COMMUNITY COLLEGE PERSISTENCE:

ACHIEVEMENT, RETENTION, AND ATTAINMENT

IN A DIVERSE STUDENT POPULATION

By

SHAUN PEEVSASSER

Bachelor of Science in Environmental Studies
University of Las Vegas, Nevada
Las Vegas, Nevada
2007

Bachelor of Arts in Sociology
University of Las Vegas, Nevada
Las Vegas, Nevada
2007

Master of Science in Sociology
Oklahoma State University
Stillwater, Oklahoma
2009

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
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Dissertation Approved:

Dr. Andrew S. Fullerton

Dissertation Adviser

Dr. Michael A. Long

Dr. Tamara Mix

Dr. Jon L. Smythe

DEDICATION

For my grandma, who took joy in setting long-term goals whether or not she saw them realized

For my mother, who used each final breath fighting for something she believed in

For my father, who was willing to walk the long and winding road as long as it led him home

For my sister, who set standards that I will forever try to shatter

For my wife, who showed me that nothing can truly be accomplished without the support and
love from those closest to you

And for my boys, whose laughter is a daily reminder that the best has yet to come

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kindness of others has been in my journey. I can only do my best to pay it forward from here on out. Thank you all so much.

Name: SHAUN PEEVSASSER

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Title of Study: COMMUNITY COLLEGE PERSISTENCE: ACHIEVEMENT, RETENTION, AND ATTAINMENT IN A DIVERSE STUDENT POPULATION

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Abstract: Community colleges occupy a distinct position within the field of higher education, especially when prospective students have adopted a College-for-All mentality. Due to widespread open admissions policies, these institutions appeal to diverse student populations that are often unprepared for the rigors of higher education. This dynamic can lead to long-term struggles related to student persistence, retention, and attainment. I apply Bourdieu's notion of habitus at the institutional level as well as Tinto's notion of integration to analyze predictors of academic achievement, institutional departure, and degree attainment at a large community college serving approximately 25,000 students annually in the South West Central region. Using data college by the college's Institutional Research and Assessment department from academic years 2009-2010 to 2018-2019, I employ ordinary least squares regression to examine predictors of academic achievement as well as logistic regression models to estimate retention and attainment. The findings suggest that individual-level variables such as high school GPA as well as participation in institutional programs are reliable predictors for community college persistence. There is some support for applying Bourdieu's notion of habitus at the institutional level. I conclude with a brief discussion of theoretical implications as well as institutional recommendations to benefit the experiences of future students.

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CHAPTER I

INTRODUCTION

"And that's what community colleges are all about -- the idea that no one with drive and discipline should be left out, should be locked out of opportunity, and certainly that nobody with that drive and discipline should be denied a college education just because they don't have the money. Every American, whether they're young or just young at heart, should be able to earn the skills and education necessary to compete and win in the 21st century economy."

- Barack Obama

Institutions of higher education play a prominent role in both the reproduction of social inequalities (Lee and Kramer 2013) and sites of personal transformation (Horvat and Davis 2011) on the path to increased social mobility. Pierre Bourdieu's (1986) conceptualization of habitus, capital, and field are especially relevant to colleges and universities, as they are locations of struggle where knowledge, credentials, and wealth are legitimized through their own sets of rules (Bourdieu and Wacquant 1992). Elite skills and knowledge that make up our habitus (Bourdieu 1986) – dispositions often predicated on your social upbringing – can make the transition to an elite institution like college seamless. For students who lack the cultural capital necessary to assimilate and thrive within an academic environment, social and academic integration (Tinto 1993) is critical to persisting through to graduation. Community colleges, as open-access institutions, deem all students as college-eligible which can present distinct challenges when promoting student success.

The widespread importance of being accepted to, attending, and graduating from college

in America is undeniable and reflective of the growing College-for-All mentality (Ahearn 2016). The number of students estimated to attend American colleges and universities in Fall 2018 was nearly 20 million, with that number projected to increase each year over the next decade (U.S. Department of Education 2018). The percentage of young individuals entering college is also rising, as the number of students aged 17 or younger enrolling in community colleges has increased from 163,000 in 1995 to 745,000 in 2015 (Smith 2017). Simply because more students are attending does not mean that all are succeeding. As the number of college enrollments continues to increase, so does the number of college dropouts. This suggests that while there are more students are enrolling in college and have the long-term goal of a college degree, there are also more students who are under-prepared, uninformed, and possibly misinformed about skills necessary to persist at the college level. For students who see themselves as college-eligible but might not be college-ready, community colleges offer a low-risk transition from high school into higher education.

Much of the focus on educational attainment in college is centered on the experiences of students at four-year institutions. Community colleges, however, should not be overlooked. They play a critical role for students interested in either university-transfer or career-oriented studies: they provide an open-door policy for anyone who would like to pursue a college degree (Witt et al). 98% of public two-year institutions had an open admissions policy where all applicants were accepted (U.S. Department of Education 2018), deeming essentially all applicants as college-eligible. This, along with proximity to home and affordability, make community colleges an ideal landing spot for first-generation college students, full-time employed students, returning adults, and students from low-income families. In Fall 2016, nearly 50% of all part-time students and 34% of all undergraduate students were enrolled in community colleges (U.S. Department of Education 2018). Because of the lower cost compared to other higher education institutions, as well as lower admissions criteria, community colleges can act as a safety net for students – regardless of how college-ready they are – to strive to complete the College-for-All expectation.

While academic success can be dependent on an individual's personal situation and external factors such as finances, familial obligations, or work duties, most researchers in education use Tinto's (1975, 1993) definition of persistence as retention and attainment. These two components are essential to explain the experiences of community college students, as 80% of students who begin at community colleges seek to earn bachelor's degrees (Jenkins & Fink 2016), yet the six-year completion rate of an associate degree for all community college students is 39% (Community College Review). Students, regardless of academic institution, tend to focus on a third factor while in college: academic achievement. While attainment is a goal for most community college-going students, major retention issues such as institutional departure underscore an unfortunate yet important reality of their college-going experience. It is critical for scholars to more closely examine the experiences of community college students. While not every college student in America attends a community college, every prospective college student has the ability to be accepted into one.

Research Questions

Community colleges are an underexplored, yet important American innovation and provide a gateway to higher learning and educational opportunities for millions of Americans. They offer easier access for college-eligible students, but many students still arrive underprepared academically. Community college students face factors which create challenges for college success, such as familial obligations, part-time enrollment, as well as higher rates of full-time employment (Ma and Baum 2016). The experiences of these students are not an anomaly and could potentially be an emerging trend in higher education. This dissertation addresses three specific research questions, all conceptualized to reflect a college-eligible student's journey through community college. The first question captures Bourdieu's notion of habitus as well as Tinto's understanding of pre-entry attributes for students as they choose to enroll in college. This question considers the path CC students have taken prior to attending CC and how different upbringings can alter the various trajectories students find themselves on:

1) How does previous academic achievement impact success (persistence, retention, and credential attainment) among community college students?

The second question relies heavily on Tinto's theory of integration (especially academic integration) and considers the impact of CC's programs such as concurrent enrollment, developmental education, honors program, etc. have on a student's ability to achieve their academic goals:

2) How do institutional programs impact success (persistence, retention and credential attainment) among community college students?

The final question tests Bourdieu's notion of habitus at the institutional level instead of how it is commonly conceptualized at the individual-level. I measure the impact that institutional habitus has on a student's ability to achieve their academic goals:

3) How does high school institutional habitus impact success (persistence, retention, and credential attainment) among community college students?

This dissertation project, shaped by these three questions, attempts to conceptualize the total CC student experience. These three questions capture different priorities in CC student lives: student success as measured by cumulative GPA (Chapter Four), institutional success as measured by institutional departure rates (Chapter Five), and student success as measured by degree attainment rates (Chapter Six).

Historical Background of Community Colleges in America

Community colleges, initially referred to as junior colleges or two-year colleges, were an American response in the early 20th-century to increased demand for greater public higher education. In 1901, university presidents from several leading institutions recognized a difference between general education courses and university-level education for specific majors (Drury 2003). This reflected a German model in which universities emphasized research and the first two years of college would be an extension of a student's high school education. Early iterations of this model were essentially a

high school-based community college, as Central High School in Joliet, Illinois, is often recognized as the first independent public Junior College in America in 1901 (AACC). While there was a slow national adoption to the community college model in the early 20th century, by 1950 there were over 250 community colleges in the U.S. (SUNY) and there are presently over 1,100 community colleges providing educational opportunities for over 13 million students (AACC).

Community colleges have transitioned to institutions which provide affordable educational opportunities to high percentages of students from marginalized backgrounds (National Center for Public Policy and Higher Education 2011). The College-for-All mentality blossomed in post-World War II America, where a new community college emerged somewhere in this country at a rate of nearly one per week (Palinchek 1973). This surge in institutions allowed for an open admissions policy to provide equity for educational opportunity. Providing an open-access model of education has not only perpetuated a College-For-All mentality in America, but also led to community colleges facing serious persistence issues. Close to one-half of community college students leave before attaining their stated academic goals (Schuetz 2008), such as an associate degree or a program certificate. Less than half of degree-seeking students complete a degree or certificate within 6 years (Shapiro, Dundar, Yuan, Harrell & Wakhungu 2014; Moore and Shulock 2010; Calcagno, Bailey, Jenkins, Kienzl, & Leinbach 2006). Community colleges play an important role in providing everyone in America with access to higher education, but perhaps too many underprepared students are enrolling in community college courses with the unrealistic goal of completing a credential.

This dissertation focuses on the student experiences at one specific community college, which is referred throughout the paper as CC. In the early 1970s, CC opened its doors in a downtown location of a metropolitan area. The initial downtown location shared the building with a local business, but soon all floors of the building were occupied by CC and that initial building became the focal point of what is referred to as the Metro Campus location. The first major public institution of higher education in its state in 50 years, CC immediately became the primary public institution of

higher education for the metropolitan area. Less than a decade later, CC opened its second location, referred to as the Northeast Campus, providing classrooms not only to a more racially-diverse population but also centrally located to the area's industrial and aerospace hub. In the mid-1980s, the largest CC campus, the Southeast Campus, opened to provide opportunities to populations in more affluent areas of the metropolitan area. In the mid-1990s, the fourth major campus location, the West Campus, opened to provide education to populations living west of the downtown location. Decades after opening, CC is now the largest two-year college in its state, ranks in the top 50 nationally in the number of associate degrees annually awarded, and serves approximately 25,000 students per semester in course offerings. CC provides educational opportunities to a diverse community, as demonstrated by its diverse student population. Each of the four main campus locations offers some specialized non-duplicative programs, which allows each campus to maintain a distinct identity from the others.

CC is the premier open-access institution in its state, but the College-for-All mentality has not escaped CC's student population. In 2007, CC implemented two institutional programs aimed at increasing retention and graduation rates across the college. Achieving the Dream provided specific academic mentoring to African-American male students. CC Achieves provided free tuition and fees for students who graduated from a local-area high school and commit to CC the fall following their high school graduation. In the 21st century, with competition from higher education institutions both local and global, CC has implemented programs that directly address student persistence. As more students are enrolling in colleges at earlier ages, persistence must be a focal point of not only the institution, but also researchers analyzing the community college student experience.

OUTLINE OF THE DISSERTATION

In Chapter Two, I discuss the theoretical perspectives that serve as the foundation of my project. These perspectives include one from Sociology: Pierre Bourdieu's (1986) conceptualization of power,

capital, and habitus in the field of higher education as well as one from Education: Vincent Tinto's (1993) theory of social and academic integration. I argue that these two perspectives are congruent, as I extend Bourdieu's notion of habitus to an institutional-level and combine it with Tinto's theory of integration. As others have primarily conceptualized Bourdieu's notion of habitus at the individual-level and family level, I focus specifically on Bourdieu's understanding of primary habitus and embodied capital, ultimately arguing that institutional-level characteristics such as the public-school district one attends reflects habitus and embodied capital. Elite dispositions will allow for more seamless integration in collegiate programs, which Tinto theorizes will lead to greater persistence in college. After discussing how those two perspectives synthesize in the community college setting, I also draw on work of scholars in various areas of sociology and education to summarize the distinct economic, social, and academic struggles facing community college students today.

In Chapter Three, I describe the data and methods used to address my research questions. Pierre Bourdieu (1992) strongly encouraged reflexivity in the social sciences and I begin the chapter with a reflection of my position in the field of higher education, focusing on how my experiences (at the personal/social, disciplinary, and scholarly levels) have shaped this project. I then discuss the research questions targeting persistence, retention, and attainment among students enrolled at CC from 2010 – 2019. Using data from CC's Institutional Research and Assessment department, as well as information collected from the Department of Education and Regents of Higher Education websites in CC's state, I created OLS regression and logistic regression models to address my research questions. I end the chapter with a description of all variables included in the models, as well as hypotheses for each set of models found in the three empirical chapters.

In Chapter Four, I analyze predictors of academic achievement at CC. I build up the models from Model 1 (dependent variable and control variables only) through Model 14 (full model). There are four distinct sets of OLS regression models in this chapter and each set incorporates a different emphasis on the outcome variable, cumulative GPA at CC. Much of the existing research suggests

that high school academic achievement is the best predictor of college academic achievement. The first set examines the impact of prior academic achievement (high school GPA and placement scores) on cumulative GPA at CC. Tinto's theory of persistence suggests that increased integration in a college environment would increase retention and, presumably, academic achievements. The second set of models in Chapter Four analyzes impact of academic integration on cumulative GPA at CC. Bourdieu's notions of habitus and capital would suggest that elite dispositions in the field of higher education would result in elite outcomes such as higher cumulative GPA. The third set includes measures reflecting Bourdieu's notion of cultural capital at the high school organizational level. The fourth set examines measures reflecting Bourdieu's notion of economic capital at the high school organizational level.

In Chapter Five, I analyze predictors of institutional departure at CC. Because institutional departure is a binary outcome variable, I am using logistic regression models. Like Chapter Four, I build up the models from Model 1 (dependent variable and control variables only) through Model 14 (full model). There are again four distinct sets of models in this chapter and each one predicts the probability of institutional departure, which is defined as departing CC within 12 months of the first term of enrollment. Just as previous research suggests high school performance is positively linked to cumulative GPA, research suggests high school performance is positively linked to retention. The first set of models examines this claim of prior academic achievement on institutional departure. Tinto's theory of persistence, which is really based on decreasing institutional departure, is the focus of the second set of models in this chapter. The third and fourth sets of models again test out Bourdieu's notions of cultural and economic capital, respectively, as reflected by the high school attended.

In Chapter Six, I examine predictors of degree attainment at CC. Because degree attainment is a binary outcome variable, I am also using logistic regression models in this chapter. As with the other empirical chapters, I build up the models from Model 1 (dependent variable and control variables

only) through Model 14 (full model). There are again four distinct sets of models in this chapter and each one predicts the probability of degree attainment, which is defined as earning an Associate of Arts, Associate of Science, or an Associate of Applied Science at CC. Just as previous research suggests high school performance is positively linked to cumulative GPA and retention, research suggests high school performance is positively linked to graduating. The first set of models examines this claim of prior academic achievement on degree attainment. Tinto's theory of persistence implies that increased retention throughout college will ultimately result in graduation. The second set tests out this theory by exploring the impact participation in institutional programs has on degree attainment. While Bourdieu's notion of elite dispositions would seemingly positively correspond to graduation from CC, it has primarily been researched at elite institutions of higher education. The third and fourth sets of models test out Bourdieu's notions of cultural and economic capital, respectively, on degree attainment at CC. In Chapter Seven, I conclude the dissertation with a general summary of the results of CC students, explain how a synthesis of Bourdieu and Tinto is best for understanding the experiences of college students at community college, and a discussion of recommended policy changes at CC.

CHAPTER II

THEORY: BOURDIEU AND TINTO FOR A DIVERSE POPULATION

"The specific role of the sociology of education is assumed once it has established itself as the science of the relations between cultural reproduction and social reproduction."
– Pierre Bourdieu

Emile Durkheim defined educational systems as "the conservation of a culture inherited from the past" (Bourdieu 1977:57). Educational systems have conserved and perpetuated many aspects of our culture, including capital-building and inequality. Higher education has existed as a means of teaching the "rules of the game" as it pertains to knowledge, credentials, and wealth (Bourdieu and Wacquant 1992; Lee and Kramer 2013), often in that order. As Americans seek to improve their social standing, attempting to adopt or assimilate the elite ways of life through higher education is a common approach. Inequality is perpetuated through higher education because access to those elite ways of life are predicated on your social upbringing and the educational system is designed to reward the habits which the elite learn from their family. Achieving academic success through a college degree has become a popular avenue toward re-shaping one's trajectory. However, in many ways, external factors and opportunities in an individual's early life are significant in determining a potential path. In this chapter, I discuss two theories that help explain predictors of student success at community colleges. When combined, they provide a sociological and educational understanding of barriers to student success. Due to limitations of individual-level income data, I apply these two theories at the institutional level in the three empirical chapters of the dissertation.

