students' time-to-degree.

Earned 30+ Credits in Year 1 is a dummy variable that measures if a student earned at least 30 credits between semester one and semester two. Similar to above, investigating the impact of earning 30 credits versus attempting 30 credits in the first year may shed light on course scheduling policies for four-year colleges.

Earned 24+ Credits in Year 1 is a dummy variable that measures if students earned at least 24 credits in their first year at a four-year college. Enrolling in 15 credits each semester

shortens time-to-degree (Huntington-Klein & Gill, 2020). However, some students cannot enroll in an increased course load if they have to work while attending college. For example, students who work 30 or more hours per week do not benefit from an increased course load (Attewell & Monaghan, 2016). In addition, some students may only enroll for 12 credits each term to maintain full-time status and remain eligible for financial aid. This variable investigates the impact of enrolling full-time across a students' first two semesters on time-to-degree. The findings from this analysis can shed light on the impact of earning 24 credits compared to 30 credits on time-to-degree. Earning at least 24 credits in year one will likely shorten students' time-to-degree but will have less impact than earning 30 credits in the first year.

Percent of Credits Earned in Year 1 is a continuous variable that calculates students' rate of credit accumulation in their first year. The variable measures the percent of credits earned versus credits attempted in semesters one and two. Adelman (1999, 2006) found that one of the biggest predictors of bachelor's degree attainment is whether or not a student earns a significant number of college credits during the first year of college. It is not yet clear if this mechanism operates similarly for transfer students in their first year at a four-year college (Huntington-Klein & Gill, 2020). Students may not complete all of their coursework due to failing or withdrawing from a class. Both of these grades impede momentum and lengthen their time-to-degree. Likely, the percentage of credits earned in year one is negatively correlated with time-to-degree. In other words, students who complete more of their coursework in their first year will have a shorter time-to-degree.

Earned at Least 80% of Credits Attempted in Year 1 is a dummy variable that flags students who completed most of the credits attempted in semesters one and two. Since completing more courses likely signals shorter time-to-degree, students who complete less than

80% of credits attempted will likely take longer to graduate. The impact of completing most of the courses attempted might signal to universities the need to intervene for students who earn less than 80% of what they attempt in their first year through advising, tutoring, or credit recovery strategies.

Year 1 GPA represents students' academic standing at the end of their first year. The variable measures students' cumulative GPA at the end of their second semester. Much of the research on academic momentum underscores the relationship between early academic performance and degree completion (Attewell & Monaghan, 2016; Clovis & Chang, 2019). Grade point average is one of the more predictive variables regarding graduation and time-to-degree (Yue & Fu, 2017). Though research on GPA and time-to-degree has been limited to first-year students, higher first-year GPAs are likely to signal a shorter time-to-degree for first-year and transfer students.

Demographic

The Demographic domain consists of indicators of students' gender, citizenship, language, and socio-economic status. There are twelve variables in this domain: Female, Citizenship, Undocumented, US Citizen or Permanent Resident, Visa Holder, Language of Comfort, Language of Comfort is English Only, Multilingual, Language of Comfort is Language Other than English, Economic Disadvantage Flag, Pell Flag, and TAP Flag.

Female is a dummy variable that codes females as one and males as zero. Men and women have similar time-to-degree at four-year institutions (Shapiro et al., 2016), but there is a dearth of research on how time-to-degree operates for Latine students explicitly. Nationally, Latina women earn more degrees than Latino men (Hussar et al., 2020). Given the higher rate of degree attainment among Latina women, the challenges males face in terms of educational

attainment (Zarifa et al., 2018), and calls for intervention to improve degree outcomes for men of color (Brooms et al., 2018; Saenz et al., 2016), more needs to be learned about how time-to-degree works for Latino men compared to Latina women. Based on what is known about Latina women's degree outcomes, it is likely that Latina women have a shorter time-to-degree.

Citizenship is a recode of the nominal level variable CITIZENSHIP_DESC (citizenship description) in the Policy Tracking Cohort into three categories where U.S. citizens and permanent residents are coded one; those who are undocumented are coded two; and those with a visa or other immigration status are coded three. Research demonstrates correlations between citizenship status and several indicators of educational outcomes, including access to financial resources (Ballerini & Feldblum, 2021), psychological distress (Alif et al., 2020), and educational expectations (McWhirter et al., 2013). Several scholars have called for integrating immigration status into analyses of Latine educational outcomes (Ballerini & Feldblum, 2021; Núñez, 2014), yet research has not yet considered how citizenship or immigration status influences time-to-degree. Research suggests that various immigration statuses influence academic outcomes (Bean et al., 2011; Hsin & Reed, 2020), so it is likely that there will be variance in time-to-degree between those who are undocumented, are US citizens or permanent residents, and those with a visa.

Undocumented is a dummy variable where those listed as undocumented on the variable CITIZENSHIP_DESC are coded one, and all others are coded zero. Undocumented immigrants are more likely to face the fear of deportation and psychological distress (Alif et al., 2020). However, undocumented students have demonstrated higher self-esteem (Alif et al., 2020) and an ability to tap into social networks to access resources that help them achieve positive educational outcomes (Borjian, 2018; Huber, 2009; Yasuike, 2019). Undocumented students

tend to have lower vocational expectations than their peers and expect to face more challenges

navigating higher education (McWhirter et al., 2013). Nevertheless, studies have shown that

undocumented students who enroll in college are more academically prepared than their peers

with legal status (Hsin & Reed, 2020). Research suggests variation in outcomes between

undocumented students enrolled at a four-year institution and those who start at a two-year

college (Hsin & Reed, 2020). It is possible that being undocumented will shape time-to-degree

differently for those students who begin as first-year students compared to those who manage to

transfer before continuing with their collegiate studies. However, undocumented status is likely

to lengthen time-to-degree for both populations.

     US Citizen or Permanent Resident is a dummy variable where those listed as U.S.

citizens or permanent residents on the variable CITIZENSHIP_DESC are coded one, and all

others are coded zero. Prior studies demonstrate that citizenship bestows a protected status upon

immigrant families that carries educational benefits (Bean et al., 2011). Citizens and permanent

residents have access to federal and state financial aid programs, which can help offset the cost

of college. Even after controlling for socioeconomic factors, there is considerable variation in

educational attainment associated with citizenship status (Patler, 2018). Thus, citizenship or

permanent resident status will likely serve as a conduit to degree completion and reduce overall

time-to-degree.

     Visa Holder is a dummy variable where those listed as having a visa or other immigration

status on the variable CITIZENSHIP_DESC are coded one, and all others are coded zero.

Students on a visa have protected immigration status; these students are less likely to face the

same psychological distress or challenges encountered by undocumented students (Alif et al.,

2020). There is a dearth of research on time-to-degree for students on a visa, but given what is

known about correlations between citizenship and academic outcomes, it is likely that visa

holders will have similar outcomes as other students with protected legal status (Bean et al.,

2011)

   Language of Comfort measures students' language ability and is derived from the

LANGUAGE_OF_COMFORT_DESC (language of comfort description) within the Policy

Tracking Cohort dataset. The variable identifies whether a student's language of comfort is

English only, English and another language, or a language other than English. Those students

comfortable with English only are coded one; those equally comfortable with English and

another language are coded two; those comfortable with a language other than English are coded

three. Bachelor's degree completion is correlated with primary language spoken at home

(Carales, 2020). Enrolling in English as a New Language classes delays time-to-degree (Giesey

& Manhire, 2003). However, being multilingual carries cognitive (Flores & Park, 2013) and

social benefits (Carales, 2020; Yosso, 2005) that positively influence educational outcomes.

However, to date, research has not considered the relationship between language and time-to-

degree. Given what is known, there will likely be variance in time-to-degree based on language

ability.

   Language of Comfort is English Only is a dummy variable where those whose language

of comfort is English are coded one, and all others are coded zero. Since English is the primary

language of American higher education, being most comfortable with English will likely serve as

a conduit to timely degree completion.

   Multilingual is a dummy variable where those equally comfortable with English and

another language are coded one. Those comfortable with just one language are coded zero.

Students who can communicate in multiple languages or styles possess linguistic capital, which

has been theorized to serve as an asset that helps students complete their education (Denton et al., 2020; Yosso, 2005). For example, scholars have confirmed that students who grew up speaking Spanish or another language were more likely to persist towards graduation (Carales, 2020). In addition, a facility with multiple languages is likely to shorten the time it takes students to complete a degree.

Language of Comfort is Language Other than English is a dummy variable where those whose language of comfort is a language other than English are coded one, and all others are coded zero. Many English Language Learners must first improve their English language skills before enrolling in courses that apply towards their degree (Crisp & Nora, 2010; C. Suárez-Orozco et al., 2019), which can delay their graduation. Being most comfortable with a language other than English will likely lengthen the time it takes students to complete a bachelor's degree.

Economic Disadvantage Flag is a measure of socioeconomic status. The variable identifies students within the dataset who, based on household size and household income, experience economic disadvantage. Numerous scholars have demonstrated the link between socioeconomic status and postsecondary attainment (Diemer & Li, 2012; Doren & Grodsky, 2016; Goldrick-Rab, 2006; Goldrick-Rab & Pfeffer, 2009; Hamilton, 2013, p. 201; Mendoza, 2012). Several have also confirmed that students from lower socioeconomic backgrounds take longer to complete their degrees (Bound et al., 2012; Mccormack et al., 2014). Though it is not yet clear how socioeconomic status operates for Latine students explicitly regarding time-to-degree, experiencing economic disadvantage will likely increase time-to-degree, particularly since socioeconomic status is more predictive than race when it comes to educational outcomes (Battle & Pastrana, 2007).

Pell Flag is also a measure of socioeconomic status. This variable identifies those students who received a federal Pell grant. Federal Pell Grants are awarded to students who have exceptional financial need. Students from low-income backgrounds take longer to complete their degrees (Bound et al., 2012; Zarifa et al., 2018), but research suggests the potential for financial aid programs to reduce time-to-degree. Students who receive Pell have up to six years of full-time equivalent enrollment of eligibility. Thus, while receiving Pell may be a marker of lower socioeconomic status, the aid eligibility window may push students to complete their degrees sooner (Mabel, 2020).

TAP Flag identifies students who received the New York State Tuition Assistance Program (TAP) grant; available to students and families who make up to $80,000 in New York State Taxable Income (NYS Higher Education Services Corporation, n.d.). This variable is both a measure of socioeconomic status and a state aid program. Students can receive TAP for up to eight semesters, or four years, unless they are in the SEEK program; SEEK students can receive TAP for up to five years. Research suggests the value of state-based grants in reducing time-to-degree (DesJardins et al., 2002) and the effect of lifetime eligibility limits (Mabel, 2020). While lower socioeconomic status signals a longer path to a degree, receiving TAP may shorten the time to graduation.

Statistical Methods

Given what is currently known about the concepts above and the hypotheses presented, the following statistical methods will be used to determine the relative impact of college completion programs, academic momentum, and key demographic variables on time-to-bachelor's-degree.

KUNICKI - DISSERTATION PROPOSAL 64</image>

T-Tests

T-tests will be used to determine if there is a significant difference between the means between several groups by participation in college completion programs, academic momentum indicators, and demographic differences.

ANOVAs

A one-way analysis of variance (ANOVA) will be used to determine whether there are statistically significant differences between three or more groups and the dependent variable. ANOVAs will reveal the relationship between the nominal-level categorical variables in the demographic domain and the dependent variable. More specifically, ANOVAs will be used to investigate the variance in time-to-degree based on Citizenship and Language of Comfort.

Pearson's Correlation

Pearson's Correlation will be used to investigate linear relationships between variables. The results of the Pearson's analysis will inform the creation of domains: college completion programs, academic momentum, and demographic domain.

Regression Analyses

For all models in the analysis, the dependent variable will be time-to-bachelor's-degree. The first model will examine college completion program variables (Domain I). The second model will add academic momentum variables (Domain II), and the third model will add demographic variables (Domain III). The first three models will explore all Latine students at CUNY who have graduated with a bachelor's degree. The sample will then be split to examine the trajectories of Latine transfer students (Models IV thru VI) and Latine first-year students (Models VII thru IX) at four-year colleges. Figure 3 displays the regression models. This dissertation will yield generalized insights and offer conclusions to improve bachelor's degree

attainment for Latine students whether they begin pursuing a bachelor's as a transfer student or first-year student.

Figure 3

Hierarchical Regression Models: Time-to-Bachelor's-Degree for Latine Students at CUNY

	All Students			Transfer Students			First-Year Students		
Models:	I	II	III	IV	V	VI	VII	VIII	IX
College Completion Programs	✓	✓	✓	✓	✓	✓	✓	✓	✓
Academic Momentum		✓	✓		✓	✓		✓	✓
Demographic			✓			✓			✓

References

Abrica, E. J., & Martinez, E. (2016). Strategies for navigating financial challenges among latino male community college students: Centralizing race, gender, and immigrant generation. *Journal of Applied Research in the Community College; San Diego*, *23*(2), 59–72.

Adelman, C. (1999). *Answers in the tool box. Academic intensity, attendance patterns, and bachelor's degree attainment*. US Department of Education. https://eric.ed.gov/?id=ED431363

Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college* (p. 223). US Department of Education.

Alif, A., Nelson, B. S., Stefancic, A., Ahmed, R., & Okazaki, S. (2020). Documentation status and psychological distress among New York City community college students. *Cultural Diversity and Ethnic Minority Psychology*, *26*(1), 11–21. https://doi.org/10.1037/cdp0000290

Aragon, A. (2018). Achieving latina students: Aspirational counterstories and critical reflections on parental community cultural wealth. *Journal of Latinos & Education*, *17*(4), 373–385. https://doi.org/10.1080/15348431.2017.1355804

Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development*, *40*(5), 518–529.

Attewell, P., Heil, S., & Reisel, L. (2012). What is academic momentum? And does it matter? *Educational Evaluation and Policy Analysis*, *34*(1), 27–44. https://doi.org/10.3102/0162373711421958

Attewell, P., Lavin, D., Domina, T., & Levey, T. (2007). *Passing the torch: Does higher education for the disadvantaged pay off across the generations?* Russell Sage Foundation.