Fields, Capital, and Habitus

Bourdieu's theory on wealth and culture has primarily focused on the reproduction of social inequality via social institutions through fields of practice. Fields of practice are locations of struggle with their own set of rules, knowledge, and capital to be gained. For Bourdieu, fields are at the core of understanding the complexities of the social formation as well as the distributed forms of power:

> "To think in terms of fields is to think relationally…a field may be defined as a network, or a configuration, of objective relations between positions. These positions are objectively defined, in their existence and in the determinations they impose upon their occupant, agents or institutions, by their present and potential situation in the structure of the distribution of species of power (or capital) whose possession commands access to specific profits that are at stake in the field…" (Bourdieu and Wacquant 1992: 96-97)

Fields are where we struggle specifically for capital (economic, social, cultural, and symbolic) while also relying on our embodied capital (in the form of habitus) to help us skillfully navigate the rules and occupy better positions within the field:

> "Thus, the social world can be represented as a space (with several dimensions) constructed on the basis of principles of differentiation or distribution constituted by the set of properties active within the social universe in question, i.e., capable of conferring strength, power within that universe, on their holder. Agents and groups of agents are thus defined by their relative positions within that space." (Bourdieu 1985:723-724)

These locations of agents and organizations, relative to another, within the field – which are often operationalized on a two-dimensional plane of economic and cultural capital – can be considered the positions of the field. Each field has its own set of core values and discourses believed to be inherently true and necessary (*doxa*), its own set of norms and practices that represent the implied rules of the field (*nomos*), and the belief that the stakes of the field are important enough to pursue (*illusio*). Fields are the areas in our culture which allow for the transformation from the possession of knowledge to the practice of knowledge. They are critical to understanding the

reproduction of social class and the various forms of capital are integral to understanding that transformation.

The struggle for capital underlies the reproduction of class status and Bourdieu argued that capital can "present itself in three fundamental guises" (Bourdieu 1986:47), which can be utilized to navigate fields of power: economic capital, social capital, and cultural capital. Economic capital is that which can be quickly transformed into money or property. Social capital refers to the social connections or obligations which can be transformed into economic capital or possibly a title of nobility (Bourdieu 1986:47). Cultural capital is that which can be, in some circumstances, converted into economic capital or institutionalized in the form of educational credentials. Capital is not only the planes of inequality in our society, but it is what agents and organizations utilize to inhabit more beneficial field positions and achieve upward mobility.

Cultural capital is of specific interest for Bourdieu, who claims it exists in three forms: institutionalized state, objectified state, and embodied state. Institutionalized cultural capital refers to capital that "confers entirely original properties on the cultural capital which it is presumed to guarantee" (Bourdieu 1986:47). Within fields, certain institutions can grant cultural capital to reflect a guarantee of resources – such as how high schools and colleges grant diplomas and degrees to reflect a completion of academic pursuits. Objectified cultural capital refers to physical goods such as books, pictures, art, or technology. Having greater access to objectified cultural capital can often be related to having greater access to institutionalized cultural capital or possibly a reflection of the third form, embodied cultural capital. Embodied cultural capital is perhaps Bourdieu's most significant form. It is "long-last dispositions of the mind and body" (1986:47) and represented by what he describes as habitus, which reflects the process of how we learn how to be. Individuals internalize their class status and social position into their tastes and worldview, which then reinforce the very same position and unconsciously reproduces one's status (Lee and Kramer 2013):

> "Habitus, as a product of social conditionings, and thus of a history (unlike *character*), is endlessly transformed either in a direction that reinforces it … or in a direction that transforms it and, for instance, raises or lowers the levels of expectations and aspirations" (Bourdieu 1990: 116).

While early-life experiences can certainly impact life-long desires and dreams, they do not rigidly determine one's life trajectory. Habitus is malleable, and Bourdieu's discussion of habitus separates our transposable acquisitions into two categories: primary (generic) and secondary (specific). Bourdieu's distinction between primary and secondary habitus is especially relevant for understanding the experiences of college-going students, as opportunities for attending college are influenced by both familial dispositions toward education as well as one's organized schooling dispositions toward college.

Our primary habitus provides us with the ways we think, feel, understand, and respond in certain situations with certain stimuli. Primary habitus is an embodied sense of self and an unconscious way of being that defines who we are. It represents our innate tendencies – first absorbed through the field of family – that are then seen through our practices and behaviors:

> "The success of all school education, and more generally of all secondary PW [pedagogical work], depends fundamentally on the education previously accomplished in the earliest years of life, even and especially when the educational system denies this primacy in its ideology and practice by making the school career a history with no pre-history: we know that through all the skill-learning processes of everyday life, and particularly through the acquisition of the mother tongue or the manipulation of kinship terms and relationships, logical dispositions are mastered in their practical state. These dispositions, more or less complex, more or less elaborated symbolically, depending on the group or class, predispose children unequally towards symbolic mastery of the operations implied as much in a mathematical demonstration as in decoding a work of art" (Bourdieu and Passeron 1977: 43).

One key component of primary habitus is one's group/family identity, which includes other dimensions or subfields of identity, such as gender, race, nationality, etc. Another component is familial class position, which can also provide the basis for formations of future habitus. As we begin to experience different social environments with different choices, we will also begin to generate different dispositions (Asimaki and Koustourakis 2014). An individual's

upbringing has a lifelong impact on their disposition and their ability to acquire new disposition, triggered by specific fields such as higher education. That upbringing – often forged in family history and early schooling experiences (Bourdieu and Passeron 1977) – then shapes their aspirations, expectations, and behaviors when placed in an appropriate situation later in life such as participating in the college-going experience.

Secondary habitus reflects the new skills, knowledge, and demeanor acquired as individuals journey through different social environments. Acquiring specialized dispositions, such as skills and knowledge necessary to earn a college degree, reflect congruence between primary and secondary habitus:

> "Habitus change constantly as a function of new experiences. Dispositions are subject to a sort of permanent revision, but one that is never radical, given that it operates on the basis of premises instituted in the previous state. They are characterized by a combination of constancy and variation that fluctuates according to the individual and her degree of rigidity or flexibility" (Bourdieu 2000: 161).

Students whose primary habitus closely aligns with the systems of dispositions needed in college will be most adept at navigating the collegiate environment and, ultimately, succeeding in earning a degree. Similarly, students whose primary habitus greatly differs from the systems of dispositions needed will be more likely to face difficulties in that field. In the field of education, and specifically in the college or university environment, primary habitus can provide a tremendous advantage for a child whose parents have both the economic capital required for college but also the goal of guiding their child toward a college degree.

Positions Within the Field of Higher Education

Higher education, as a field, represents a social structure that can replicate social classes through distribution of access and opportunity. Higher education is a location of struggle, as individuals strive to attain credentials and institutions compete for increased enrollments and perceived prestige of degrees. As with any other field, higher education intersects with other structures of

power and produces class fractions. There are dominant institutions of higher education which reproduce institutionalized cultural capital in a more desirable way than the relatively subordinate and undesired institutions:

> "Institutionalized form of cultural capital based on properties such as prior educational achievement, a 'disposition' to be academic, and specifically designated competencies" (Bourdieu 1996).

Power in the field of higher education relies heavily on the institution's ability to amass and utilize capital—both economic and cultural—to distribute assets to agents within that field. Institutionalized capital such as degrees and the prestige of the degree-seeking institutions enable individuals to improve social mobility through increased knowledge, credentials, and social connections. As more students and families attempt to complete academic credentials, the experiences prior to college can impact opportunity for upward social mobility.

Bourdieu's notion of habitus is critical to understanding a student's trajectory in higher education in America, as one's childhood position within any given field is largely out of their control. The educational disposition of students is based on their primary habitus in the educational field, whether it be from their parents' habitus or the schooling experiences in their lives. Stuber (2011) provided an examination of how elite habitus reinforces extracurricular involvement during college and how that involvement can ultimately shape social class identity. This cyclical dynamic of social upbringing impacting educational disposition and educational disposition impacting social class highlights the complexity of power available within fields. Cultural capital, in the form of knowledge or credentials, can unlock access to wealth. It can also, however, be obstructed in ways which replicate current social stratification. Educational systems, as fields in America, exist as a duality: they both reproduce inequality but can also be a site of liberation, as an individual can absorb elite habitus and ultimately alter their trajectory.

Schools as a Reflection of Power

The field of higher education in America is not evenly distributed in terms of power. Elite institutions utilize and reproduce economic and cultural capital, which primarily benefits those elite students who qualify for those institutions. This cycle perpetuates the existing inequality in higher education and begins prior to entering college, as the familial identity and early schooling experiences greatly influence a student's trajectory. Due to the relational aspect of positions within fields, it is important to consider similarities and differences in students' paths through higher education via the existence of elementary and high school districts within a city. Schools and school districts are defined by the people who live within those boundaries. The institutional positions are perhaps physically defined by neighborhood boundaries but are economically defined by neighborhood income levels and culturally defined by prestige of the funneling high schools.

Just as Bourdieu argues that habitus reflects an individual's past life, Merleu-Ponty (2002) argues that schools also have a past life which can be observed as an institutional or collective habitus. High schools in various areas of a diverse population will have past experiences and past histories that define both the institutions and the families who currently live within –and have previously lived within – those district boundaries. Schools that exist in low-income neighborhoods will represent a different neighborhood population – and reflect a different habitus – than schools in affluent neighborhoods. Bourdieu (2000) explains it further:

> "Because the social is also instituted in biological individuals, there is, in each biological individual, something of the collective, and therefore properties valid for a whole class of agents…Habitus understood as an individual or a socialized biological body, or as the social, biologically individuated through incarnation in a body, is collective, or transindividual – and so it is possible to construct classes of habitus, which can be statistically characterized" (2000: 156-157).

School districts therefore represent different field positions in which students can inhabit. Burke et al (2013) argued the following: "It is important, therefore, to conceive of how it is that the group or collective habitus becomes imposed and embodied within the individual." Bourdieu continues: "[Habitus] may be totally or partially common to people who have been the product of similar social conditions" (2002: 29). School districts reflect the inequalities of capital in a physical form of individuals living within similar social conditions. They are agreed-upon boundaries which divide the field of higher education into desirable and undesirable positions, based on the ability of the district to reproduce economic and cultural capital for its students.

Institutional Habitus and Student Trajectory

Habitus is a product of social conditionings, and thus of a history (Bourdieu 1990). While many researchers have considered habitus to only be at an individual level, it is important to consider how the structuring and distribution of high school districts can reflect different institutional habitus. Schools districts are physical boundaries that separate schools related to each other in the same geographic region. These positions are defined not only by the socio-economic status of the residents within the school district, but also by the past histories and trajectories of those who previously inhabited the space. School districts mediate and reproduce fundamental principles of the social class of its inhabitants. Because the physical locations of high schools do not often change, relocating families consider desirable school districts if they have the economic capital to do so. Desired school districts are those which are best at distributing both economic and cultural capital, specifically with regards to providing college-prep education.

Students attending high schools which exist in different field positions would then enter college with different embodied capital. For most students, the trajectories of their primary and institutional habitus will match the college institutions they attend. Those students should thrive

in the social reality that is college due to their innate behavioral patterns matching the institutional expectations:

> "Social reality exists, so to speak, twice in things and in minds, in fields and in habitus, outside and inside social agents. And when habitus encounters a social world of which it is the product, it is like a 'fish in water': it does not feel the weight of the water and it takes the world about itself for granted" (Bourdieu & Wacquant 1992:127)

For some, however, there could exist what Bourdieu defines as a deviant trajectory:

> "Deviant trajectories, which lead some students to the pole opposition the position to which they were promised and which was promised to them, along with the interrupted trajectories of those who have remained within their future but have not attained their probably future, are undoubtedly one of the most important factors in the transformation of the field of power…" (Bourdieu 1996:184)

Deviant trajectories in higher education relate to the phenomenon known as academic mismatching, where students either overestimate or underestimate their academic abilities when applying for colleges. Lee and Kramer (2013) suggest that academic mismatching is less about academic aptitude and more about a mismatch of symbolic capital. Students with nonelite habitus in an elite college environment find little in common socially with higher SES peers (Stuber 2009; Ostrove 2003), which suggests social integration is also a challenge for students who mismatch academically.

Researchers have found that academic mismatching does not occur randomly, as students mismatch out of a deficit of elite cultural capital or due to a devaluing of home culture by the institution. Socioeconomic opportunity seems to be related to the phenomenon of undermatching, with lower-income and underrepresented students most likely to undermatch (Bastedo & Jaquette 2011; Dannenberg & Voight 2013) and most likely to perceive themselves as less prepared academically (Aries and Seider 2005; Stewart and Ostrove 1993). Because those students are also most likely to attend non-elite institutions like community colleges, academic mismatching is an important component to understanding the college-going experience and especially the ability of college institutions to contribute to capital-building. College choice is a critical factor in

understanding student success, especially as more students consider their college choice while they are in high school. This can lead to long-lasting issues, as research has shown that lack of information about college can be a prominent factor in academic undermatching.

The focus of much of the research on institutional habitus in higher education has been on the trajectory of nonelite students attending elite institutions. For Bourdieu, there is a connection between social mobility, capital, field, and habitus:

> "The relation between habitus and field operates in two ways. On one side, it is a relation of conditioning: the field structures the habitus, which is the product of the embodiment of the immanent necessity of the field (or of a hierarchy or intersecting fields). On the other side, it is a relation of knowledge or cognitive construction: habitus contributes to constituting the field as a meaningful world, a world endowed with sense or with value, in which it is worth investing one's energy" (Bourdieu, in Wacquant, 1989, p. 44)

Habitus is both a product of the field and a contributor to the field. Cultural capital within the field of higher education can be reflected through parental education. Elite cultural capital can inform and shape a student's understanding of the field of higher education, which can then impact college choice. Even though aspirations are the same across the field of higher education (i.e., earning a college degree), habitus – individual and institutional – matters. It is through this process in which social inequality can be reproduced through higher education. The acquisitions of habits, mannerisms, and knowledge differentiated by social class can lead to a different construction of the field. Individuals without those forms of capital – nonelite students – will exist in a disadvantaged field position, relative to those who possess the capital – elite students.

Educational programs specifically can and do reshape individuals' habitus within social class hierarchy. Our current educational institutions are structured to favor those students who possess the cultural/academic capital (Harker 1984), which was gained prior to enrolling in the institutions. In this way, elite higher educational institutions are reproducing social inequality, by enabling individuals who already possess elite habitus with the greatest opportunities for

credential attainment. Elite institutions can be sites of transformation for those without elite primary habitus, though. A secondary habitus which reflects elite dispositions can be added to primary habitus and incorporated with new experiences (Horvat and Davis 2011:166). Lee and Kramer (2013) also find evidence that a new elite habitus can be developed through increased social interactions at college, which might cause a cleft between college (elite) and home (non-elite) environments. Higher educational systems in America are experiencing a cultural shift, as college education is no longer considered a luxury but is now considered a necessity. This shift is placing more emphasis on expanding access to elite environments for a growing number of non-elite students.

College Persistence as a Mechanism of Social Stratification

Schools are sites of personal transformation, as Horvat and Davis (2011) observed development of self-esteem, improved measures of self-worth, and increased empathy from high school dropouts-turned-graduates. Earning a college degree also has a positive impact on expected annual income (Wallace and Fullerton 2003). Because educational systems can improve both economic and non-economic capital in an individual's life, there has been a shift from the view of a college education as a luxury for those who are academically talented to one of a necessity for everyone, regardless of academic ability and social background (Goyette 2008). This shift in both the *doxa* and *illusio* of the field of education is known as the College-For-All mentality and many researchers (Rosenbaum 2001; Reynolds et al 2006; Ahearn et al 2016) discuss the negative consequences for the increased academic expectations in America. These academic expectations might not be realistic for all high school students, based on either individual academic aptitude or access to institutions of higher education. The College-For-All mentality represents a *doxa* in the field of education in America. It also places a burden on students without inherited cultural capital, as they are pressured to achieve similar credentials as those who were taught how to successfully navigate the educational system. As society begins to perceive college credentials as

the educational norm for all students (Ahearn et al 2016), four-year institutions can react with more stringent admissions criteria. For open-access institutions like community colleges, that response is not available.

For most colleges and universities in the US, the distinction between students being college-eligible and college-ready is made during a review of application materials. College-eligibility refers to whether one is admitted into college. College readiness, on the other hand, refers to a more rigorous standard such as earning a high school diploma and passing first-year college courses without remediation (Chait & Venezia 2009; Porter & Polikoff 2012). For other institutions, such as community colleges, there is no distinction made between those two terms. Open-admission institutions allow all students to be defined as college-eligible and the determination of college-readiness is often left to the local high schools. The College-For-All mentality leads many high school students to enter community colleges believing they are college-ready simply because they have earned a high school diploma or are on their way to earning a diploma. Researchers have found that high school grade point average (GPA), instead of high school degree attainment, is a better indicator of predicting college success (Adelman 2006; Long, Conger, & Iatarola 2012; Woods et al 2018). For community colleges that do not distinguish between college-eligibility and college-preparedness, high school GPA should be used to help predict academic achievement.

Regardless of how truly college-ready students are when they are deemed college-eligible, the goal for most higher education institutions and students is the same: persisting through coursework and eventually attaining a college credential, most often in the form of a degree. Many factors are associated with academic achievement. Supporting Bourdieu's broad argument of the importance of economic capital and cultural capital on positions within the field of higher education, researchers have found a connection between financial obligations and academic success at community colleges. Community college students are more likely to be

working while enrolled (Ma and Baum 2016) and students who work full-time were less likely to persist than part-time workers (Cofer and Somers 2001). Even though tuition is consistently lower at two-year colleges than four-year institutions, tuition has a negative influence on within-year persistence among community college students (Hippensteel et al 1996; St. John and Starkey 1994). Access to financial resources seems important, as students who are financially independent are more likely to persist than financially dependent students (Cofer and Somers 2001). This conveys the significance of habitus to educational achievement, as individuals who are raised in an environment without financial constraints might feel less pressure during college to focus on non-academic concerns.

Similarly, Vincent Tinto's Model of Persistence (1993) emphasizes the student's prior associations and expectations (i.e., habitus) they have when first enrolling in college. Tinto's model supports Bourdieu's notions of habitus, in that both theoretical perspectives stress the importance of prior educational experiences, integration within the social culture, and congruent educational environments. Persistence—maintaining continuous enrollment toward achieving academic goals—is often the best indicator of collegiate success and as students continue to persist in college, they begin to feel more integrated and more invested academically (Tinto 1993). Persistence research in higher education has historically been focused on university students from four-year institutions, with few studies specific to persistence at community colleges (Derby & Smith 2004; Wild & Ebbers 2002). Because community college student populations are typically different from the four-year student population in age, full-time employment status, part-time student status, and development education placement, it is important to focus on persistence of two-year students. Many studies (Bers & Smith 1991; Mutter 1992; Nora, Attinasi, & Matonak 1990; Pascarella, Smart, & Ethington 1986; Rendon 1995; Rendon & Nora 1989; Nippert 2000; Karp et al 2010) have found Tinto's (1993) theory of integration is applicable to the experience of two-year students. Students can maintain enrollment at their own pace (part-time vs. full-time enrollment), at different locations through transferring

institutions, or through different modes of learning. Evidence supporting Tinto's model is perhaps most evident by the low levels of persistence for students who are placed into developmental education courses (Scherer and Anson 2014), suggesting underprepared students simply dropout prior to learning the skills necessary to integrate and persist.

For students and institutions who equate success with persisting through to credential attainment, year-to-year retention is a critical first component of persistence. Persistence is an important component to achieving success and any pauses in persistence is referred to as departure. System departure is when students choose to no longer pursue a college education, at any level or any institution. Student retention is what Tinto (1993) describes as institutional departure, which is often measured as whether a student has maintained enrollment at the same institution from Fall-to-Fall of one academic year. If a student transfers to another institution of higher learning, that student has persisted but has not been retained. Persistence and departure are inseparable and are viewed as part of the total educational process by scholars (Peltier et al 2000), as a large percentage of students leave colleges and universities for a variety of reasons. There are distinct differences in retention between four-year and two-year college students. Not only do community colleges have lower retention rates than other institutions of higher education, they also have different student populations. As mentioned above, there are many reasons for students to dropout from college. Research has shown that dropouts do not occur randomly, as older, Black or Hispanic, single parent or having children at home, financial components, and factors in the home environment are all associated with dropping out of college (Crisp & Nora 2010; Feldmen 1993; Fike & Fike 2008; Schmid & Abell 2003; Wells 2008). Income level is a predictor of retention for all students when controlling for financial aid packages other than Pell grants (Mendoza et al 2012). Because these students are more likely to enroll at a community college than at a four-year institution and because more community college students in general are entering with lower academic levels, it is easy to see why retention is a major issue at two-year institutions.

Retention has been conceptualized around four forms of experience: adjustment, difficulty, incongruence, and isolation (Tinto 1993). College requires all students to adjust to new environments, whether they are social or academic. Community colleges primarily require students to adjust to academic environments, as social environments are less developed on a two-year college than they are on a four-year college with residential housing. Any difficulties, whether real or perceived, could cause a student to dropout. As most two-year colleges are open access, there are few situations that would lead to involuntary academic withdrawal. Student fit – similar to academic mismatching – is important to retention, as a student must believe their college is neither too hard nor too easy for their academic level. If a student believes pursuing the college degree from that institution is not in their best interests, they will voluntarily withdraw. Finally, isolation can lead to institutional departure. Students who do not create enough contacts with academic and social communities on campus are susceptible to isolation-based departure.

The second aspect of persistence, attainment, is often measured as degree completion. Degree completion is both an institutional measure of student success as well as an individual measure of student success. Most students enrolled at community colleges are credential-seeking students, whether they aspire to earn an associate degree or a program certificate. Most community college students have aspirations beyond the two-year level, as over 80% of students who begin at community colleges have the goal of earning a bachelor's degree (Jenkins & Fink 2016). While an associate degree is the most common end-goal for students at two-year institutions, most community college students fail to accomplish that goal within six years of beginning their college careers (Shapiro, Dundar, Yuan, Harrell & Wakhungu 2014; Moore and Shulock 2010; Calcagno, Bailey, Jenkins, Kienzl, & Leinbach 2006). Because community college students may face more hurdles on their path to credential attainment, it is important for community colleges to shift their focus of retention/attainment on smaller goals, such as first-year credits earned and GPA (Clovis and Chang 2019), completion of developmental education

credits, placement along a college degree pathway, or percentage of credits earned (Crisp and Mina 2012). Across the country, two-year institutions have implemented programs aimed at increasing retention and, therefore, attainment among its potentially-underprepared student population.

College-going students, whether at community colleges or four-year institutions, are more likely to persist as college-ready students based on their habitus. With more and more students opting to identify as college-going, the pressure is on high schools to ensure that students are college-ready. A lack of distinction between eligibility and readiness has serious consequences for college students and institutions. The College-for-All mentality encourages students to see themselves as college-ready when they may only be college-eligible. This disconnect between how students and institutions define college-readiness can lead to academic mismatching. While the College-for-All mentality might encourage students to see all colleges – and therefore all college degrees – as the same, this undermatching poses a problem for institutional degree attainment. Roughly 30% to 40% of college-eligible students undermatch (Belasco & Trivette 2015; Bowen et al 2009; Smith, Pender, & Howell 2013), and less selective institutions – like open-admission community colleges – are more likely to be chosen by these students. This becomes problematic for those institutions, especially if students view the college-going experience at those institutions as not rigorous or challenging. When students attend more selective institutions, there is a greater likelihood of graduating (Bowen et al 2009; Heil, Reisel, & Attewell 2014; Hoxby & Avery 2012). Conversely, students who drastically undermatch are less likely to attain a degree (Gansemer-Topf et al 2018). As open-admission institutions, community colleges are the least selective institutions and the most likely to be presented with an undermatched student population.

As stated previously, pre-college experiences do not occur randomly. They are heavily influenced by environmental factors and can themselves be factors in how well a student

integrates into a college environment. Older, Black or Hispanic, single parent or having children at home, financial components, and factors in the home environment are all associated with dropping out of college (Crisp & Nora 2010; Feldmen 1993; Fike & Fike 2008; Schmid & Abell 2003; Wells 2008). As those students depart community college – either to focus on employment opportunities or to attend a transfer institution – they lower their probability of returning to community college and attaining a degree. Other studies (Williamson & Creamer 1988; Pascarella, Duby, Miller, & Rasher 1981; Bean and Metzner 1985) found that academic integration was more important to student persistence at non-residential institutions like community colleges. Additionally, Bean and Metzner (1985) found financial, familial, and work factors as barriers into persistence for non-traditional students. Community colleges, because of their appeal to non-traditional students and students who may have tremendous external pressures which take priority over their schoolwork, rely on institutional programs to assist in increasing student integration.

Habitus and Integration via Institutional Programs

Students with the appropriate habitus necessary to achieve success in college will be most like "a fish in water" in their college or university. Students enter college with different dispositions and knowledge, which would include not just educational achievements but also socioeconomic status, skills, abilities, and family background. Students also bring a level of commitment to the goal of succeeding academically. This commitment, combined with external factors such as institutional programs, can influence their ability to fully integrate into a new academic environment. Tinto (1993) describes three distinct stages in the process of integration: separation, transition, and incorporation. Separation is an important rite of passage to succeeding in higher education, as students must separate (socially and academically) from their pre-college environment. This separation could be achieved by moving away from families, home communities, or quitting work to focus on collegiate work. Transition occurs as students begin to

acclimate to their post-separation environments but have yet to acquire the *nomos* appropriate for college success. Institutional programs can ease this transition process and some programs, such as New Student Orientation, are designed specifically to help transition occur. Both separation and transition happen early in the student's college experience. The final rite of passage, incorporation, takes place as students adopt the behavioral patterns which lead to being fully integrated into the communities of the college.

For many community college students, these rites of passage do not directly apply to their experiences. For example, separation may not be an option. Community college students tend to not re-locate for their college education and, in the instances of concurrent enrollment, begin taking college courses while still attending high school. Because of this, transition – as Tinto (1993) theorized – would either never truly occur or would take place while students remain integrated in their pre-college communities. For community college students, these stages of integration into college might not be as distinct as those students who move away to attend a four-year institution. Regardless of when and how separation and transition occur, incorporation must still take place at the college level. Since most community colleges do not offer residential housing and approximately half of all U.S. community colleges offer athletic programs (Chen 2008), community college students are uninvolved on campus in general (Miller, Pope, and Steinmann 2005). Community college students must concentrate on incorporation within the academic environment and it is important for two-year institutions to facilitate this integration through institutional programs when focusing on retention and attainment.

CC has implemented a variety of programs aimed at increasing academic and social integration among its diverse student population. Community college students, when compared to students at four-year public institutions or private universities, tend to have less economic and academic capital. In response, community colleges like CC have initiated several programs with specific student populations in mind. For the most underprepared students, whether one directly

out of high school or a returning student who is years removed from secondary school, CC offers a robust developmental education department to help students acquire the knowledge necessary to enroll in on-level coursework. Developmental education, previously referred to by researchers as remedial education, often provide coursework in reading, writing, and mathematics. The popularity of developmental education courses and the need for these types of courses is a reflection on the preparedness of students entering college, whether they are immediately out of high school or a returning student. Between 25% and 40% of first-year students at community colleges will enroll in at least one developmental education course (Parsad & Lewis 2003; Spann 2000) and the pass rates vary across subjects, with as few as 30% of students passing the math developmental courses (Attewell, Lavin, Domina, and Levey 2006). Community colleges have understood the importance of completing development education courses early and have pushed students to enroll in courses in their first year, especially those students who may have tested multiple levels below the entry-level college course. Overall, development education is critical at open-access community colleges as over half of all community college students will enroll in at least one developmental course at some point (Bailey et al 2006).

Academic integration can lead to goal-setting and establishing a higher level of commitment at the academic institution. This commitment, combined with external factors, can influence their ability to achieve academic success. Students who demonstrate tremendous academic need by scoring low on placement tests at the time of enrollment into CC will be placed into developmental education courses. Students at community colleges across the country require developmental education courses to help increase their academic abilities. More than half of all community college students enroll in at least one developmental education course while in college (Bailey et al 2006), but not all developmental courses are equal. Those students who test into the lowest levels of developmental education struggle the most with persisting in college (Xu and Dadgar 2017). The associations with developmental education and retention is clear:

students who take developmental courses struggle to persist through to graduation. Because students who place into developmental coursework are faced with a burden of additional coursework prior to beginning degree-seeking coursework, they are most likely to dropout prior to completion.

Community colleges have prioritized offering curriculum where students are, both in terms of academic ability – with developmental education or Honors programs – and in physical location – with concurrent enrollment and online coursework. Online curriculum is a fast-growing sector in community colleges, with the growth rate of students taking online courses exceeding the growth rate of the college population (Allen and Seaman 2015). Community colleges provide a relatively low-cost, low-risk opportunity for students to attend college. Online courses, within the higher education curriculum, are a low-engagement alternative to the traditional on-campus courses. Community colleges have attempted to increase enrollment as well as retention and attainment among the College-For-All population through offering online courses and online programs for students who are not able to physically attend on-campus courses. Online courses are perhaps the area with the biggest year-to-year growth in postsecondary education (OLC 2015) and an abundance of online education institutions lessens the importance of attachment or integration into a "home" institution (Salter 2012). Online learning creates a new barrier to students becoming socially and academically integrated in a college and possibly prevents students from entering the separation phase. As such, course completion rates are lower for online courses in comparison to on-campus courses (Cummings 2009; Xu and Jaggars 2011). Specifically, taking an online course has a negative effect on the probability of taking another course in the same field and it has a negative effect on the probability of earning a four-year degree (Huntington-Klein et al 2017). This effect might be felt more with four-year students, as there is more of an opportunity to take additional courses within a bachelor's program instead of an associate's program. Students who are most likely to choose

online courses are typically women, older, full-time employed students, and students with high academic aptitudes (Huntington-Klein et al 2017). The demographics for an online student population more closely align with the community college student population than they do with a four-year institution.

Concurrent-enrollment, sometimes referred to as dual-enrollment, is a program aimed at decreasing the anxiety over adjusting from high school to college. Students with high levels of capital in high school might consider participating in concurrent enrollment, which allows high school students the opportunity to engage with college materials prior to high school graduation. High school students gain experience with college course material, often in their high school, while also gaining college credits that can transfer to most institutions. Concurrent enrollment programs are a reaction to the College-For-All mentality, and a way for community colleges to enroll college-ready high school students before those students begin seeking college credits elsewhere. Under the *illusio* of higher education in America, completing high school and completing college is viewed as essential. Concurrent enrollment programs positively impact academic success (Jones 2014; Grubb et al 2016), degree attainment for both high school and college credentials (Karp, Calcagno, Hughes, Jeong, & Bailey 2007), clarity of the college-student role (Lile et al 2018), and persistence beyond the two-year institution (An 2013; Ganzert 2014). While concurrent enrollment programs positively impact student success, they do not actually translate to increasing retention rates for community colleges. Students participating in dual-enrollment programs were less likely to attain a degree at the community college in which they participated in the program (Lawrence and King 2018). One possible explanation is that these high school students already self-identified as being college-ready, used the dual enrollment program to earn college credits at a low cost, and simply enrolled in a four-year university after their high school graduation. Concurrent enrollment requires commitment from both students and institutions. Students often seek out concurrent courses because they know the pressures of

the College-for-All expectations and are confident they have the capital necessary to go beyond high school curriculum. Institutions like CC provide additional support measures to ensure student success in the concurrent classrooms.

For recent high school graduates, some community colleges will offer programs which cover up to the cost of full tuition if the students enroll in the semester following graduation. Because many students depart out of financial obligations, CC Achieves is an institutional solution to that problem, as well as addressing retention concerns from high school to college. The CC Achieves Program was created in 2007 which provides up to 100 percent funding of student tuition and fees to high school graduates who also reside within the county of the CC. High school students must demonstrate academic success (2.0 High School GPA) and must enroll at CC in the fall following their senior year of high school. To maintain eligibility through the CC Achieves Program, CC students must demonstrate CC academic success (2.0 CC GPA), maintain continuous enrollment (complete at least three credit hours each semester), and integrate into the local community through at least 40 hours of volunteer service each academic year. All these eligibility requirements motivate students to emphasize integration – academically and socially – in an attempt to increase retention rates and, ultimately, persistence through degree completion.