Attewell, P., & Monaghan, D. (2016). How many credits should an undergraduate take? *Research in Higher Education*, *57*(6), 682–713. https://doi.org/10.1007/s11162-015-9401-z

Bahr, P. R., Toth, C., Thirolf, K., & Massé, J. C. (2013). A review and critique of the literature on community college students' transition processes and outcomes in four-year institutions. In M. B. Paulsen (Ed.), *Higher education: Handbook of theory and research* (Vol. 28, pp. 459–511). Springer Netherlands. https://doi.org/10.1007/978-94-007-5836-0_10

Ballerini, V., & Feldblum, M. (2021). Immigration status and postsecondary opportunity: Barriers to affordability, access, and success for undocumented students, and policy solutions. *American Journal of Economics and Sociology*, *80*(1), 161–186. https://doi.org/10.1111/ajes.12380

Battle, J., & Pastrana, A. (2007). The relative importance of race and socioeconomic status among hispanic and white students. *Hispanic Journal of Behavioral Sciences*, *29*(1), 35–49. https://doi.org/10.1177/0739986306294783

Bean, F. D., Leach, M. A., Brown, S. K., Bachmeier, J. D., & Hipp, J. R. (2011). The educational legacy of unauthorized migration: Comparisons across u.s.-immigrant groups in how parents' status affects their offspring. *International Migration Review*, *45*(2), 348–385. https://doi.org/10.1111/j.1747-7379.2011.00851.x

Belfield, C., Jenkins, P. D., & Lahr, H. E. (2016). *Momentum: The academic and economic value of a 15-credit first-semester course load for college students in tennessee* (CCRC Working Paper). Teachers College, Columbia University. https://doi.org/10.7916/D84T6JJM

Bensimon, E. M., & Dowd, A. (2009). Dimensions of the transfer choice gap: Experiences of latina and latino students who navigated transfer pathways. *Harvard Educational Review*, *79*(4), 632–658.

Borjian, A. (2018). Academically successful latino undocumented students in college: Resilience and civic engagement. *Hispanic Journal of Behavioral Sciences*, *40*(1), 22–36. https://doi.org/10.1177/0739986317754299

Bound, J., Lovenheim, M. F., & Turner, S. (2012). Increasing time to baccalaureate degree in the united states. *Education Finance and Policy*, *7*(4), 375–424. https://doi.org/10.1162/EDFP_a_00074

Braxton, J. M., & Lien, L. A. (2016). The viability of academic integration as a central construct in tinto's interactionalist theory of college student departure. In J. M. Braxton (Ed.), *Reworking the Student Departure Puzzle* (pp. 11–28). Vandebilt University Press. doi:10.2307/j.ctv176kvf4.4

Brooms, D. R., Clark, J., & Smith, M. (2018). Supporting men of color's success efforts. In H. S. Wechsler (Ed.), *Empowering Men of Color on Campus* (pp. 111–126). Rutgers University Press. https://doi.org/10.2307/j.ctt1vjqqp8.9

Butler, W. L. (1999). Intrusive advisement, counseling, and tutoring: An interactive model for

    retaining academically under-prepared students. *Negro Educational Review*, *50*(3–4),

    109–122.

Carales, V. D. (2020). Examining educational attainment outcomes: A focus on latina/o

    community college students. *Community College Review*, *48*(2), 195–219.

    https://doi.org/10.1177/0091552120903087

Carales, V. D., & López, R. M. (2020). Challenging deficit views of latinx students: A strength-

    based perspective. *New Directions for Community Colleges*, *190*, 103–113.

    https://doi.org/10.1002/cc.20390

Carbado, D. W., Crenshaw, K. W., Mays, V. M., & Tomlinson, B. (2013). Intersectionality:

    Mapping the movements of a theory. *Du Bois Review*, *10*(2), 303–312.

    http://dx.doi.org.ezproxy.gc.cuny.edu/10.1017/S1742058X13000349

Carnevale, A. P., & Fasules, M. (2017). *Latino education and economic progress: Running

    faster but still behind*. Georgetown University Center on Education and the Workforce.

Chase, M. M., Dowd, A. C., Pazich, L. B., & Bensimon, E. M. (2014). Transfer equity for

    "minoritized" students: A critical policy analysis of seven states. *Educational Policy*,

    28(5), 669–717. https://doi.org/10.1177/0895904812468227

City University of New York. (n.d.-a). *About cuny asap*. CUNY ASAP. Retrieved May 25, 2021,

    from https://www1.cuny.edu/sites/asap/about/

City University of New York. (n.d.-b). *About us*. The City University of New York. Retrieved

    May 3, 2021, from

    https://www.cuny.edu/about/administration/offices/oira/institutional/about/

City University of New York. (n.d.-c). *Accelerate, complete, and engage (ace)*. CUNY ASAP.

Retrieved August 10, 2021, from https://www1.cuny.edu/sites/asap/accelerate-complete-

and-engage/

City University of New York. (n.d.-d). *College discovery & seek*. The City University of New

York. Retrieved May 25, 2021, from https://www.cuny.edu/academics/academic-

programs/seek-college-discovery/

City University of New York. (2021a, February 25). *Cuny leads new york with the most*

hispanic-serving institutions in the state, says a report by excelencia in education. CUNY

Newswire. https://www1.cuny.edu/mu/forum/2021/02/25/cuny-leads-new-york-with-the-

most-hispanic-serving-institutions-in-the-state-says-a-report-by-excelencia-in-education/

City University of New York. (2021b). *Ace fast facts june 2021*.

https://www1.cuny.edu/sites/asap/wp-content/uploads/sites/8/2021/06/ACE-Fast-

Facts_June-2021.pdf

City University of New York Office of Institutional Research & Assessment. (2020).

Performance management process 2019-2020 data book. City University of New York.

http://www.cuny.edu/about/administration/offices/oira/institutional/data/current-student-

data-book-by-subject/#Accountability

Clovis, M. A., & Chang, M. (2019). Effects of academic momentum on degree attainment for

students beginning college at 2-year institutions. *Journal of College Student Retention:*

Research, Theory & Practice, 1521025119826245.

https://doi.org/10.1177/1521025119826245

Cole, D., & Griffin, K. A. (2013). Advancing the study of student-faculty interaction: A focus on

    diverse students and faculty. In M. B. Paulsen (Ed.), *Higher Education: Handbook of*

    Theory and Research (Vol. 28, pp. 561–611). Springer Netherlands.

    https://doi.org/10.1007/978-94-007-5836-0_12

Complete College America. (2013). *The power of 15 credits: Enrollment intensity and*

    postsecondary student achievement. Complete College America.

    https://completecollege.org/resource/the-power-of-15-

    credits/#:~:text=BoTTom%20line%3A%20Students%20who%20take,classroom%20spac

    e%20for%20other%20students.

Covarrubias, A. (2011). Quantitative intersectionality: A critical race analysis of the chicana/o

    educational pipeline. *Journal of Latinos and Education*, *10*(2), 86–105.

    https://doi.org/10.1080/15348431.2011.556519

Covarrubias, A., Nava, P. E., Lara, A., Burciaga, R., Vélez, V. N., & Solorzano, D. G. (2018).

    Critical race quantitative intersections: A testimonio analysis. *Race Ethnicity and*

    Education, *21*(2), 253–273. https://doi.org/10.1080/13613324.2017.1377412

Covarrubias, A., & Vélez, V. N. (2013). Critical race quantitative intersectionality: An anti-racist

    research paradigm that refuses to "let the numbers speak for themselves." In M. Lynn &

    A. D. Dixson (Eds.), *Handbook of Critical Race Theory in Education* (1st ed.).

    Routledge. https://doi.org/10.4324/9780203155721

Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence

    against women of color. *Stanford Law Review*, *43*(6), 1241–1299.

    https://doi.org/10.2307/1229039

Crisp, G., & Nora, A. (2010). Hispanic student success: Factors influencing the persistence and

transfer decisions of latino community college students enrolled in developmental

education. *Research in Higher Education*, *51*(2), 175–194.

https://doi.org/10.1007/s11162-009-9151-x

Crisp, G., Taggart, A., & Nora, A. (2015). Undergraduate latina/o students: A systematic review

of research identifying factors contributing to academic success outcomes. *Review of

Educational Research*, *85*(2), 249–274. https://doi.org/10.3102/0034654314551064

CUNY Office of Institutional Research & Assessment. (2020a). *Institution retention and

graduation rates of special program, full-time first-time freshmen in associate programs

by year of entry:* total university*.

http://www.cuny.edu/irdatabook/rpts2_AY_current/RTGI_0005_SPRG_FT_FTFR_ASS

OC_TOT_UNIV.pdf

CUNY Office of Institutional Research & Assessment. (2020b). *System retention and graduation

rates of full-time transfers in baccalaureate programs by year of entry:* total university*.

http://www.cuny.edu/irdatabook/rpts2_AY_current/RTGS_0008_FT_TNS_BACC_TOT

_UNIV.rpt.pdf

CUNY Office of Institutional Research & Assessment. (2020c). *System retention and graduation

rates of special program, full-time first-time freshmen in baccalaureate programs by year

of entry:* total university*.

http://www.cuny.edu/irdatabook/rpts2_AY_current/RTGS_0011_SPRG_FT_FTFR_BAC

C_TOT_UNIV.rpt.pdf

Dadgar, M., Nodine, T., Bracco, K. R., & Venezia, A. (2014). Strategies for integrating student

supports and academics. *New Directions for Community Colleges*, *2014*(167), 41–51.

https://doi.org/10.1002/cc.20109

Davidson, J. C., & Blankenship, P. (2017). Initial academic momentum and student success:

Comparing 4- and 2-year students. *Community College Journal of Research and

Practice*, *41*(8), 467–480. https://doi.org/10.1080/10668926.2016.1202158

Denton, M., Borrego, M., & Boklage, A. (2020). Community cultural wealth in science,

technology, engineering, and mathematics education: A systematic review. *Journal of

Engineering Education*, *109*(3), 556–580. https://doi.org/10.1002/jee.20322

DesJardins, S. L., Ahlburg, D. A., & McCall, B. P. (2002). A temporal investigation of factors

related to timely degree completion. *Journal of Higher Education*, *73*(5), 555–581.

https://doi.org/10.1353/jhe.2002.0042

Diemer, M. A., & Li, C.-H. (2012). Longitudinal roles of precollege contexts in low-income

youths' postsecondary persistence. *Developmental Psychology*, *48*(6), 1686–1693.

https://doi.org/10.1037/a0025347

Doren, C., & Grodsky, E. (2016). What skills can buy: Transmission of advantage through

cognitive and noncognitive skills. *Sociology of Education*, *89*(4), 321–342.

https://doi.org/10.1177/0038040716667994

Estrada, F., & Jimenez, P. (2018). Machismo and higher education: Examining the relation

between caballerismo and ethnic identity, support seeking, and sense of connectedness

among college Latinos. *Journal of Latinos & Education*, *17*(3), 215–224.

https://doi.org/10.1080/15348431.2017.1319367

Excelencia in Education. (2019). *Latinos in higher education: Compilation of fast facts* (p. 31).

Excelencia in Education.

Excelencia in Education. (2021). *A new york briefing on 25 years of hsis*. Excelencia in

Education. www.edexcelencia.org/25yrs-HSIs

Fan, S. P., Liberman, Z., Keysar, B., & Kinzler, K. D. (2015). The exposure advantage: Early

exposure to a multilingual environment promotes effective communication.

Psychological Science, *26*(7), 1090–1097. https://doi.org/10.1177/0956797615574699

Flores, S. M., & Park, T. J. (2013). Race, ethnicity, and college success: Examining the

continued significance of the minority-serving institution. *Educational Researcher*, *42*(3),

115–128. https://doi.org/10.3102/0013189X13478978

Francis, K. C., Kelly, R. J., & Bell, M. J. (1993). Success in school: A research agenda on

student attrition and retention in the seek program. *Educational Evaluation and Policy

Analysis*, *15*(4), 437–441. https://doi.org/10.2307/1164541

Freeman, M. L., & Martinez, M. (2015). *College completion for latino/a students: Institutional

and system approaches*. John Wiley & Sons, Incorporated.

http://ebookcentral.proquest.com/lib/cunygc/detail.action?docID=4187377

Gershenfeld, S., Ward Hood, D., & Zhan, M. (2016). The role of first-semester gpa in predicting

graduation rates of underrepresented students. *Journal of College Student Retention:

Research, Theory & Practice*, *17*(4), 469–488.

https://doi.org/10.1177/1521025115579251

Giesey, J. J., & Manhire, B. (2003). An analysis of b.s.e.e. Degree completion time at ohio

university. *Journal of Engineering Education*, *92*(3), 275–280.

https://doi.org/10.1002/j.2168-9830.2003.tb00769.x

Glass Jr, J. C., & Bunn, C. E. (1998). Length of time required to graduate for community college

students transferring to senior institutions. *Community College Journal of Research and

Practice*, *22*(3), 239–263. https://doi.org/10.1080/1066892980220305

Glynn, J. (2019). *Persistence: The success of students who transfer from community colleges to

selective four-year institutions*. Jack Kent Cooke Foundation.

https://www.jkcf.org/research/persistence/

Goldrick-Rab, S. (2006). Following their every move: An investigation of social-class

differences in college pathways. *Sociology of Education*, *79*(1), 67–79.

https://doi.org/10.1177/003804070607900104

Goldrick-Rab, S., & Pfeffer, F. T. (2009). Beyond access: Explaining socioeconomic differences

in college transfer. *Sociology of Education*, *82*(2), 101–125.

https://doi.org/10.1177/003804070908200201

Gonzalez, L. D. (2015). The horizon of possibilities: How faculty in hispanic-serving institutions

can reshape the production and legitimization of knowledge within academia. In A.-M.

Nuñez, S. Hurtado, & E. Calderón Galdeano (Eds.), *Hispanic-serving institutions:

Advancing research and transformative practice*. Routledge.