While community colleges designate all students as college-eligible, the honors programs reflect a complexity to the notion of college-ready. For students who attend community colleges – often considered low-risk in terms of financial commitment – honors programs can offer higher opportunities of academic commitment to students of all academic levels (McKeague 1984). Critics of honors programs at community colleges claim that the differing levels of academic rigor inherent in offering honors courses contradicts the open-access mission statement of community colleges (Olivas 1975). Another critique of honors programs being elitist comes from research showing honors program participants more likely than non-honors students to be white

and female (Lucas, Hull, and Brantley 1995). Because the goal of most students entering community colleges is to persist to a four-year institution, one primary argument for honors courses is that they can provide superior preparation for the academic rigors of a baccalaureate program (Byrne 1998). Honors programs have a positive impact on the transfer rate of underrepresented students to four-year institutions (Outcalt 1999). At CC, honors courses reflect an elite learning environment but are made available to all students—regardless of academic merit—as a means of upholding the egalitarian value of community college. To graduate from CC with an honors distinction, students need to have completed 24 credit hours from designated honors courses. This is a common policy at many community colleges and, in this way, honors programs can meet the needs of the higher-ability students while also offering honors opportunities to students of all levels (McKeague 1984). Honors courses also add another layer of integration – both socially and academically – to students at community colleges. The honors programs allow students to form closer social bonds and network with other honors students. The honors courses provide those students who have undermatched at community colleges to integrate at a more appropriate academic level. Honors programs are currently found in most community colleges in the United States, which perhaps reflects an institutional reaction to academic undermatching and a solution for increasing students' academic investment at the two-year level.

While Honors programs would theoretically offer students the opportunity to be more academically engaged at the university through more rigorous coursework, graduation rates of Honors students do not offer a clear picture of improving degree attainment. At one four-year institution, participation in Honors programs was shown to be associated with increased graduation rates within a 4-, 5, or 6-year period (Keller and Lacy 2013). Wolgemuth et al (2007), however, did not find any significant associations between Honors program participation and graduation rates within a 4-, 5-, or 6-year period. Other studies (Slavin et al 2008; Cosgrove 2004) found no significant differences between Honors and non-Honors students. All of those

studies were done at four-year institutions and it is important to note differences between four-year and two-year academic engagement. At CC, students often go out of their way to enroll in Honors courses. Those Honors courses are primarily offered during the Fall and Spring semesters and cater more to full-time, university-transfer students.

Researchers have been studying predictors of success among the college-going student population and Tinto's (1975) landmark theory on integration reduces to three main components of a student's educational experience: persistence, retention, and attainment. While most researchers apply Bourdieu's notion of habitus at elite academic institutions, it is important to examine habitus at non-elite institutions as well. For some students who have significant academic needs, community colleges like CC represent an elite institution. While Tinto (1975) suggested that higher levels of academic and social integration are positively associated with persistence, components of social engagement are difficult to measure at a community college. Early applications of Tinto's (1975) research focused primarily on the four-year, residential college campuses (Pascarella & Chapman 1983; Stoecker, Pascarella, & Wolfe 1988). Later studies (Williamson & Creamer 1988; Pascarella, Duby, Miller, & Rasher 1981; Bean and Metzner 1985) differentiated between residential and non-residential institutions, finding that academic integration was more important to student persistence at non-residential institutions. These distinctions among the college-going population relate to the community college student population. Tinto (1997) revised his theory to include the in-classroom engagement (with faculty or other students) that is the most common social integration for a community college student. More recent research has focused on how networking among community college students does have a positive impact on student persistence (Karp, Hughes, and O'Gara 2010). Researchers exploring persistence of community college students should focus primarily on the academic engagement that occurs on campus. As more students are enrolling in colleges at earlier ages, academic predictors of student persistence – such as high school academic achievement,

participation in institutional programs, as well as elite dispositions reflected through institutional habitus – must be a focal point of researchers analyzing the community college student experience.

SUMMARY

In this chapter, I discussed two different theories related to institutions of higher education in America. Both theoretical perspectives, when combined, provide a full picture of the experience of community college students in America. Persistence among community college-going students is predicated on primary habitus which is reflected in the high school institutions attended and participation in institutional programs which reflect an elite habitus. In the next chapter, I first reflect upon how my experiences (personal/social, disciplinary, and scholarly) have impacted this project prior to discussing the method, data sets, and variables in greater detail.

CHAPTER III

DATA AND METHODS

"Persons, at their most personal, are essentially the personification of exigencies actually or potentially inscribed in the structure of the field, or more precisely, in the position occupied within this field." – Pierre Bourdieu

In this chapter, I describe the data, variables, and methods used in the empirical chapters (four through six). I use a data set that contains all CC students enrolled in classes from 2010-2019 as the primary data source for all three empirical chapters. I also use data from three outside sources: economic data (income-to-poverty ratios) from the 2013-2017 U.S. Census Burear and high school academic achievement data (graduation rates, college-going rates, and remediation rates) from the state Department of Education and the state Regents Board of Higher Education. I begin this chapter with a reflection of my own position within the field of higher education by applying Bourdieu's notion of reflexivity to my experiences as both a student and instructor in community college, as well as a research of the community college experience. After that, I discuss the data and variables used in the three empirical chapters, and then I conclude with a description of the methods and hypotheses for each model in those chapters.

REFLEXIVE THOUGHT

Many social science researchers analyzing the complexities of higher education are themselves situated within the field of higher education, most often as faculty at collegiate institutions. As we rely on personal and professional experiences when determining the best methods of inquiry,

reflexivity is crucial to a better understanding of the field. Critical and reflexive thought is important to contemplating the systems of oppression which have shaped all of us, including researchers conducting studies exploring those very systems. Reflexivity, as part of a well-rounded scientific approach, allows us to consider our own positionality in the system. It also allows us to reflect upon how we might reproduce biases and interpret any societal problem worthy of inquiry or the results which might guide us in preparing concrete solutions. Because approaches to scientific inquiry are honed through trainings and repeated practice, our methodological habitus is subject to taken-for-granted assumptions that exist in our unconscious. Just as habitus is a topic of investigation for social science researchers, habitus is also a tool in which researchers rely on while conducting investigations (Wacquant 2014). Bourdieu introduces three levels of hidden presuppositions to guide reflexive analysis: personal/social, disciplinary, and scholarly. Analyzing the hidden preconceptions of those three levels is important to advancing social thought (Emirbayer and Desmond 2012), as individuals existing within any field are influenced by the *doxa* (core values and discourses believed to be inherently true and necessary), *nomos* (norms and practices that represent the implied rules of the field), and *illusio* (belief that the stakes of the field are important enough to pursue) of that field. This dissertation project is certainly no exception to that claim, as my past and present position within the field of higher education has shaped both my interest in the topic of community colleges and my methodological approach to studying them.

While it is impossible for me to reflect upon all of the times in which the *doxa, nomos,* and *illusio* of higher education were enforced in my life, I do know that I have never felt more comfortable in any academic environment than when I have been in a community college environment. My primary habitus and, more specifically, my family's position within the social space provided me the tools necessary to pursue a career emphasizing critical thinking or educational attainments. As a child from a middle-class family living in a small, agricultural town in Midwest America, I attended a parochial school which emphasized the connection

between education, faith, and family. Even though college attendance in my family was sparse up to that point, a college education was always encouraged. My family firmly believed in the *illusio* of higher education and my elementary education environment reflected those values. Always being part of or being able to pass as part of the dominant group in terms of race, class, gender, and sexuality, I was afforded many opportunities to overcome hardships to achieve my current occupation as a Professor of Sociology at a community college. Many of my personal triumphs can be attributed to my persistence as a community college student and those experiences influenced my decision to not only pursue a career at a community college but also view community college students as a legitimate data source. Over the past five years, my current place of employment has adopted a Pathways model for college students, which emphasizes degree completion (attainment) as a primary means of measuring success. It would be improper for me to presume that does not impact my perspective of community colleges in general and the site of this data set specifically.

My pursuit of a degree in Sociology has also shaped what I see and what I fail to see as a researcher. While working toward both undergraduate and graduate degrees, I learned of the existing *doxa* regarding collegiate institutions in the field of higher education. Specifically, I encountered negative perceptions toward community colleges from students and faculty in multiple disciplines at four-year institutions. As I have reviewed the literature related to the community college experience in both Sociology and Education, I have become aware of similar biases found within those disciplines. If I were in a discipline other than Sociology, I would very likely be focusing on a different aspect of community college students and I would have very different presumptions about their college-going experience. The *nomos* of Sociology often focuses on binaries such as dominant and oppressed groups in society, especially when conducting quantitative studies. This push toward binaries can condense the experiences of many into simple nomenclature and perpetuate what Bourdieu termed symbolic violence: "violence which is exercised upon a social agent with his or her complicity" (Bourdieu and Wacquant

1992). The determination of binary categories used by researchers in Sociology and Education reflects the power of elites to create groups of legitimate identity (e.g., male or female, white or non-white). In many ways, I am legitimizing these terms of domination/violence by recreating these binaries with my project as a means of investigating long-term patterns at the community college. When creating a binary of "Earned a Degree=1 and Did Not Earn a Degree=0", I am replicating a methodological approach that fails to ask questions which explore what external factors may have occurred for a student to fall within either of those categories. Instead, I am condensing the experiences of students into an outcomes-based approach without carefully considering the tremendous amount of variation in their lived experiences.

Within the discipline of Sociology, a four-year degree is the "reference category" for many articles written about undergraduate educational experiences. Also, many articles written about community college students or professors are written by researchers who are not affiliated with a community college. While "outside researchers" are certainly capable of presenting credible research in any field, one's habitus and position in the field can reveal a well-informed perspective regarding the population of interest. My intent with this project was to make sure I specifically was not trying to apply the experiences of four-year students at a community college and that I would use my personal experiences or the experiences of my students to help guide my hypotheses. I believe community college students and their academic environments are fundamentally different from those at four-year institutions, which may simply be a defense mechanism to reinforce my own decision to attend and work at a community college.

There also exists an intellectual bias, referred to as the "scholarly gaze that one casts upon the social world" (Bourdieu and Wacquant 1992: 69), that is impacting my research. Many academic disciplines extol the *illusio* of college, citing the economic benefit of a college degree, as well as the improved opportunities for social mobility. My own path through life certainly suggests that I view college – and especially open-access institutions such as community colleges – as necessary and beneficial. That bias could lead me to see my results in a more positive light

and possibly ignore asking the question of whether this institution – or any collegiate institution – is positively impacting those who interact with it. The push for publications within academic life has certainly shaped the way in which I'm setting up this dissertation project. Specifically, there is an appeal within academia to focus on the experiences of marginalized groups in society. Community college students are more likely to identify as lower-SES than four-year students and are possibly more likely to demonstrate improved social mobility from earning a degree. My awareness of the perceived importance of college and the importance of publications within academia is making me blind to very real concerns that contribute to student persistence but cannot be captured via this data set.

Bourdieu's notions of symbolic power and symbolic violence can also be applied to the ways in which higher education is discussed within academia. Vincent Tinto's model of persistence and departure is considered a paradigm-shifting contribution to the literature and is certainly a cornerstone to my dissertation project. The theoretical foundations which shaped that model and the language used to describe aspects of an individual's academic journey reflect the *illusio* of higher education. Tinto's framework is heavily influenced by Emile Durkheim's notion of egoistical suicide. In Tinto's model, dropping out of school is analogous to Durkheim's understanding of committing suicide. The language used in Tinto's model signifies the *illusio* of higher education, as he compares dropping out of school to suicide and, consequently, persisting through school to living. It implies the utmost importance of a college degree and the potential despair when a student departs or fails to persist. The use of the word persistence in and of itself suggests earning a college degree is, in fact, a worthwhile venture. The use of persistence, retention, and attainment all imply there is one goal (degree completion) and the critical mode of inquiry is whether one has achieved this goal or not – instead of focusing on reasons why individuals choose to depart. As someone who took three years off between high school and college, I see this language from different disciplines as a shift away from the value of learning in favor of the value of graduating.

In many ways, this dissertation project represents a culmination of my lifetime experiences, beginning with my primary habitus and concluding with my present occupation and position within the field of higher education. The learning and growth that I have experienced because of college has influenced all aspects of my identity, including those values I will pass on to my children. I was drawn to this topic based on my own experiences as a community college student and as a community college professor. I hope the findings of this study can not only help the current institution I am at improve the experiences of future community college students, but also help other social science researchers with their analyses of community colleges. I am focusing on three main research questions, which apply the contributions of both Bourdieu and Tinto to CC's student population, as well as incorporate my own understanding of CC as a degree-granting institution.

RESEARCH QUESTIONS

I have conceptualized the research questions as reflecting a college student's journey through their academic institution. The first question captures Bourdieu's notion of habitus as well as Tinto's understanding of pre-entry attributes for students as they choose to enroll in college. This question considers the path CC students have taken prior to attending CC and how different paths can alter the various trajectories students find themselves on:

1) How does previous academic achievement impact success (persistence, retention, and credential attainment) among community college students?

The second question relies heavily on Tinto's theory of integration (especially academic integration) and considers the impact of CC's programs such as concurrent enrollment, online learning, honors program, etc. have on a student's ability to achieve their academic goals:

2) How do institutional programs impact success (persistence, retention and credential attainment) among community college students?

The final question applies Bourdieu's notion of habitus at the institutional level via two definitions: organizational economic capital and organizational cultural capital. I measure the impact that institutional habitus has on a student's ability to achieve their academic goals:

3) How does high school institutional habitus impact success (persistence, retention, and credential attainment) among community college students?

This dissertation project, shaped by these three questions, attempts to conceptualize the total CC student experience. These three questions capture different priorities in CC student lives: student success as measured by cumulative GPA (Chapter Four), institutional success as measured by institutional departure rates (Chapter Five), and student success as measured by credential attainment rates (Chapter Six).

DATA[1]

All student persistence, retention, and attainment data for this study come from information collected by CC's Institutional Research and Assessment program[2][3]. CC is an ideal location to measure persistence, retention, and attainment because it is an accredited two-year college which educates more than 25,000 students each year. This institution provides educational opportunities to students living in a large, metropolitan area located within the West South Central Census Region. Additionally, CC offers multiple modes of education: on-campus courses (across multiple locations), online courses, developmental education courses, honors courses, and concurrent enrollment – offered both at main campus locations as well as at local high schools. Student success and persistence is a core value of the institution.

[1] Descriptions for all variables are attached as Table 3.1 and summary statistics are attached as Table 3.2.
[2] IRB Application Approval by CC was granted on February 6, 2019 and is attached as Appendix A.
[3] IRB Application Approval by Oklahoma State University was granted on April 25, 2019 and is attached as Appendix B.

To measure persistence, I requested academic achievement data from CC's Institutional Research and Assessment program. The data set includes both the cumulative GPA for any student enrolled at CC from academic years 2009-2010 to 2018-2019 (N=118,855), as well as the ACT composite scores and the cumulative high school GPA for any student enrolled during that time. I limit the data to this range because student GPA prior to academic year 2009-2010 is unavailable. This data set is the most accurate GPA representation of CC's student population.

To measure retention, I requested student enrollment data from CC's Institutional Research and Assessment program. The data set includes the first semester of enrollment as well as the final semester of enrollment for any student enrolled at CC from academic years 2009-2010 to 2018-2019 (N=118,855). I limit the data to this range because student GPA prior to academic year 2009-2010 is unavailable.

To measure attainment, I requested credential attainment data from CC's Institutional Research and Assessment. The data set includes both certificate attainment and degree attainment for any student enrolled at CC from academic years 2009-2010 to 2018-2019 (N=118,855). I limit the data to this range because credential attainment data prior to academic year 2009-2010 is unavailable.

Dependent Variables

PERSISTENCE. Following previous research exploring student academic success (Garza and Fullerton 2018), I use a continuous measure of students' cumulative Grade Point Average (GPA) in the final semester in which they were enrolled. Across the entire data set of community college students, cumulative GPA ranges from 0.00 to 4.00. *N=118,546. Mean GPA: 2.54. SD: 1.27.*

RETENTION. I measure retention based on Tinto's (1993) notion of institutional departure. Retention is often defined as whether a student has enrollment beyond the first academic year, as students who enroll continuously through to their second year are more likely to earn a degree or certificate (Wells 2008). The data set for this study does not include specific measures of

continuous enrollment. Rather, the data reflects the first term of enrollment and the final term of enrollment. My binary measure of retention is a measure of institutional departure (1=Yes, 0=No), which indicates that a student has departed CC less than two academic semesters removed from their first term of enrollment. Out of the total student population in my data set (N=118,549), 35.4% of students (N=42,960) departed prior to beginning their second year at CC.