Grapevine. (2021). *Grapevine table 2 one-year (fy20-fy21), two-year (fy19-fy21), and five-year

(fy16-fy21) percent changes in state fiscal support for higher education*. Illinois State

University. https://education.illinoisstate.edu/grapevine/tables/

Hailikari, T., Sund, R., Haarala-Muhonen, A., & Lindblom-Ylänne, S. (2020). Using individual

study profiles of first-year students in two different disciplines to predict graduation time.

Studies in Higher Education, *45*(12), 2604–2618.

https://doi.org/10.1080/03075079.2019.1623771

Hailikari, T., Tuononen, T., & Parpala, A. (2018). Students' experiences of the factors affecting

  their study progress: Differences in study profiles. *Journal of Further and Higher*

  Education, *42*(1), 1–12. https://doi.org/10.1080/0309877X.2016.1188898

Hamilton, L. T. (2013). More is more or more is less? Parental financial investments during

  college. *American Sociological Review*, *78*(1), 70–95.

  https://doi.org/10.1177/0003122412472680

Harper, S. R. (2010). An anti-deficit achievement framework for research on students of color in

  stem. *New Directions for Institutional Research*, *148*, 63–74.

  https://doi.org/10.1002/ir.362

Harper, S. R. (2013). Am i my brother's teacher? Black undergraduates, racial socialization, and

  peer pedagogies in predominantly white postsecondary contexts. *Review of Research in*

  Education, *37*(1), 183–211. https://doi.org/10.3102/0091732X12471300

Harris, J. C., & Patton, L. D. (2019). Un/doing intersectionality through higher education

  research. *The Journal of Higher Education*, *90*(3), 347–372.

  https://doi.org/10.1080/00221546.2018.1536936

Holcombe, E., & Kezar, A. (2020). Ensuring success among first-generation, low-income, and

  underserved minority students: Developing a unified community of support. *American*

  Behavioral Scientist, *64*(3), 349–369. https://doi.org/10.1177/0002764219869413

Horn, L., & Skomsvold, P. (2011). *Web tables: Community college student outcomes: 1994–*

  2009 (NCES 2012-253). U.S. Department of Education, Institute of Education Sciences,

  National Center for Education Statistics.

Hsin, A., & Reed, H. E. (2020). The academic performance of undocumented students in higher

    education in the united states. *International Migration Review*, *54*(1), 289–315.

    https://doi.org/10.1177/0197918318825478

Huber, L. P. (2009). Challenging racist nativist framing: Acknowledging the community cultural

    wealth of undocumented chicana college students to reframe the immigration debate.

    Harvard Educational Review; Cambridge, *79*(4), 704-729,784.

Huntington-Klein, N., & Gill, A. (2020). Semester course load and student performance.

    Research in Higher Education. https://doi.org/10.1007/s11162-020-09614-8

Hussar, B., Zhang, J., Hein, S., Wang, K., Roberts, A., Cui, J., Smith, M., Mann, F. B., Barmer,

    A., Dilig, R., Nachazel, T., Barnett, M., & Purcell, S. (2020). *The condition of education

    2020 (nces 2020-144)* (p. 348). U.S. Department of Education National Center for

    Education Statistics. https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2020144

Jack, A. A. (2016). (no) harm in asking: Class, acquired cultural capital, and academic

    engagement at an elite university. *Sociology of Education*, *89*(1), 1–19.

    https://doi.org/10.1177/0038040715614913

Jay, M. (2003). Critical race theory, multicultural education, and the hidden curriculum of

    hegemony. *Multicultural Perspectives*, *5*(4), 3–9.

Jones-White, D. R., Radcliffe, P. M., Huesmann, R. L. J., & Kellogg, J. P. (2010). Redefining

    student success: Applying different multinomial regression techniques for the study of

    student graduation across institutions of higher education. *Research in Higher Education*,

    51(2), 154–174. https://doi.org/10.1007/s11162-009-9149-4

Kezar, A., & Holcombe, E. (2020a). The role of collaboration in integrated programs aimed at

    supporting underrepresented student success in stem. *American Behavioral Scientist*,

    64(3), 325–348. https://doi.org/10.1177/0002764219869421

Kezar, A., & Holcombe, E. (2020b). Challenges of implementing integrated programs for

    underrepresented students in stem: A study of the csu stem collaboratives. *Educational*

    Policy, *34*(6), 864–893. https://doi.org/10.1177/0895904818802091

Kolenovic, Z., Linderman, D., & Karp, M. M. (2013). Improving student outcomes via

    comprehensive supports: Three-year outcomes from cuny's accelerated study in associate

    programs (asap). *Community College Review*, *41*(4), 271–291.

    https://doi.org/10.1177/0091552113503709

Kuh, G. D., & Love, P. G. (2016). A cultural perspective on student departure. In J. M. Braxton

    (Ed.), *Reworking the Student Departure Puzzle* (pp. 196–212). Vandebilt University

    Press. doi:10.2307/j.ctv176kvf4.13

Ladson-Billings, G., & Tate IV, W. F. (1995). Toward a critical race theory of education.

    Teachers College Record, *97*(1), 23.

Logue, A. W. (2017). *Pathways to reform*. Princeton University Press.

    https://press.princeton.edu/books/hardcover/9780691169941/pathways-to-reform

López, N., Erwin, C., Binder, M., & Chavez, M. J. (2018). Making the invisible visible:

    Advancing quantitative methods in higher education using critical race theory and

    intersectionality. *Race Ethnicity and Education*, *21*(2), 180–207.

    https://doi.org/10.1080/13613324.2017.1375185

Lovenheim, M. F., Turner, S., & Bound, J. (2007). *Understanding the decrease in college completion rates and the increased time to the baccalaureate degree* (No. 07–626; p. 93). University of Michigan Institute for Social Research. https://www.psc.isr.umich.edu/pubs/rr07-626171f.pdf?i=92597401561410892417807617 7&f=rr07-626.pdf

Mabel, Z. (2020). Aiding or dissuading? The effects of reducing lifetime eligibility limits for need-based aid on bachelor's degree attainment and time to completion. *Research in Higher Education*, *61*(8), 966–1001. https://doi.org/10.1007/s11162-020-09600-0

Malcom-Piqueux, L., & Bensimon, E. M. (2017). Taking equity-minded action to close equity gaps. *Peer Review*, *19*(2), 5–8.

Mccormack, T., Schnee, E., & Vanora, J. (2014). Researching up: Triangulating qualitative research to influence the public debate of "on-time" college graduation. *Teachers College Record*, 39.

McWhirter, E. H., Ramos, K., & Medina, C. (2013). ¿Y ahora qué? Anticipated immigration status barriers and Latina/o high school students' future expectations. *Cultural Diversity and Ethnic Minority Psychology*, *19*(3), 288–297. https://doi.org/10.1037/a0031814

Medina, C. A., & Posadas, C. E. (2012). Hispanic student experiences at a hispanic-serving institution: Strong voices, key message. *Journal of Latinos and Education*, *11*(3), 182–188. https://doi.org/10.1080/15348431.2012.686358

Melguizo, T. (2011). A review of the theories developed to describe the process of college persistence and attainment. In J. C. Smart & M. B. Paulsen (Eds.), *Higher Education: Handbook of Theory and Research* (Vol. 26, pp. 395–424). Springer Netherlands. https://doi.org/10.1007/978-94-007-0702-3_10

Mendoza, P. (2012). Should i work or should i borrow? Counterfactual analysis on the effect of

    working while enrolled and debt on baccalaureate completion. *Journal of Student*

    Financial Aid, *42*(2). https://ir.library.louisville.edu/jsfa/vol42/iss2/2

Mitchell, M., Palacios, V., & Leachman, M. (2015). States are still funding higher education

    below pre-recession levels. *Journal of Collective Bargaining in the Academy*, *0*(Article

    71), 28.

Museus, S. D. (2014). The culturally engaging campus environments (cece) model: A new

    theory of success among racially diverse college student populations. In M. B. Paulsen

    (Ed.), *Higher Education: Handbook of Theory and Research* (Vol. 29, pp. 189–227).

    Springer Netherlands. https://doi.org/10.1007/978-94-017-8005-6_5

New American Economy, Presidents' Alliance on Higher Education and, & Immigration. (2021).

    Undocumented students in higher education: How many students are in u.s. Colleges and

    universities, and who are they? (Updated march 2021). Partnership for a New American

    Economy. https://www.presidentsalliance.org/undocumented-students-in-higher-

    education-updated-march-2021/

Nora, A., & Crisp, G. (2009). Hispanics and higher education: An overview of research, theory,

    and practice. In J. C. Smart (Ed.), *Higher Education: Handbook of Theory and Research*

    (pp. 317–353). Springer Netherlands. https://doi.org/10.1007/978-1-4020-9628-0_8

Núñez, A.-M. (2014). Advancing an intersectionality framework in higher education: Power and

    latino postsecondary opportunity. In M. B. Paulsen (Ed.), *Higher Education: Handbook*

    of Theory and Research (Vol. 29, pp. 33–92). Springer Netherlands.

    https://doi.org/10.1007/978-94-017-8005-6_2

Núñez, A.-M., Hoover, R., Pickett, K., Stuart-Carruthers, C., & Vazquez, M. (2013). *Latinos in*

   higher education and Hispanic-serving institutions: Creating conditions for success.

   Jossey-Bass.

Núñez, A.-M., & Kim, D. (2012). Building a multicontextual model of latino college enrollment:

   Student, school, and state-level effects. *The Review of Higher Education*, *35*(2), 237–263.

   https://doi.org/10.1353/rhe.2012.0004

NYS Higher Education Services Corporation. (n.d.). *NYS TAP*. Retrieved August 16, 2021, from

   https://www.hesc.ny.gov/pay-for-college/apply-for-financial-aid/nys-tap.html

Patler, C. (2018). Citizen advantage, undocumented disadvantage, or both? The comparative

   educational outcomes of second and 1.5-generation latino young adults1. *International*

   Migration Review, *52*(4), 1080–1110. https://doi.org/10.1111/imre.12347

Pérez II, D., & Sáenz, V. B. (2017). Thriving latino males in selective predominantly white

   institutions. *Journal of Hispanic Higher Education*, *16*(2), 162–186.

   https://doi.org/10.1177/1538192717697754

Perna, L. W., & Thomas, S. L. (2008). Theoretical perspectives on student success:

   Understanding the contributions of the disciplines. *ASHE Higher Education Report*,

   34(1), 1–87. https://doi.org/10.1002/aehe.3401

Picciano, A. G., & Jordan, C. (2017). *Cuny's first fifty years: Triumphs and ordeals of a people's*

   university. Routledge. https://doi.org/10.4324/9781315270463

Princiotta, D., Ryberg, R., Schmitz, H., Murphey, D., Cooper, M., & Lippman, L. (2014). *Social*

   indicators predicting postsecondary success (p. 103). http://www.childtrends.org/wp-

   content/uploads/2014/05/2014- 21SocialIndicatorsLumina.pdf

Rodríguez, L. F., & Oseguera, L. (2015). Our deliberate success: Recognizing what works for

    latina/o students across the educational pipeline. *Journal of Hispanic Higher Education*,

    14(2), 128–150. https://doi.org/10.1177/1538192715570637

Saenz, V. B., Rodriguez, S., Ortego Pritchett, K., Estrada, J., & Garbee, K. (2016). Latino males

    in higher education: Administrator awareness of the emerging challenges. In V. B. Saenz,

    L. Ponjuan, & J. Lopez Figueroa (Eds.), *Ensuring the success of latino males in higher*

    education: A national imperative (First). Sterling.

Schak, J. O., Bentley, C., Nichols, A., & Pilar, W. D. (2019). *Broken mirrors ii: Latino student*

    representation at public state colleges and universities. The Education Trust.

    https://edtrust.org/resource/broken-mirrors-latino-representation/

Scrivener, S., Weiss, M. J., Ratledge, A., Rudd, T., Sommo, C., & Fresques, H. (2015). Doubling

    graduation rates: Three-year effects of cuny's accelerated study in associate programs

    (asap) for developmental education students. In *MDRC*. MDRC.

    https://eric.ed.gov/?id=ED558511

Shapiro, D., Dundar, A., Wakhungu, P. K., Yuan, X., Nathan, A., & Hwang, Y. (2016). *Time to*

    degree: A national view of the time enrolled and elapsed for associate and bachelor's

    degree earners (Signature Report No. 11). National Student Clearinghouse Research

    Center.

Solorzano, D. G., & Yosso, T. J. (2001). Critical race and LatCrit theory and method: Counter-

    storytelling. *International Journal of Qualitative Studies in Education*, *14*(4), 471–495.

    https://doi.org/10.1080/09518390110063365

Solórzano, D. G., & Yosso, T. J. (2002). Critical race methodology: Counter-storytelling as an analytical framework for education research. *Qualitative Inquiry*, *8*(1), 23–44. https://doi.org/10.1177/107780040200800103

Sorrentino, D. M. (2006). The seek mentoring program: An application of the goal-setting theory. *Journal of College Student Retention*, *8*(2), 241–250.

Strayhorn, T. L. (2012). *College students' sense of belonging: A key to educational success for all students*. Routledge. https://doi.org/10.4324/9781315297293

Strumbos, D., Linderman, D., & Hicks, C. C. (2018). Postsecondary pathways out of poverty: City university of new york accelerated study in associate programs and the case for national policy. *RSF: The Russell Sage Foundation Journal of the Social Sciences*, *4*(3), 100–117. http://dx.doi.org.ezproxy.gc.cuny.edu/10.7758/RSF.2018.4.3.06

Suárez-Orozco, C., Osei-Twumasi, O., & Banks, J. A. (2019). *Immigrant-origin students in community college: Navigating risk and reward in higher education*. Teachers College Press.

Suárez-Orozco, M. M., & Suarez-Orozco, C. (2008). *Learning a new land: Immigrant students in American society* (1st ed..). Cambridge, Mass. : Belknap Press of Harvard University Press.