CREDENTIAL ATTAINMENT. I measure academic achievement based on CC students' credential attainment during their enrollment with the college. As a nominal variable, this measures attainment at the end of a given academic term using several different categories, based on the various credential options. CC currently offers 88 different associate degree programs and 39 different credit-bearing certificate programs. For this study, I isolated degree attainment into one binary measure (1=Earned a Degree, 0=Did Not Earn a Degree). The variable measured whether students attained a degree (Associate in Arts, Associate in Science, or an Associate in Applied Science) at CC. Each degree type requires the completion of a program of study totaling a minimum of 60 credit hours and it can be assumed that similar coursework / academic requirements are expected across all degree types.

Approximately 20% of all students ultimately earn a credential after beginning coursework at CC. Out of 118,549 students in my data, 21,098 (17.8%) earned an associate degree. Due to the low number – and consequent heavy skew in the data – of students who earned a certificate of program completion (N=1,880; 1.58%), I only focused on degree completion. Students are far more likely to be degree-seeking than certificate-seeking, as certification accounted for only 13% of all credentials awarded during the 2017-2018 term.

Independent variables

Organizational Habitus

Due to data limitations, I am focusing solely on habitus at an institutional level. Individual-level information such as family income is federally-protected data and was therefore not provided by CC's Institutional Research & Assessment department.

ORGANIZATIONAL ECONOMIC CAPITAL. To measure organizational economic capital, I gathered data on financial prosperity of the neighborhood surrounding the in-state public high schools in which CC students attended. Using 2016-2017 School Neighborhood Poverty estimates from Census Tract information, I collected the income-to-poverty ratio of school locations from the 2016-2017 Common Core of Data school file. This file measures income data from families with children ages 5 to 18 in the U.S. Census Bureau's 2013-2017 American Community Survey 5-year collection (SNP Website). The IPR is calculated based on income reported for families, with the relative poverty thresholds for family size and structure considered. The IPR, indicated with a range from 0 to 999, reflects the percentage of family income relative to the poverty threshold. An IPR of 100 indicates that the family income is at the poverty threshold, while anything above 100 indicates the family income is above the poverty threshold. The estimates are for the neighborhoods within the school districts for the public high schools. I could only be certain of in-state public high schools in my data set, so the IPR is limited to students who attended public high school within the state in which CC is located. *N=79,022. Mean IPR = 248.04.*

Because private high schools have no set district boundaries, and therefore no neighborhood IPR, I created a nominal variable to capture the differences between private and public institutions. With quartile data of the IPR for public high schools, I created a five-category set of binary variables: (1) Bottom Quartile IPR of Public Schools (reference group), (2) Third Quartile IPR of Public Schools, (3) Second Quartile IPR of Public Schools, (4) Top Quartile IPR of Public Schools, and (5) Private Schools. Overall costs to attend private schools greatly exceed the costs of attending public schools and I believe it is a fair presumption to place private school economic capital above the top quartile public school economic capital. *Bottom Quartile IPR: 51-178, Third Quartile IPR: 179 -208, Second Quartile IPR: 209 – 339, Top Quartile IPR: 340 – 725.*

ORGANIZATIONAL CULTURAL CAPITAL. To measure organizational cultural capital, I created an index variable using data on the academic prosperity of the high schools in which CC students attended. There are three different measures of public high school performance to measure organizational cultural capital based on academics:

High school graduation rates for all public institutions within the state - High school graduation rates for all public institutions in CC's state is available from the state Department of Education website. I am using the most recent data available, which is from 2017. *N = 78,953. Mean = 85.37.*

Percent of 2016 HS graduates attending college/university directly after HS - The percent of high school graduates attending college/university directly after high school is available from the State Regents for Higher Education website. I am using the most recent data available, which is from 2017. *N = 79,018. Mean = 48.32.*

Percent of 2016 HS graduates that needing to enroll in developmental education during their first year of college - The number of high school graduates needing remediation courses during their first year of college/university is available from the State Regents for Higher Education website. I am using the most recent data available, which is from 2017. *N = 78,272. Mean = 42.41.*

All three of these measures are on the same scale (% out of 100). The first two are positive indicators of organizational academic capital at the high school level and the last is a negative indicator of organizational academic capital. These measures were combined as an index to measure institutional cultural capital. *Range: -23.2 to 154.6. Chronbach's alpha: 0.6173.*

Because private high schools were not included in the data set for those websites, I then created a variable to capture the differences between private and public institutions. I first created quartiles of the index used to measure institutional cultural capital. I then created a five-category set of binary variables: (1) Bottom Quartile Cultural Capital for Public Schools (reference group), (2) Third Quartile Cultural Capital for Public Schools, (3) Second Quartile Cultural Capital for

Public Schools, (4) Top Quartile Cultural Capital for Public Schools, and (5) Private Schools. Because private high schools within the state have admissions criteria and are not open-access institutions, I believe it is a fair presumption to place private school academic capital above the top quartile public school academic capital. *Bottom Quartile Cultural Capital: -23.2 to 78.2, Third Quartile Cultural Capital: 78.3 to 98.1, Second Quartile Cultural Capital: 98.2 to 105.8, Top Quartile Cultural Capital: 105.9 to 154.6.*

Pre-College Academic Achievement

HIGH SCHOOL GPA. High school GPA is often considered the most robust indicator of academic success in college. Because the community college is an open-access institution, there aren't limitations to the lower-end of the range of High School GPA values. The range of values for High School GPA in my data set is 0.057 – 4.89. Because weighted High School GPA is calculated differently from unweighted High School GPA, I have created an upper limit of 4.00. Any weighted High School GPA that exceeded 4.00 was modified to 4.00. There were 131 students (0.11%) in my data set whose High School GPA exceeded 4.00. *N=73,388. Mean GPA: 3.04. SD: 0.62.*

COURSE PLACEMENT TESTS. Academic placement exams are important to assessing skill level in specific subject areas upon admission into the college. Over the past decade, CC has accepted three primary placement options: COMPASS scores, Accuplacer scores, and ACT scores. Each placement test covers reading, writing, and mathematics. These are all continuous variables with a variety of ranges, depending on the specific test related to each placement exam: COMPASS (0 to 99), Accuplacer (0 to 120), and ACT (1 to 36). Due to relatively low numbers of students completing the SAT, COMPASS, or Accuplacer exams, I am using the ACT Composite score as a measure of academic preparation prior to enrollment. *N=64,035. Mean Composite Score: 21.10. SD: 4.21.*

Institutional Participation

CC ACHIEVES PROGRAM. I measure participation in the CC Achieves Program as a binary variable (1=Yes, 0=No). Because students are only eligible for this program upon admission to CC immediately following their high school graduation, it is not available for non-traditional or returning students. This program provides financial incentives for students to immediately enroll in CC after high school. Those incentives include at least partial free tuition and up to full free tuition, based on eligibility requirements as well as maintaining levels of academic success while enrolled at CC. *N=17,258.*

HONORS PROGRAM. Honors program data was collected by Honors course credits earned, with a range from 0 to 51. I measure integration in the Honors program two separate ways: a continuous measure of total Honors course credits earned and a binary measure of enrollment in at least one Honors course (1=Yes, 0=No). Because students do not need to be admitted into the Honors program to enroll in Honors courses, it is important to distinguish students who never take Honors courses, students who do enroll in Honors courses, and students who enroll in multiple Honors courses. *N=8,795. Mean Honors Credits Earned: 5.94.*

DEVELOPMENTAL EDUCATION. Developmental education data was collected by developmental course credits completed, with a range from 0 to 42. I first measure participation in the developmental education program by a continuous variable: total developmental credits earned at CC. *N = 41,960. Mean Developmental Credits Earned at CC: 2.178.*

Because CC only counts degree-seeking credits toward a credential, developmental education credits are not included in the total degree-seeking credits earned. Therefore, I also measure participation in the developmental education program by a categorical variable with the following categories: 1=1 or more developmental credits but no credit yet towards a degree, 2=1 or more developmental credits and also credit towards a degree, 3=No developmental credits.

ONLINE COURSES. I measure participation in online courses by a continuous variable: total online credits earned at CC, with a range from 0 to 134. *N=52,276. Mean Online Credits Earned: 4.28.*

CONCURRENT ENROLLMENT PROGRAM. Concurrent enrollment data was collected by concurrent enrollment credits earned, with a range from 0 to 65. I measure integration in the Concurrent Enrollment program two separate ways: a continuous measure of total Concurrent Enrollment course credits earned and a binary measure of enrollment in at least one Concurrent Enrollment course (1=Yes, 0=No). Because local high school students have very different opportunities to participate in the Concurrent Enrollment program (either sponsored at their high school or individually on their own), it is important to distinguish students who have never taken Concurrent Enrollment courses, students who do participate in the Concurrent Enrollment program, and students who enroll in multiple Concurrent Enrollment courses. *N=15,923. Mean CC Credits Earned from Students Enrolled in At Least One Course Concurrently: 8.06.*

Demographic Variables

AGE. Age was measured in current age (years since birth) in 2018. Due to a coding error, four cases reported an age of 13 or under. Those cases were dropped, and the range of current age is 16 to 103 years. *N = 118,549. Mean Age: 31.46.*

NON-TRADITIONAL STATUS. This variable is a measure of whether a student is a non-traditional student (1=Yes, 0=No). Traditional students, in my study, are defined by those who first enroll in college by the academic year directly following their high school graduation. With concurrent enrollment, it is entirely possible for students to have enrolled in college prior to graduating from high school. Non-traditional students are defined as those who experience a gap between high school and CC by at least one academic year. Because it is impossible for me to confidently track all institutions for all students, those students who are reverse-transfer – those who attended another institution of higher education prior to enrolling at CC – were included in the non-traditional category. *N=55,599.*

GENDER. This variable was self-reported and measured as a binary variable (1=Female, 0=Male), with students identifying as male (N=48,831) or female (N=69,728). 256 students did not have a gender description and were therefore dropped due to a coding error.

RACE/ETHNICITY. This variable was self-reported. There are nine different categories for this measure: American Indian or Native American (N=9,663), Asian (N=3,330), Black or African American (N=11,743), Hispanic of any race (N=7,915), More than one race reported (N=8,680), Native Hawaiian or Pacific Islander (N=165), Non-Resident Alien (N=2,021), White (N=70,797), and Other (N=46). 4,455 students did not report racial identity and were dropped.

Several binary variables were created to analyze racial identity: White (1=Yes, 0=No), Black (1=Yes, 0=No), Native (1=Yes, 0=No), Multi-Racial (1=Yes, 0=No), Hispanic (1=Yes, 0=No) and Other (1=Yes, 0=No). The reference category for the race variable is White.

ACADEMIC SCHOOL. This variable was measured based on the last declared major of the student. I combined majors into categories that reflect the seven academic schools and divisions at the community college: School of Allied Health, School of Business & Information Technology, School of Engineering, Aviation, & Public Service, School of Liberal Arts & Communication, School of Nursing, School of Science & Mathematics, and the School of Visual & Performing Arts.

Because this is the only measure in my data set that focuses on differences in academic content, I created several binary variables to measure differences in academic focus: Allied Health (1=Yes, 0=No), Business & IT (1=Yes, 0=No), Engineering, Aviation, & Public Service (1=Yes, 0=No), Liberal Arts & Communication (1=Yes, 0=No), Nursing (1=Yes, 0=No), Science & Mathematics (1=Yes, 0=No), Visual & Performing Arts (1=Yes, 0=No) and Other (1=Yes, 0=No). The reference category for Academic School is Business & IT.

PRIMARY CAMPUS LOCATION. This variable was measured based on the primary campus location for credits earned. There are six different categories for this measure: Conference Center

(N=9), Metro Campus (N=36,690), Northeast Campus (N=22,177), Off-Campus Concurrent (N=2,534), Southeast Campus (N=45,756), and West Campus (N=11,649).

Because this is the only variable that distinguishes between campus location for courses, I created several binary variables to measure differences in the four main CC campus locations: Metro (1=Yes, 0=No), Northeast (1=Yes, 0=No), Southeast (1=Yes, 0=No), West (1=Yes, 0=No) and Other (1=Yes, 0=No). The reference category for Campus Location is Metro Campus.

HYPOTHESES

The data reflect the totality of a student's academic experience at CC, from pre-entry achievements to retention at CC through degree attainment. The following hypotheses, separated by major focus (persistence, retention, or attainment), reflect a synthesis between Bourdieu, Tinto, and my first-hand experience with the student population at CC. While similar components of persistence are widely-used to measure student performance, there are confounding issues – both at the individual and the institutional level – which might impact results. Individual-level issues are those which reflect student aptitude and that is why measures of academic achievement such as GPA are important. Students who have shown high levels of aptitude in the past would be most likely to replicate high levels of aptitude at CC. Institutional-level issues such as retention and attainment connect student aptitude as well as an organization's ability to offer appropriate support services. Students who have the necessary capital to navigate organizations would be most likely to find retention and attainment support at CC.

PERSISTENCE. Based on Bourdieu's notion of habitus, and specifically deviant trajectories, I believe students with a pre-college experience that is most congruent with the CC environment will be most likely to persist and achieve higher GPAs at CC.

> **Hypothesis 1**: Past Performance - Students who were academically successful in high school will have higher levels of academic achievement at CC. Higher cumulative high school GPA will be associated with higher cumulative GPA at CC.

Hypothesis 2: Institutional Integration - Students who were more academically integrated into CC's institutional programs will have higher levels of academic achievement at CC. Student participation in institutional programs will be associated with higher cumulative GPA at CC.

Hypotheses 3: Cultural Capital - Students who attended high schools with higher cultural capital index rates will be associated with higher levels of academic achievement at CC. Schools with the highest index rates will have the highest levels of college prep and students from those schools will fare best in terms of GPA at CC.

Hypotheses 4: Economic Capital - Higher income-to-poverty ratios will be associated with higher levels of academic achievement at CC. Schools within the highest IPR neighborhoods will have the highest levels of college prep and students from those schools will fare best in terms of GPA at CC.

RETENTION. Based on both Bourdieu's notion of habitus and Tinto's notion of integration, I believe students with the highest retention rates will be those who find the CC environment most ideal for integration. Those students will be most likely to come from similar economic and academic environments as compared to the environments found at CC. I believe public high schools in the 3rd quartile are most congruent with CC.

Hypothesis 1: Past Performance - Students who were academically successful in high school will have higher levels of retention at CC. Higher cumulative high school GPA will be associated with higher levels of retainment at CC.

Hypothesis 2: Institutional Integration - Students who were more academically integrated into CC's institutional programs will have higher levels of retention at CC. Student participation in institutional programs will be associated with higher levels of retainment at CC.

Hypotheses 3: Cultural Capital - There will exist a curvilinear relationship between cultural capital index rates and retention. Schools within the lowest and the highest

cultural capital index rates will have the least amount of organizational habitus overlap with CC. Because of that, students from lower and higher organizations will struggle to remain at CC, while students from intermediate organizations will fare better.

Hypotheses 4: Economic Capital - There will exist a curvilinear relationship between income-to-poverty ratios and retention. Schools within the lowest and the highest IPR neighborhoods will have the least amount of organizational habitus overlap with CC. Because of that, students from lower and higher organizations will struggle to remain at CC, while students from intermediate organizations will fare better.

ATTAINMENT. Based on both Bourdieu's notion of habitus and Tinto's notion of integration, I believe students with the highest degree attainment rates will be those who find the CC environment most ideal for integration and success. Those students will be most likely to come from similar economic and academic environments. I believe public high schools in the 3rd quartile are most congruent with CC.

Hypothesis 1: Past Performance - Students who were academically successful in high school will have higher levels of credential attainment at CC. Higher cumulative high school GPA will be associated with higher levels of credential attainment at CC.

Hypothesis 2: Institutional Integration - Students who were more academically integrated into CC's institutional programs will have higher levels of credential attainment at CC. Student participation in institutional programs will be associated with higher levels of credential attainment at CC.

Hypotheses 3: Cultural Capital - There will exist a curvilinear relationship between cultural capital index rates and credential attainment. Schools within the lowest and the highest cultural capital index rates will have the least amount of organizational habitus overlap with CC. Because of that, students from lower and higher organizations will struggle to complete credential requirements at CC, while students from intermediate organizations will fare better.

Hypotheses 4: Economic Capital - There will exist a curvilinear relationship between income-to-poverty ratios and credential attainment. Schools within the lowest and the highest IPR neighborhoods will have the least amount of organizational habitus overlap with CC. Because of that, students from lower and higher organizations will struggle to complete credential requirements at CC, while students from intermediate organizations will fare better.