Taylor, P., Lopez, M. H., Martinez, J., & Velasco, G. (2012). *When labels don't fit: Hispanics and their views of identity* (Pew Research Center's Hispanic Trends Project). Pew Hispanic Center. https://www.pewresearch.org/hispanic/2012/04/04/when-labels-dont-fit-hispanics-and-their-views-of-identity/

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (Second). The University of Chicago Press.

Tinto, V. (2012). *Completing college: Rethinking institutional action*. The University of Chicago

     Press.

Tobolowsky, B. F., & Cox, B. E. (2012). Rationalizing neglect: An institutional response to

     transfer students. *The Journal of Higher Education*, *83*(3), 389–410.

     https://doi.org/10.1353/jhe.2012.0021

Todorova, R. (2019). Making sense of one's place in an educational opportunity program.

     Journal of College Student Retention: Research, Theory & Practice, *21*(3), 342–357.

     https://doi.org/10.1177/1521025117713304

Tovar, E. (2015). The role of faculty, counselors, and support programs on latino/a community

     college students' success and intent to persist. *Community College Review*, *43*(1), 46–71.

     http://dx.doi.org.ezproxy.gc.cuny.edu/10.1177/0091552114553788

Turner, S. (2004). *Going to college and finishing college. Explaining different educational

     outcomes* (College Choices: The Economics of Where to Go, When to Go, and How to

     Pay For It). National Bureau of Economic Research.

U.S. Department of Education National Center for Education Statistics. (2017). *Table 2.3-A.

     Among 2011–12 first-time postsecondary students who began in a bachelor's degree

     program, percentage distribution of 6-year attainment and persistence status at any

     institution, by selected personal characteristics: 2012–17*. Datalab Tables Library.

     https://nces.ed.gov/Datalab/TablesLibrary/TableDetails/14406?pageNum=5&keyword=2

     020238&rst=true

U.S. Department of Education, National Center for Education Statistics. (2019a). *Baccalaureate and beyond (b&b:16/17): A first look at the employment and educational experiences of college graduates, 1 year later (NCES 2019-106)*. U.S. Department of Education National Center for Education Statistics. https://nces.ed.gov/fastfacts/display.asp?id=569

U.S. Department of Education, National Center for Education Statistics. (2019b). *Degrees conferred by race and sex*. National Center for Education Statistics. https://nces.ed.gov/fastfacts/display.asp?id=72

Revisions to the standards for the classification of federal data on race and ethnicity, (1997). https://www.govinfo.gov/content/pkg/FR-1997-10-30/pdf/97-28653.pdf

Verley II, F. A. (2020). *A quantitative examination of black and hispanic students' time-to-graduation*. The Graduate Center, City University of New York.

Vidal-Ortiz, S., & Martínez, J. (2018). Latinx thoughts: Latinidad with an x. *Latino Studies; London*, *16*(3), 384–395. http://dx.doi.org.ezproxy.gc.cuny.edu/10.1057/s41276-018-0137-8

Villalpando, O. (2003). Self-segregation or self-preservation? A critical race theory and latina/o critical theory analysis of a study of chicana/o college students. *International Journal of Qualitative Studies in Education*, *16*(5), 619–646. https://doi.org/10.1080/0951839032000142922

Villaseñor, M. J., Reyes, M. E., & Muñoz, I. (2013). *Mujerista* mentoring for chicanas/latinas in higher education. *Journal of College Student Retention: Research, Theory & Practice*, *15*(1), 49–64. https://doi.org/10.2190/CS.15.1.d

Viramontes, J. R. D. R. (2020). Latina/o transfer students and community cultural wealth: Expanding the transfer receptive culture framework. *Community College Journal of Research and Practice*, *0*(0), 1–16. https://doi.org/10.1080/10668926.2020.1824828

Volkwein, J. F., & Lorang, W. G. (1996). Characteristics of extenders: Full-time students who take light credit loads and graduate in more than four years. *Research in Higher Education*, *37*(1), 43–68. https://doi.org/10.1007/BF01680041

Winograd, G., Verkuilen, J., Weingarten, A., & Walker, L. (2018). Educational opportunity program (eop) at a selective public university: Initial findings from a longitudinal evaluation study. *Learning Assistance Review (TLAR)*, *23*(1), 61–93.

Witteveen, D., & Attewell, P. (2021). Delayed time-to-degree and post-college earnings. *Research in Higher Education*, *62*(2), 230–257. https://doi.org/10.1007/s11162-019-09582-8

Yasuike, A. (2019). The academic success of undocumented Latino students: School programs, non-profit organizations, and social capital. *Journal of Latinos & Education*, *18*(1), 42–52. https://doi.org/10.1080/15348431.2017.1418354

Yosso, T. J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race Ethnicity and Education*, *8*(1), 69–91. https://doi.org/10.1080/1361332052000341006

Yue, H., & Fu, X. (2017). Rethinking graduation and time to degree: A fresh perspective. *Research in Higher Education*, *58*(2), 184–213. https://doi.org/10.1007/s11162-016-9420-4

Zarate, M. E., & Burciaga, R. (2010). Latinos and college access: Trends and future directions. *Journal of College Admission*. https://eric.ed.gov/?id=EJ906627

Zarifa, D., Kim, J., Seward, B., & Walters, D. (2018). What's taking you so long? Examining the

    effects of social class on completing a bachelor's degree in four years. *Sociology of*

    Education, *91*(4), 290–322. https://doi.org/10.1177/0038040718802258

Zhang, Y. L. (2019). Early academic momentum: Factors contributing to community college

    transfer students' stem degree attainment. *Journal of College Student Retention:*

    Research, Theory & Practice, 1521025119881130.

    https://doi.org/10.1177/1521025119881130

Appendices

KUNICKI - DISSERTATION PROPOSAL

Appendix A. Chapter Outline

Chapter 1: Background

This chapter will discuss the national scope of Latine degree completion and explicate the unique trajectory most Latine students traverse in order to complete a bachelor's degree. It will present the case for the need to consider the unique trajectories of transfer versus first-year Latine students at four-year colleges and the value of using the City University of New York as a research site.

Chapter 2: Literature Review

This chapter will introduce the theoretical framework used for this analysis as well as synthesize relevant research on Latine students in higher education. More specifically, this chapter will examine a number of concepts that influence Latine bachelor's degree completion and time-to-degree.

Chapter 3: Methodology

This chapter will describe the variables selected from the CUNY Office of Institutional Research & Assessment Policy Tracking Cohort dataset. The analytical plan will describe how the data will be organized and the statistical analyses used in this dissertation

Chapter 4: Results

This chapter will present the findings from the univariate, bivariate, and multivariate analyses performed for this dissertation.

Chapter 5: Discussion

This chapter will interpret the findings considering previous research on Latine student degree completion and time-to-degree, informed by the theoretical framework. Additional insights and new findings gleaned from the analysis will be advanced.

Chapter 6: Conclusion, Implications, and Recommendations

       This chapter will conclude the findings, consider implications, and present recommendations for future research. The conclusion will provide guidance for institutions of higher education to inform policies and practices to improve Latine student degree outcomes.

Appendix B. Project Timeline

Year	2021								2022				
Month	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Topic Agreement with Battle	▓												
Finalize Committee	▓												
Discuss Proposal with Battle	▓												
Proposal Draft 1 to Battle	▓												
Edits to Proposal Draft 1	▓												
Proposal Draft 2 to Battle		▓											
Edits to Proposal Draft 2		▓											
Full Proposal to Battle		▓											
Edits to Full Proposal		▓	▓										
Final Edits to Full Proposal			▓	▓									
Full Proposal to Committee					▓								
Prepare Proposal Defense					▓								
Defend Dissertation Proposal						▓							
Clean Dataset using SPSS						▓							
Data Analysis						▓							
Write/Run Command Syntax						▓							
Organize/Analyze Output						▓							
Submit Chapter 4						▓							
Edit/Resubmit Chapter 4						▓							
Submit Chapter 5							▓						
Edit/Resubmit Chapter 5							▓						
Submit Conclusion							▓						
Edit/resubmit Conclusion							▓						
Finalize Dissertation							▓						
Dissertation Review								▓					
Final Edits to Dissertation									▓				
Prepare for Defense									▓	▓			

Defend Dissertation										▨			
Submit Dissertation										▨			
Degree													▨
Writing for publication													▨

Appendix C. Budget

This study uses data from the City University of New York (CUNY) Institutional

Research Database Policy Tracking Cohort dataset. The data was provided by the CUNY Office

of Institutional Research & Assessment. SPSS software was purchased for conducting statistical

analyses. Expenses were insignificant.

Appendix D. IRB Human Subjects

This research protocol meets the criteria for IRB exemption because it is a secondary analysis of a de-identified dataset. The CUNY Policy Tracking Cohort does not contain personally identifiable information. Student record data are stored using anonymized codes. The linking file is only accessible to CUNY Office of Institutional Research and Assessment staff. The research protocol was reviewed, and IRB exemption was granted by The Graduate Center, City University of New York (IRB File #2021-0402).

Appendix E. Variables

<div align="center">

Dependent Variable: Time-to-Bachelor's-Degree

</div>

- YEARS_TO_BA_FROM_BA_START is a latent variable that measures the number of

    years from a students' first semester at a bachelor's degree granting institution until

    graduation with a bachelor's degree. More specifically, the variable is calculated based on

    the following variables included in the Policy Tracking Cohort dataset:

    - ANYBA - dummy variable that measures if a student earned a bachelor's degree

    - BA_DATE - the semester in which a student earned a bachelor's degree

    - COLLEGE_ID through COLLEGE_ID_SEM20 - variables that measure the

        college the student was enrolled in tracked from their first semester at CUNY

        through their twentieth semester

    - GRAD_SEM01 through GRAD_SEM20 - dummy variables that indicate whether

        a student graduated from a CUNY institution tracked from semester one through

        semester twenty

    - TERM_ENROLLED_DATE - a student's first term at CUNY

<div align="center">

Domain I: College Completion Programs

</div>

- SEEK is a dummy variable that captures if a student was in the SEEK program

- ASAP is a dummy variable that captures if a student was in the ASAP program. The

    ASAP variable isolates students who participated in the ASAP program from other

    special programs offered at CUNY. More specifically, it is a latent variable created based

    on the variables available in the Policy Tracking Cohort dataset below:

    - OTHER_SPECIAL_PROG_CODE_SEM01 through

        OTHER_SPECIAL_PROG_CODE_SEM20 - variables that identify if a student

was ever involved in a special program, like ASAP, at anytime during their tenure

at CUNY, tracked from semester one through semester twenty

Domain II: Academic Momentum

The variables the measure academic momentum are calculated based on the following indicators

in the Policy Tracking Cohort dataset:

- ❖ CRDATTM_SEM01 through CRDATTM_SEM20 - variables that measure the

  number of credits attempted each semester, tracked from semester one through

  semester twenty

- ❖ CRDSEM01 through CRDSEM20 - variables that measure the number of credits

  earned each semester, tracked from semester one through semester twenty

- ❖ GPACUMSEM02 through GPACUMSEM20 - variables that measure cumulative

  grade point average tracked from semester two through semester twenty

- BA_SEM01_FULLTIME is a latent dummy variable that measures if a student attempted

  12 or more credits in the first semester at the bachelor's degree institution where they

  earned their BA.

- BA_SEM01_CRDATTM15 is a latent dummy variable that measures if a student

  attempted 15 or more credits in their first semester at the college from which they earned

  their bachelor's degree.

- BA_SEM01_CRDERND15 is a latent dummy variable that measures if a student earned

  15 or more credits in their first semester at the college from which they earned their

  bachelor's degree.

- BA_YR01_CRDATTM30 is a latent dummy variable that measures when credits attempted in semester one added to credits attempted in semester two are greater than or equal to 30.

- BA_YR01_CRDERND30 is a latent dummy variable that measures when credits earned in semester one added to credits earned in semester two are greater than or equal to 30.

- BA_YR01_CRDERND24 is a latent dummy variable that measures when credits earned in semester one added to credits earned in semester two are greater than or equal to 24.

- BA_YR01_PERCRDERND is a latent variable that measures percent of credits earned versus attempted in semesters one and two.

- BA_YR01_PERCRDERND80 is a latent dummy variable that flags those who earned at least 80% of credits attempted in semesters one and two at their bachelor's degree granting institution.

- BA_SEM02_GPACUM is a latent variable that measures a student's cumulative GPA at the end of their second semester at a bachelor's degree granting institution.

Domain III: Demographics

Gender

- FEMALE - dummy variable where females are coded one.

Citizenship

- CITIZENSHIP_UPDATED is a recode of the nominal level variable CITIZENSHIP_DESC (citizenship status) from the Policy Tracking Cohort dataset into three categories where U.S. citizens and permanent residents are coded 1; those who are undocumented are coded 2; and those with a visa or other immigration status are coded 3.

- UNDOC is a dummy variable where those who are listed as undocumented on the variable CITIZENSHIP_DESC are coded 1 and all others are coded 0.

- USCTZNPERMRES is a dummy variable where those listed as U.S. citizens or permanent residents on the variable CITIZENSHIP_DESC are coded 1 and all others are coded 0.

- VISA is a dummy variable where those listed as having a visa or other immigration status on the variable CITIZENSHIP_DESC are coded 1 and all others are coded 0.

Language

- LANGUAGE_OF_COMFORT_DESC_code is a nominal level variable where those comfortable with English are coded 1, those equally comfortable with English and another language are coded 2, and those comfortable with a language other than English are coded 3. It is based on the variable LANGUAGE_OF_COMFORT_DESC (student's language of comfort) from the Policy Tracking Cohort dataset.

- ENGLISH is a dummy variable where those whose language of comfort is English are coded 1; and all others are coded 0.

- MULTILINGUAL is a dummy variable where those who are equally comfortable with English and another language are coded 1. Those comfortable with just one language are coded 0.

- NOT_ENGLISH is a dummy variable where those whose language of comfort is a language other than English are coded one; and all others are coded 0.

Socioeconomic Status

- ECONOMIC_DISADVANTAGE_FLAG - student experiences economic disadvantage based on household size and income.

- PELL_FLAG - student received a Federal Pell grant

- TAP_FLAG - student received a New York State Tuition Assistant Program grant