METHOD

PERSISTENCE. Following similar research related to predictors of College GPA (Garza and Fullerton 2018) and because College GPA is a continuous variable, I will estimate all persistence models using ordinary least squares regression to examine its relationship with prior academic achievements and participation in institutional programs. I will be using contextual variables such as organizational habitus and will be adjusting the errors for the clustering within these schools for all outcome models in the dissertation.

RETENTION. Following similar research related to student retention (Wells 2008), I will estimate all student departure models using logistic regression (Long 1997) because of the dichotomous nature of the dependent variable.

ATTAINMENT. Following similar research related to academic achievements (Garza and Fullerton 2018), I will estimate all credential attainment models using logistic regression because of the dichotomous nature of the dependent variable. Logistic regression (Long 1997) will be used to estimate models for earned degrees (1=Yes, 0=No).

DATA LIMITATIONS

Several external factors shaped my research project and the methods. First and foremost, the lack of individual-level economic data leads to a gap in my analyses. Because individual-level economic data like income and PELL grant recipient is related to financial aid data, I was not able to gain access to that information. For dependent students, family-level economic data is also federally-protected information. There were self-reported measures on the Exit Survey that

reflected income levels post-graduation from CC, but only graduates completed those surveys. There were other limitations to the data set at CC. First-generation status was a question asked on the CC application, but it was not a required component to the application. Because of that, only 30% of the students answered that question. Due to the low response rate, in addition to the self-reported nature of the question, I chose to omit that from my analysis.

Not having robust individual-level variables for habitus is unfortunate. Ideally, I would have an awareness of the neighborhood students lived in, their parents' income and educational attainments, as well as the students' pre-CC educational achievements. That was simply not the case with this data set. Because of the constraints for individual-level data, I chose to focus more intently on the institutional-level economic data. This choice was not perfect, as school districts have a variety of poorer and richer neighborhoods within them. There is also the issue of magnet schools, which reflect the inequality found in educational options for students. Some of those magnet schools are located in the poorest neighborhoods surrounding CC but offer exceptional academic credentials and attract gifted students. Ultimately, I believe school district data can provide institutional-level insight – both academic and economic – to the educational experiences of students at CC.

SUMMARY

In this chapter I discussed my own position relative to the data set as well as discussed the data and methods that I will use in the following three empirical chapters to examine the relationships between prior-college achievements, institutional participation, economic capital, cultural capital, and student success at CC. The primary source of student-level data for these chapters is from CC's Institutional Research and Assessment program, which provided a useful data set of any CC student enrolled from academic years 2009-2010 to 2018-2019. That data set contains all of the variables used to measure prior-college achievements, institutional participation, and student success. The secondary data sets measure organizational economic capital and organizational cultural capital at the high school institutional level. Each of the following empirical chapters

combines these data sets to analyze predictors of a commonly-held notion of student success in college. In the next chapter, I examine individual and institutional predictors of cumulative GPA at CC.

Table 3.1. Description of Variables used in Models of Persistence, Retention, and Attainment

Variables	Description and Source (in parentheses)
Dependent Variables	
Persistence	Cumulative GPA at CC. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Retention	Did not continue at CC beyond their first year=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Attainment	Attained a degree=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Independent Variables	
Organizational Economic Capital	2016-2017 School Neighborhood Income-to-Poverty Ratio of High School Attended (Source: 2016-2017 Common Core of Data)
Organizational Cultural Capital	2017 Public High School Graduation Rate (Source: State Department of Education Website)
	2017 Public High School College-Going Rate (Source: State Regents for Higher Education Website)
	2017 Public High School Remediation Rate (Source: State Regents for Higher Education Website)
High School GPA	Cumulative high school GPA upon admission into CC. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Course Placement Tests	ACT Composite Score (Source: 2010-2018 Student Data Deidentified SR-1819-3607).

Table 3.1. Description of Variables used in Models of Persistence, Retention, and Attainment Continued

CC Achieves Program	Participation in CC Achieves Program=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Honors Credits	Total honors credits earned at CC. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Honors Courses	Have taken an honors course = 1, else = 0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Developmental Education Credits	Total developmental credits earned at CC. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Developmental Education Courses	Have taken only developmental education courses at CC = 1, have taken both development education and on-level courses at CC = 2, have not taken developmental education courses = 3. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Online Credits	Total online credits earned at CC. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Concurrent Credits	Total CC credits earned while concurrently registered in high school (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Concurrent Participation	Have taken course while concurrently registered = 1, have not taken course while concurrently registered = 0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
CC Credits	Total credits earned at CC. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).

Table 3.1. Description of Variables used in Models of Persistence, Retention, and Attainment Continued

Age	Current age in years in 2018. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Non-Traditional	Non-traditional student=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Gender	Female=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Race/Ethnicity	
White (reference)	Non-Hispanic white=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607)
Black	Non-Hispanic black=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Hispanic	Hispanic=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Native	American Indian or Native American=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Multi-racial	More than one race reported=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Other race	Non-Hispanic race other than white, black, native, or multi-racial=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Academic School	
Business & IT (Reference)	Business & Information Technology major=1 else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).

Table 3.1. Description of Variables used in Models of Persistence, Retention, and Attainment Continued

Liberal Arts	Liberal Arts & Communication major=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607)
Allied Health	Allied Health major=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Engineering, Aviation, & Public Service	Engineering, Aviation, & Public Service major=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Nursing	Nursing major=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Science & Mathematics	Science & Mathematics major=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Visual & Performing Arts	Visual & Performing Arts major=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Primary Campus Location	
Metro Campus (Reference)	Metro=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607)
Northeast Campus	Northeast=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
Southeast Campus	Southeast=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).
West Campus	West=1, else=0. (Source: 2010-2018 Student Data Deidentified SR-1819-3607).

Table 3.2. Description and Summary Statistics for Variables in Dissertation Models

Variables	Definition	Mean	SD	Min	Max
Dependent Variables					
Persistence	CC Cumulative GPA	2.54	1.27	0	4
Retention	1 = Final Term was Less Than One Year After First Term 0 = Final Term was More Than One Year After First Term	0.35	0.48	0	1
Attainment	1 = Earned an AA, AS, or AAS 0 = Did Not Earn a Degree	0.18	0.38	0	1
Independent Variables					
ACT	Composite Score on ACT	21.10	4.21	1	36
Age	Current Age in Years in 2018	31.46	10.74	16	103
Business & IT	1 = Majored in B&IT discipline 0 = Other majors	0.20	0.40	0	1
CC Achieves	1 = Participated in Achieves 0 = Did Not Participate in Achieves	0.15	0.35	0	1
CC Credits	Total Credits Earned at CC	25.96	27.38	0	277
Concurrent	1 = Earned Concurrent Credits 0 = Did Not Earn Concurrent Credits	0.13	0.34	0	1
Concurrent	Total Concurrent Credits Earned	1.08	3.55	0	65
Dev Ed	Total Dev Ed Credits Earned	2.18	3.96	0	42
Dev Ed	1 = Have Taken Only Dev Ed 2 = Have Taken Dev Ed and On-Level 3 = Have Taken Only On-Level	2.66	0.52	1	3
Female	1 = Female 0 = Male	0.59	0.49	0	1
Honors	1 = Have Taken an Honors Course 0 = Did Not Take Honors Courses	0.07	0.26	0	1
Honors	Total Honors Credits Earned	0.44	2.16	0	51
HS GPA	HS Cumulative GPA	3.04	0.62	0	4

Table 3.2. Description and Summary Statistics for Variables in Dissertation Models Continued

Variables	Definition	Mean	SD	Min	Max
Metro	1 = Primary Campus Location is Metro Campus 0 = Primary Campus Location is not Metro Campus	0.31	0.46	0	1
Online Credits	Total Online Credits Earned	4.28	8.24	0	134
Econ. Capital[1]	2016-2017 Neighborhood Income-to-Poverty Ratio of High School Attended	248.04	118.8	51	725
Cult. Capital[2]	2017 Public High School Graduation Rate	85.37	7.26	20	100
	2017 Public High School College-Going Rate	48.32	10.34	0	100
	2017 Public High School Remediation Rate	42.41	13.63	0	100
Non-Traditional	1 = Non-Traditional Student 0 = Traditional Student	0.46	0.50	0	1
White	1 = White 0 = Other Racial Identities	0.60	0.49	0	1

Notes: N = 118,555; Data came from CC's Institutional Research and Assessment Office unless otherwise noted

[1]Data for Economic Capital came from 2016-2017 Common Core of Data

[2]Data for Cultural Capital came from State Department of Education Website and State Regents of Higher Education Website

CHAPTER IV

ACADEMIC ACHIEVEMENT

"*Student success does not arise by chance."* – Vincent Tinto

Community colleges occupy a distinct position within the field of higher education. While adhering to the *doxa* (taken-for-granted beliefs and values) and *illusio* (importance of pursuing goals within the field, they implement their own *nomos* (norms or rules of the field) when admitting students into the institution. Almost all community colleges in the United States are open-access institutions, where they allow every applicant (U.S. Department of Education, 2018) the chance to enroll in their institution. In this way, community colleges offer unparalleled access to higher education and, therefore, widespread opportunity for students to build capital in an affordable manner. As students strive to build capital through a college education, one specific measure becomes a universal indicator of success: cumulative GPA. It is an over-simplification of how well a student is performing in college. Cumulative GPA reduces not just student academic performance over the duration of their institutional enrollment to a number on a 0-4 scale, but also reduces all the pre-college factors that have impacted student academic success at that institution. Cumulative GPA is not just an indicator of success, but can also be an indicator of disparity in pre-college attributes and experiences. However flawed and reductive cumulative GPA may be, it is a universal measure of achievement that reflects the *doxa*, *illusio*, and *nomos* of students, instructors, and institutions of higher education. It is widely accepted as the most basic indicator of success and accomplishment among all actors within higher education.

Bourdieu's notion of habitus and capital can help explain the disparity between academic achievements in college students. Utilizing habitus in a theoretical framework can explain inequalities that pervade different levels of society (Costa and Murphy 2015) and this is especially important when analyzing predictors of an overly-reductive measurement such as cumulative GPA. As one's habitus is responsible for shaping dispositions and influencing behaviors such as academic achievement, it would be plausible that transmission of an elite habitus – or one that translates well within the academic world – would correspond with achieving an elite cumulative GPA. Bourdieu's conclusion that educational institutions naturally replicate inequalities (Grenfell 2008) suggest that the power and institutions one is able to occupy in any field might relate to one's habitus. In the field of higher education, it is important to explore the role of organizational habitus and elite pre-college academic environments in predicting academic success in college.

Similarly, Vincent Tinto (1993) explains that student performance in college is based on the characteristics and experiences prior to enrolling in post-secondary education. A student's demographic background, as well as their ability to integrate both academically and socially into the college environment, can influence their ability to commit to the institution and their initial goals upon enrollment. Increased commitment will ultimately lead to increased persistence through the educational system and would be reflected by higher GPA. Tinto's focus is less on early childhood experiences but rather on the ability of the adult student to integrate into the academic institution. Bourdieu and Tinto are compatible in this study. Bourdieu's notion of habitus and Tinto's notion of integration are inseparable when considering predictors of cumulative GPA. The way a student is taught – from a very early age – to integrate into any academic institution has an impact on future academic performance. Using cumulative GPA as a measure of academic achievement is commonplace, but it is important to examine those aspects of one's life which might influence academic ability. In this chapter, I review my hypotheses for

the models in light of the previous research pertaining to persistence. I then test these expectations using data from CC's Institutional Research and Assessment program. I conclude with a discussion of the theoretical implications as well as policy recommendations.

HYPOTHESES

I anticipate a linear relationship between pre-CC institutional habitus and academic achievement at CC. Because of the research linking financial resources with increased persistence, I expect to find that students who attend high schools in wealthier neighborhoods will be associated with a higher cumulative GPA at CC. Due to the importance of pre-college preparations on college persistence, I expect to find that students who attended high schools with higher levels of academic capital will earn a higher cumulative GPA at CC.

In general, I also anticipate a linear relationship between CC institutional participation and academic achievement at CC. Concurrent enrollment programs often recruit students who are most capable of excelling in high school environments, so I expect participation in concurrent enrollment to increase cumulative GPA at CC. Because of the presumed higher academic integration and commitment found within Honors courses, I expect participation in Honors coursework to increase cumulative GPA at CC. Because of the presumed higher social integration and the financial incentive for maintaining grades in their courses, I expect participation in CC Achieves to increase cumulative GPA at CC. I anticipate participation in two programs at CC – developmental education and online coursework – to decrease academic achievement because of the presumed lower social integration of online courses and the lower academic capital related to testing into developmental courses.

RESULTS

Each model within Chapter 4 treats CC cumulative GPA as the dependent variable in the multiple regression analysis. The measure used in the following models reports a cumulative GPA on a scale of 0.0 – 4.0. In my data set, the average cumulative GPA for all CC students was 2.54. In the following write-ups, as well as in Table 4.1, I report the unstandardized coefficients for the independent variables on the outcome measure. After the models were run, I determined a relative effect threshold of +/- 0.10 to report substantive significance. Grade point averages are often referenced by students in tenths of a point and the 0.10 difference is a meaningful change. Focusing on substantive significance is also important when dealing with such a large sample size, due to the presumably high number of statistically significant coefficients simply based on the large N.

Model 1 is the base model for the chapter and contains only the dependent variable and the control variables (gender, race, age, traditional student status, declared major, and primary campus). There are four main sets of models in this chapter, beyond the control model: the first set (Models 2-4) explores the impact that prior academic achievement (high school GPA and ACT composite scores) has on predicting college success. The second set (Models 5 and 6) are a direct application of Tinto's theory, with a focus on how academic integration (both in credits earned and participation in institutional programs) impacts cumulative GPA at CC. The third set (Models 7-9) test includes measures of Bourdieu's notion of institutional habitus, specifically focusing on cultural capital in the form of academic success. All three models in the third set have some measurement of the academic success of students' high school organizations. The final set (Models 10 and 11) test includes measures of Bourdieu's notion of institutional habitus, specifically focusing on economic capital. These two models in the fourth set measure the

economic success of students' high school organizations. I conclude with a full model that incorporates the best substantive measures from each set.

Base Model

The base model (N = 118,546) for academic achievement (R^2 = 3.3%) includes demographic variables such as gender, race, age, non-traditional status, academic major, and primary campus location. Several key results were found prior to introducing cultural capital or economic capital variables.

Model 1 – Base Model: Dependent Variable (CC GPA) plus control variables

All variables in the base model are statistically significant. However, that was to be expected with the large population in the model. Even though all variables were statistically significant in the base model, there are few variables that are substantively significant. Race was the strongest predictor of GPA in the base model, as White students have a 0.34 point higher cumulative GPA when compared to non-White students. Female students have a 0.20 point higher cumulative GPA when compared to male students.

Declared major and primary campus have minor impacts on one's GPA. While CC is an open-access institution with a wide age range of students, there is not much GPA difference when factoring in age. A 10-year difference in students will result in a predicted 0.11 increase in cumulative GPA. Similarly, there was a slight difference between traditional and non-traditional students. Non-traditional students overall earned a lower cumulative GPA, but only by 0.1 point.

Set One

Three models were included in Set One. The first two models introduced the two pre-college academic achievement variables, high school grade point average and ACT Composite scores,

separately. The final model of Set One (N = 54, 186) added both prior academic achievement models and was the best model of the three (R^2 = 25.70%).

Model 4 – Hypothesis 1: Base Model + Prior Academic Achievement (HS GPA + ACT)

The "full model" for prior academic achievement combines the control variables along with both substantive variables, since both were statistically significant predictors of CC GPA. This model is the best predictor of CC GPA in Set One. That is consistent with previous research as well as common practice, as high school GPA and standardized test scores are the two most common requirements for college admission and placement. Consistent with previous research, high school GPA is both a statistically and substantively significant predictor for cumulative CC GPA. For every 1-point increase in high school GPA, students see their CC GPA rise 0.85 points. This suggests that prior academic achievements, regardless of institutional rigor or prestige, very strongly predicts student academic performance while in CC. Factoring in high school GPA decreased the impact of all control variables found in the base model. Declared major and traditional status were no longer statistically significant when high school GPA was introduced into the model. With both achievement variables present, no control variable other than gender had much substantively significant impact on CC GPA. Identifying as female was associated with a 0.11 increase in cumulative GPA.

Set Two

Two models were included in Set Two, both testing Vincent Tinto's theory of academic integration by including measures of institutional participation at CC. He suggests that the more integrated a student is in college – both socially and academically – the better they will persist. While social integration is limited in a non-residential campus environment at a community college, there are several ways in which academic integration or participation can be measured.

The models differed in how participation was defined. For both models in the set, I have also included the best predictor from Set 1, high school GPA.

In Model 5 (N = 73,387; R^2 = 39.87%), participation was defined continuously by accounting for credits earned across a variety of categories such as total credits earned (*mean total credits earned: 25.99)*, concurrent credits earned (*mean concurrent credits earned: 1.08)*, online credits earned (*mean online credits earned: 4.29)*, honors credits earned (*mean honors credits earned: 0.44)*, and developmental education credits earned (*mean developmental education credits earned: 2.18)*.

In Model 6 (N=73,387; R^2=26.25%), participation was defined via binary measures (1=Yes, 0=No) for concurrent enrollment (mean: 0.13), honors courses (mean: 0.075), and participation in the CC Achieves program (mean: 0.15). Model 6 also included an ordinal measure for developmental education, which split students into one of three categories: have completed no developmental education credits, have completed both developmental education and on-level credits, or have only completed developmental education credits.

Model 5 – Hypothesis 2: Base Model + HS GPA + Institutional Integration (Credits Earned)

While all of the base model control variables were statistically significant, few provided much substantive impact on academic achievement at CC. Once key substantive difference with the control variables in this model is the change in coefficients for non-traditional students. When factoring in credits earned at CC, non-traditional students' cumulative GPA increases by a predicted 0.25. This could be since non-traditional students, while less likely to begin college after a period of inactivity, are perhaps more likely to succeed in college once they have begun that journey. The effects of high school GPA on CC GPA are still very strong with a coefficient of 0.73, albeit slightly reduced when factoring in credits earned.

All five variables measuring integration were statistically significant in this model and all five were positive coefficients. Those results are consistent with the belief that persistence leads to increased success in an academic institution. The coefficient for total credits earned at CC was 0.017, which means that for every 12-credit semester a student completes at CC, their predicted cumulative CC GPA will increase by 0.20. Credits earned via concurrent enrollment had the strongest institutional impact on academic achievement at CC, with a coefficient of 0.05. This is to be expected, as students who enroll in concurrent courses are usually the highest achievers in their high school. Credits earned via online and honors courses earned had much smaller effects on CC GPA, with coefficients at 0.005 for each. Each full-time semester (12 credit hours) taken either with online or honors credits would lead to a predicted 0.06 increase in the student's cumulative GPA. Finally, student participation in development education leads to a predicted increase in cumulative GPA. For every 12-credits worth of development courses, cumulative GPA is predicted to increase by 0.036 points. One explanation of the relatively small impact of developmental education is the fact that students testing into those courses most likely have lower attributes and skills when compared to their on-level student counterparts.

Model 6 – Hypothesis 2: Base Model + HS GPA + Institutional Integration (Participation)

Almost all the control variables were statistically significant, but the effect of age on cumulative GPA was the largest. For each one-year increase in age, cumulative GPA was predicted to increase by 0.037 points when factoring in participation in institutional programs. High school GPA was, yet again, the strongest predictor of cumulative GPA for this model with an unstandardized coefficient of 0.88.

Each of the substantive variables measuring participation in institutional programs are significant. Taking at least one honors course or one concurrent enrollment course increases one's GPA by 0.50 points. While honors courses are open for enrollment among all students,

perhaps there is an added level of investment needed to enroll. Similarly, high school students often must reach out to counselors and advisers at their high school to enroll in the CC concurrent enrollment program. Those additional steps require more knowledge of the institution and perhaps require more of an investment. Both of those relationships suggest that a student understands the CC structure enough to seek out either honors courses or concurrent enrollment courses.

Two substantive variables presented contradictory results with my expected hypotheses. Students who have never taken development education courses are predicted to have lower cumulative GPAs. I would have imagined those students who have never taken dev ed courses to be better academically prepared than students who have needed to take them. However, the students who have taken developmental education courses perhaps are re-learning skills acquired earlier in a supportive environment prior to taking on-level courses. The final surprising result was the CC Achieves relationship with CC GPA. CC Achieves is a program which emphasizes integration into the community in exchange for free tuition. Recent graduates of high schools within CC's county can attend CC for free, provided they maintain a certain GPA level and perform hours of volunteering each academic year. I was surprised to see a non-significant relationship between participation in CC Achieves and cumulative GPA. I would have expected participation in CC Achieves to indicate a stronger commitment and goal on behalf of the students, which – according to Tinto – should result in increased persistence.

Set Three

Set Three contains models with variables operationalizing Pierre Bourdieu's notion of cultural capital at the institutional level. Each of the four models in Set Three presents a slightly different attempt at capturing the effect of institutional cultural capital. Model 7 ($N = 59{,}911$; $R^2 = 24.31\%$) examined academic performance of high schools within CC's state using three

separate measures: graduation rates, college-going rates, and remediation rates. Model 8 (N = 59,911; R^2 = 24.11%) combined those three measures into an index variable. Model 9 (N = 63,411; R^2=24.46%) split the index variable into quartiles (1-4) and then added a fifth category (5) to represent students who attended private schools. Model 9 assumes that cultural capital associated with attending private schools is beyond the cultural capital associated with attending the best in-state public high school. The final model using Bourdieu's notion of cultural capital, Model 10 (N = 73,387; R^2 = 23.56%), split up the variable from Model 9 into separate binary measures: one for each of the four quartiles of the public high school performance and a fifth for attending private high schools in CC's state. I have included high school GPA into every model in this set.

Model 7 – Hypothesis 3: Base Model + HS GPA + Cultural Capital (Public HS Performance)

High school GPA (0.97) was again the most important predictor of cumulative GPA in the model. Of the substantive variables, the results suggest that performance of the high school institution matters in predicting student success at CC. The difference between the worst-performing public high schools in terms of college-going rates (0%) and the best-performing public high schools (100%) resulted in a predicted increase of 0.97 on a student's cumulative GPA. There was a reduced impact on cumulative GPA when looking at public high school graduation rates. The difference between the worst-performing public high school in terms of graduation rates (20%) and the best performing public high school (100%) resulted in a predicted 0.22 increase in cumulative GPA. The one surprising variable was high school remediation rates. The variable was statistically significant ($t<1.97$), but there was a predicted positive impact on student GPA. Students who attended the worst-performing schools (100% remediation) were predicted to have a 0.07 higher cumulative GPA at CC than students who attended the best-performing schools (0% remediation). While that is not a large practical impact on cumulative GPA, it is still surprising that the coefficient was positive.

Model 8 – Hypothesis 3: Base Model + Cultural Capital (Indexed Performance of Public HS)

As was expected, high school GPA was the most important predictor of cumulative GPA with an unstandardized coefficient of 0.95. The indexed variable of public high school performance was significant and provides evidence of an organizational cultural capital. The difference between the high schools with the lowest score on the index (-23.2) and the highest score on the index (154.6) results in a predicted 0.71 increase in cumulative CC GPA. This suggests the high school attended does matter when attempting to predict student performance. It also suggests there is a wide disparity among public high schools within the state of CC.

Model 9 – Hypothesis 3: Base Model + Cultural Capital (Quartile including Private Schools)

As with the other models, a 1-point increase in high school GPA leads to a predicted 0.97 increase in cumulative GPA. This suggests that pre-college academic achievement is a strong predictor for academic achievement in college. The indicator of cultural capital for Model 9 is important because it includes private school performance into the measure. The difference in cumulative GPA between a student from a public high school in the lowest quartile (1) and a private high school (5) is approximately 0.41 points. That's not as high as the difference between public high schools in Model 8, but it suggests there is an advantage to attending a private high school in the state. While it might not be as strong of an advantage when compared to the best-performing public high schools (0.082), it is still an advantage.

Model 10 – Hypothesis 3: Base Model + Cultural Capital (Dummy Variables including Private)

The final model using Bourdieu's notion of cultural capital split up the indexed variable into separate binary measures: one for each of the four quartiles of the public high school performance and a fifth for attending private high schools in CC's state. The first quartile of public high school performance was left out as the reference group. All four remaining dummy variables were positively associated with the cumulative GPA at CC, with private high school

attendance having the strongest relationship of the group. Students who attended private high schools, when compared to the students who attended public high schools, were associated with a 0.27 increase in cumulative GPA in CC.

Set Four

The models within Set Four all contained variables operationalizing Pierre Bourdieu's notion of economic capital at the institutional level. Each of the three models in Set Four presents a slightly different attempt at capturing the effect of institutional economic capital. Model 11 (N = 60,380; R^2 = 23.50%) tested out Bourdieu's notion of economic capital with income-to-poverty ratio, a continuous measure of neighborhood wealth surrounding the public high school attended. Model 12 (N =63,880; R^2=23.73%) broke up the income-to-poverty ratio into four quartiles (1-4) and added a fifth category (5) for private schools, producing a variable with five categories. Model 12 assumes that economic capital associated with attending private schools is beyond the economic capital associated with attending the in-state public high school located in the wealthiest neighborhoods. The final model using Bourdieu's notion of economic capital, Model 13 (N = 73,387; R^2 = 23.43%), split up the variable from Model 12 into separate binary measures: one for each of the four quartiles of the income-to-poverty ratio and a fifth for attending private high schools in CC's state.

<u>Model 11 – Hypothesis 4: Base Model + Economic Capital (Income-to-Poverty Ratio)</u>

The control variables, while most were statistically significant, resulted in small substantive significance. The one exception to that was high school GPA, which again had an unstandardized coefficient of 0.96. The measure inspired by Bourdieu's discussion of economic capital was statistically significant with an unstandardized coefficient of 0.00032. For students attending public school in the wealthiest neighborhoods, compared to students attendings public school in the most impoverished neighborhoods, there is a 0.22 increase in predicted cumulative

GPA. This suggests there is evidence for Bourdieu's notion of the importance of economic capital within the CC student population.

Model 12 – Hypothesis 4: Base Model + Economic Capital (Quartile including Private Schools)

Again, high school GPA was the strongest predictor of cumulative GPA with an unstandardized coefficient of 0.97. The quartile measure of economic capital predicted similar differences in cumulative GPA with an unstandardized coefficient of 0.04. This suggests that students attending high schools located in the wealthiest neighborhoods are predicted to have a 0.21 increase in cumulative GPA when compared to students who attended high schools located in the most impoverished neighborhoods. This suggests there is evidence for Bourdieu's notion of economic capital within the CC student population.

Model 13 – Hypothesis 4: Base Model + Economic Capital (Quartile including Private Schools)

The third model for Set Four split up the quartile variable into separate binary measures: one for each of the four quartiles of economic capital and a fifth for attending private high schools in CC's state. The first quartile of economic capital was left out as the reference group. The results for the economic capital dummy variables confirmed support for Bourdieu's notion of economic habitus at the institutional level. All categories were statistically significant, although not all categories were positive predictors of cumulative GPA, when compared to the reference group. The second and third quartile of economic capital had negative coefficients, which was unexpected. Students graduating from high schools in the second quartile of neighborhood wealth were associated with a 0.15 decrease in cumulative GPA, when compared to students graduating from high schools located in the poorest neighborhoods in the state. The impact of the private school variable was above the threshold for substantive significance, suggesting that economic capital reflected in attending private schools is important in academic achievement.

Attending a private high school within the state of CC leads to a 0.17 increase in cumulative GPA at CC, when compared to students who attended public high schools in the poorest neighborhood.

Full Model

Model 14 (N = 73,387; R^2 = 40.87%) includes select measures from each set in this chapter, combining past academic performance (high school GPA), Tinto's notion of integration (participation in institutional programs), and Bourdieu's notions of economic and cultural capital (dummy variables representing quartiles) to predict academic achievement.

Model 14 – Full Model

The full model includes all variables in the base model, plus pre-CC academic achievement (HS GPA), integration variables (credits earned through various platforms), participation in CC Achieves, and organizational habitus variables. Unsurprisingly, this model was the most robust in the chapter. Expectedly, student participation in most institutional programs resulted in positive impacts on student cumulative GPA. The full model presented one very unexpected result. Students who participated in the CC Achieves program were associated with a 0.22-point decrease in their cumulative GPA. This decrease was not anticipated, as the CC Achieves program was established to accomplish several things. First, it was set up to help students become more integrated in the community while attending CC through required service-learning opportunities. Second, the program helps offset the cost of college by providing up to free tuition to participants in the program. Students needed to enter the program at the time of enrollment in CC, suggesting that participants in the program had an awareness of the CC prior to registering. These results show that either participants are not prepared for the commitment necessary in the CC Achieves program or that the commitment necessary in the CC Achieves program is detrimental to academic success at CC.

Model 14 also provided insight into the role that institutional habitus plays on student academic achievement. All of the cultural capital dummy variables were significant and positive, with the coefficient for the fifth category (private school attendance) equaling 0.27. This means that attending private high schools within CC's state, as compared to attending the public high schools with the lowest academic performance, will lead to a 0.27 increase in a student's cumulative GPA. I also found evidence to support the importance of economic capital in a student's life, but the results of the full model are mixed. Students who attended public high schools in the 2nd and 3rd quartile of neighborhood wealth earned lower cumulative GPAs at CC, when compared to students who attended public high schools in the poorest neighborhoods. This suggests that economic capital is not necessarily linearly related to student success at community colleges.

CONCLUSION

As shown in every model in this chapter, pre-college factors of capital – both individual and organizational – are predictors of student success at CC. This is an important issue for community colleges across the country, who admit nearly all of the applicants in their institutions. Success in college – even at the community college level – is not a random occurrence and can be explained by capital held prior to registration. The strongest and most reliable predictor for academic achievement, in every model created, was high school GPA. This result was consistent with previous research and suggests that individual academic achievements prior to college are still the best indicator of college success. Students who demonstrate high aptitude in high school are more likely to continue high achievement in high school.

Even though much of the explanatory power for these models was located in high school GPA, there was support for Tinto's theory of integration across the models. Increased student participation in college led to increased CC GPA, almost universally across the models. This

finding is important for institutions of higher education, as they seek out policies and programs to increase student integration in college. One surprising result was found in the full model, which showed participation in CC Achieves to have a negative impact on cumulative GPA at CC. CC Achieves is a program designed with the lower-income college students in mind. The program offers up to free tuition for local students enrolling in CC immediately following their high school graduation and requires community volunteer time to maintain eligibility. In many ways, it is CC's response to Tinto's theory of integration. While most factors of academic integration were positively associated with cumulative GPA, this variable was not.

Sets three and four both suggest that Bourdieu's notion of habitus can be applied to the organizational level. Indicators of capital – both cultural and economic – at the high school level can help predict student success at college. Access to greater capital at high schools is related to achieving greater academic success at CC. Cultural capital has a greater impact on student success than economic capital, although that could simply be because the cultural capital measure was more precise in terms of academic achievement than the economic capital measure. Regardless, the results of these models support further exploration of Bourdieu's notion of habitus at the institutional level. While he conceptualized it as primarily an individual-level or family-level aspect of one's identity, it can be applied to institutions of higher education. In the next chapter, I examine individual and institutional predictors of retention at CC.

Table 4.1. Unstandardized Coefficients and Standard Errors of Variables Predicting CC GPA

	Model 1 (N=118,546)	Model 4 (N=54,186)	Model 5 (N=73,387)	Model 6 (N=73,387)	Model 10 (N=73,387)	Model 13 (N= 73,387)	Model 14 (N=73,387)
Female	0.20***	0.11***	0.12***	0.03***	0.05***	0.04***	-0.004***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
White	0.34***	0.03***	0.23***	0.13***	0.10***	0.10***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Age	0.01***	0.03***	0.003***	0.04***	0.04***	0.04***	0.01***
	(0.0003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Traditional	-0.10***	-0.03**	0.21***	0.09***	-0.03***	-0.03***	0.20***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
B&IT	-0.08***	-0.01	-0.14***	0.02	-0.01***	-0.01	-0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Metro	-0.09***	-0.04***	-0.10***	-0.07***	-0.06***	-0.05***	-0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
ACT Scores		0.04***					
		(0.001)					
HS GPA		0.85***		0.88***	0.97***	0.97***	0.72***
		(0.01)		(0.01)	(0.01)	(0.01)	(0.01)
Total Credits			0.02***				0.02***
			(0.0002)				(0.0002)
Online Credits			0.01***				0.004***
			(0.0005)				(0.0005)
Honors Credits			0.01***				0.006**
			(0.002)				(0.002)
Concurrent Credits			0.07***				0.05***
			(0.001)				(0.001)
Dev Ed Credits			-0.02***				0.01***
			(0.001)				(0.001)
Honors Participation			0.52***				
			(0.01)				
Concurrent Participation			0.49***				
			(0.01)				
Dev Ed Participation				-0.10***			
				(0.01)			
CC Achieves Participation				-0.01			-0.22***
				(0.01)			(0.01)
Cultural Capital Index (Quartile 2)						0.07***	0.12***
						(0.01)	(0.01)
Cultural Capital Index (Quartile 3)						0.18***	0.15***
						(0.01)	(0.01)
Cultural Capital Index (Quartile 4)						0.18***	0.15***
						(0.01)	(0.01)
Cultural Capital Index (Quartile 5)						0.28***	0.27***
						(0.02)	(0.02)
Economic Capital Index (Quartile 2)						-0.15***	-0.14***
						(0.01)	(0.01)

Economic Capital Index (Quartile 3)						-0.05*** (0.01)	-0.10*** (0.01)
Economic Capital Index (Quartile 4)			0.09*** (0.01)	0.03* (0.01)			

Table 4.1. Unstandardized Coefficients and St. Errors of Variables Predicting CC GPA Cont'd

	Model 1 (N=118,546)	Model 4 (N=54,186)	Model 5 (N=73,387)	Model 6 (N=73,387)	Model 10 (N=73,387)	Model 13 (N= 73,387)	Model 14 (N=73,387)
Economic Capital Index (Quartile 5)						0.16*** (0.02)	0.27*** (0.02)
MODEL FIT STATISTICS							
AIC	1.561	0.951	0.882	1.082	1.089	1.445	0.843
BIC	1.562	0.953	0.884	1.084	1.090	1.447	0.845
R^2	0.03	0.26	0.40	0.26	0.24	0.24	0.41

Notes: Selected variables came from CC's Institutional Research and Assessment Office

*p<0.05, **p<0.01, ***p<0.001.

CHAPTER V

INSTITUTIONAL DEPARTURE

"Whatever forms of action institutions take on behalf of student retention, those actions should be concentrated on the very early stages of the student's college career rather than on later stages after serious problems have surfaced." – Vincent Tinto

Whereas cumulative GPA is a measure both students and institutions utilize to measure success in college, retention rates are primarily institutional measures of success. Retention rates are critical to understanding persistence in college, as early troubles in college can lead to institutional or systematic dropout. Institutions understand that students who are retained – maintaining enrollment at the institution beyond one academic year from the initial term of enrollment – improve their chances of progressing toward graduation. Community colleges face a difficult challenge, as their student populations are more likely to face external factors – such as financial constraint, work obligations, or familial commitments – potentially leading them to withdraw.

Bourdieu's notion of habitus applies when looking at disparity of retention rates of students at institutions of higher education. Just as an elite habitus would correspond with increased student success in the form of cumulative GPA, an elite habitus would correspond with increased retention rates. Students attending elite educational institutions prior to college enrollment would share the illusio (i.e., investment or belief in the value) of a college degree and understand the timeline nomos (i.e., rules) of a two-year degree or a four-year degree. Because associate degrees are informally referred to as two-year degrees, the implication is that students should attain them in four consecutive academic semesters. Just as college graduation is a

taken-for-granted component of elite habitus, year-to-year retention is an assumed fact for students whose pre-college education occurred in elite academic environments.

Vincent Tinto's (1993) framework of persistence and integration—both academic and social—was conceptualized with institutional retention in mind. Tinto theorized the conditions leading to a student dropping out of school as similar to Durkheim's egoistical suicide. A student who lacks social and academic integration in an institution of higher education is more likely to withdraw and drop out of school. Tinto's contribution to the field of higher education has been widely accepted and institutions of higher education have begun implementing programs to foster and facilitate student integration on the college campus. According to Tinto, a student's ability to integrate will lead to increased retention and, presumably, increased rates of credential attainment. While students might not track their probability of retention or dropout as much as they track their grades or progress toward attainment, retention measures are important to understanding institutional success in guiding individual student success. In this chapter, I discuss hypotheses for the models testing institutional departure at CC. I then test these expectations using data from CC's Institutional Research and Assessment program. I conclude with a discussion of the theoretical implications as well as policy recommendations.

HYPOTHESES

Unlike expectations for academic achievement models, I do not anticipate a linear relationship between pre-CC institutional habitus and institutional departure at CC. Because of the research linking financial resources with increased retention, I expect to find that organizational economic capital will impact institutional departure. I believe students who attend high schools in neighborhoods of average wealth will be associated with lower rates of institutional departure at CC when compared with students who attend high schools in the poorest neighborhoods. Due to the importance of pre-college preparations on retention, I also expect to find that organizational cultural capital will impact institutional departure. I believe that students who attended high

schools with average levels of academic capital will have the lowest rates of institutional departure at CC, when compared with students who attended high schools with the lowest levels of academic capital.

I anticipate mixed results from participation in institutional programs at CC. I expect that participation in concurrent enrollment coursework will increase the predicted probability of institutional departure. Because of the barriers to social integration in an online course, I expect participation in online coursework to increase the predicted probability of institutional departure. I also expect that participation in developmental education will increase the predicted probability of institutional departure. However, I believe participation in two institutional programs will decreased the predicted probability of institutional departure. Because CC Achieves provides financial assistance if students maintain continuous enrollment, I expect that participation in the CC Achieves program will decrease the predicted probability of institutional departure. Because of the presumed higher academic integration found within Honors courses, I expect that participation in Honors coursework will lead to a decrease in the predicted probability of institutional departure.

RESULTS

Each model within Chapter 5 utilizes a binary measure for retention as the dependent variable of the logistic regression models. The measure used in the following models defines retention as whether a student has departed CC within twelve months after the first semester of enrollment and not returned. If a student has departed CC within twelve months and has not returned, then that student is a case of institutional departure. In my dataset, 35.4% of the students met the definition of institutional departure (N= 41,963). Because the outcome variable is binary (1=Institutional departure within twelve months of first enrollment, 0=Not departing within twelve months of first enrollment), I utilized logistic regression models. In the following write-ups, as well as in Table 5.1, I report the average discrete change coefficients for the variables.

These coefficients are global measures that average discrete change effects across every case in the sample. Because my sample is representative of the CC student population, this approach was the best at determining both statistical and substantive significance related to institutional departure. After the models were run, I determined a relative threshold of +/- 0.075 to report substantive significance. This threshold is approximately half of a standard deviation of the predicted probabilities in the base model for this measure. Due to the large sample size, it is important to set a threshold for substantive significance due to the high number of statistically significant relationships based solely on N.

Model 1 is the base model for the chapter and contains only the dependent variable and the control variables (gender, race, age, traditional student status, declared major, and primary campus). There are four main sets of models in this chapter, beyond the control model: the first set (Models 2-4) explores the impact that prior academic achievement (high school GPA and ACT composite scores) has on institutional departure at CC. The second set (Models 5 and 6) are a direct application of Tinto's theory, with a focus on how academic integration (both in credits earned and participation in institutional programs) impacts institutional departure at CC. The third set (Models 7-9) test includes measures of Bourdieu's notion of institutional habitus, specifically focusing on cultural capital in the form of academic success. All three models in the third set have some measurement of the academic success of students' high school organizations. The final set (Models 10 and 11) test includes measures of Bourdieu's notion of institutional habitus, specifically focusing on economic capital. These two models in the fourth set measure the economic success of students' high school organizations.

Base Model

The base model (N = 118,546) for institutional dropout (Pseudo R^2 = 7.3%) includes demographic variables such as gender, race, age, non-traditional status, academic major, and

primary campus location. Several key results were found prior to introducing cultural capital or economic capital variables.

Model 1 – Base Model: Dependent Variable (CC GPA) plus control variables

The base model (N = 118,546) for institutional dropout (Pseudo R^2 = 7.3%) shows several key results before introducing academic or economic capital variables. The variable with the strongest impact on institutional departure was non-traditional status. On average, identifying as a non-traditional student leads to a 0.245 increase in the probability of dropping out of CC. This is understandable, as the definition of a non-traditional student means there has already been a gap between high school and enrollment at CC. The results from this base model suggest that a previous gap in enrollment is a positive predictor of a future gap in the form of departure. Age has a negative association with institutional dropout, which could also be explained by older students having the means to continue registering at CC even if they are not enrolled continuously on a full-time basis. Because institutional departure is defined as no further enrollment after 12 months beyond the initial semester, the age variable could be somewhat misleading. If students had a five-year gap between terms, they would be considered retained but the only change with respect to their academic career would be their age. The final base model variable of note on student retention was majoring in Business and IT (B&IT), which decreased probability of institutional dropout. This is possibly due to specific advising in the School of Business and Information Technology or due to more workforce-development programs found within that school. An increased amount of workforce development programs would theoretically improve retention rates, as students would be very aware of the importance of completing coursework at CC.

Set One

Three models were included in Set One. The first two models introduced the two pre-college academic achievement variables, high school grade point average and ACT Composite scores, separately. The final model of Set One (N = 54, 186) added both prior academic achievement models and was the best model of the three (Pseudo R^2 = 11.33%).

Model 4 – Hypothesis 1: Base Model + Prior Academic Achievement (HS GPA + ACT)

When including both substantive independent variables in the model, only high school GPA was statistically significant but not substantively significant. A one standard deviation increase in high school GPA, on average, leads to a 0.32 decrease in the predicted probability of institutional departure. Even a very weak association on the predicted probability of institutional dropout is consistent with literature, which suggests that past academic performance is a predictor of future success. Another common measure of prior academic performance, ACT Composite scores, was found to not be a significant predictor in institutional departure. While many CC students take the ACT and report the composite scores, most students in the data set did not have ACT scores to report. Because of this, at CC, high school GPA is a better substantive predictor of institutional departure.

As was the case in the base model, three control variables were significantly related to institutional departure. Once again, non-traditional status was the strongest predictor – and only positive predictor – on institutional departure. Increases in age and identifying as a B&IT major, on average, both led to decreases in the predicted probability of departing CC within twelve months after initial enrollment.

Set Two

Two models were included in Set Two, both testing Vincent Tinto's theory of academic integration by including measures of institutional participation at CC. The models differed in how participation was defined. In Model 5 (N = 73,387; Pseudo R^2 = 50.1%), participation was

defined continuously by accounting for credits earned across a variety of categories such as total credits earned (*mean total credits earned: 25.99)*, concurrent credits earned (*mean concurrent credits earned: 1.08)*, online credits earned (*mean online credits earned: 4.29)*, honors credits earned (*mean honors credits earned: 0.44)*, and developmental education credits earned (*mean developmental education credits earned: 2.18)*.

The definition for participation in Model 6 (N = 73,387; Pseudo R^2 = 14.7%) was binary (1=Yes, 0=No) for concurrent enrollment (*mean: 0.13)*, honors courses (*0.075)*, and participation in the CC Achieves program (*mean: 0.15)*. Model 6 also included an ordinal measure for developmental education, which split students into one of three categories: have completed no developmental education credits, have completed both developmental education and on-level credits, or have only completed developmental education credits.

Model 5 – Hypothesis 2: Base Model + HS GPA + Institutional Integration (Credits Earned)

This model defines institutional integration as credits earned at CC. Total credits earned had the largest negative impact on the predicted probability of institutional dropout. That was expected, as students who persist in college will continue to accumulate credits along the way. Earning online credits, concurrent enrollment credits, and developmental education credits all were associated with decreasing the predicted probability of institutional dropout. Curiously, earning Honors credits was associated with increasing the predicted probability of institutional dropout.

Model 6 – Hypothesis 2: Base Model + HS GPA + Institutional Integration (Participation)

This model defines integration as participation in institutional programs. Participation in the Honors program had the strongest negative impact on the predicted probably of institutional dropout, followed by participation in the CC Achieves program. This supports Tinto's theory, as the Honors program represents the most challenging level of academic integration at CC and the

CC Achieves program represents the most community-based social integration program at CC. Participation in the developmental education and concurrent enrollment programs were both positively associated with predicted probability of institutional dropout. Those participating in the developmental education program might not have the academic abilities necessary to retain. Those participating in the concurrent enrollment program might have non-CC academic aspirations and choose to transfer to another institution to pursue their education.

Set Three

Set Three contains models with variables operationalizing Pierre Bourdieu's notion of cultural capital at the institutional level. Each of the four models in Set Three presents a slightly different attempt at capturing the effect of institutional cultural capital. Model 7 (N = 59,911; Pseudo-R^2 = 11.11%) examined academic performance of high schools within CC's state using three separate measures: graduation rates, college-going rates, and remediation rates. Model 8 (N = 59,911; Pseudo-R^2 = 10.93%) combined those three measures into an index variable. Model 9 (N = 63,411; Pseudo-R^2=10.67%) split the index variable into quartiles (1-4) and then added a fifth category (5) to represent students who attended private schools. Model 9 assumes that cultural capital associated with attending private schools is beyond the cultural capital associated with attending the best in-state public high school. The final model using Bourdieu's notion of cultural capital, Model 10 (N = 73,387; Pseudo-R^2 = 9.72%), split up the variable from Model 9 into separate binary measures: one for each of the four quartiles of the public high school performance and a fifth for attending private high schools in CC's state.

Model 7 – Hypothesis 3: Base Model + HS GPA + Cultural Capital (Public HS Performance)

Model 7 factored in public high school organizational performance into predictions of retention and attainment. While each of the measures of public high school performance (graduation rates, college-going rates, and remediation rates) were significant and in the expected

direction, none of the measures provided much substantive explanation on the predicted probability of institutional dropout. As with the other retention models, age and B&IT major had the strongest negative impact while non-traditional status had the strongest positive impact on the predicted probability of institutional dropout. None of the three measures of public high school performance had any substantive impact on the predicted probabilities of earning a degree or a certificate at CC.

Model 8 – Hypothesis 3: Base Model + Cultural Capital (Indexed Performance of Public HS)

Model 8 used an index variable for the three public high school performances to measure cultural capital. The indexed variable was negatively associated with institutional departure, although the substantive impact was very weak. Of the base model variables, age, non-traditional status, and B&IT major all remained significantly and substantively related to the predicted probability of institutional departure.

Model 9 – Hypothesis 3: Base Model + Cultural Capital (Quartile including Private Schools)

Model 9 added private schools to the index variable of high school performance. There was little difference between Model 8 and Model 9. The high school performance variable still had a negative relationship, showing that attending high schools with more academic capital is associated with lower rates of institutional departure. The strongest relationship on retention was again non-traditional status, as non-traditional students were more likely to depart. Age, B&IT, and high school GPA were all positively associated with institutional departure.

Model 10 – Hypothesis 3: Base Model + Cultural Capital (Dummy Variables including Private)

The final model using Bourdieu's notion of cultural capital split up the indexed variable into separate binary measures: one for each of the four quartiles of the public high school performance and a fifth for attending private high schools in CC's state. The first quartile of

public high school performance was left out as the reference group. All four remaining dummy variables were negatively associated with the predicted probability of institutional departure. Attending private high schools – as compared to attending schools with the lowest institutional cultural capital – demonstrated the strongest relationship of the group with the dependent variable. The other variables in the model followed similar patterns as previous iterations.

Set Four

The models within Set Four all contained variables operationalizing Pierre Bourdieu's notion of economic capital at the institutional level. Each of the three models in Set Four presents a slightly different attempt at capturing the effect of institutional economic capital. Model 11 (N = 60,380; Pseudo-R^2 = 10.87%) tested out Bourdieu's notion of economic capital with income-to-poverty ratio, a continuous measure of neighborhood wealth surrounding the public high school attended. Model 12 (N =63,880; Pseudo-R^2=10.53%) broke up the income-to-poverty ratio into four quartiles (1-4) and added a fifth category (5) for private schools, producing a variable with five categories. Model 12 assumes that economic capital associated with attending private schools is beyond the economic capital associated with attending the in-state public high school located in the wealthiest neighborhoods. The final model using Bourdieu's notion of economic capital, Model 13 (N = 73,387; Pseudo-R^2 = 9.61%), split up the variable from Model 12 into separate binary measures: one for each of the four quartiles of the income-to-poverty ratio and a fifth for attending private high schools in CC's state.

<u>Model 11 – Hypothesis 4: Base Model + Economic Capital (Income-to-Poverty Ratio)</u>

Model 11 tested Bourdieu's notion of economic capital with a continuous measure of the neighborhood wealth surrounding the in-state public high school attended. Economic capital had a statistically significant – but not substantively significant – negative relationship with the predicted probability of institutional departure. As with other models, non-traditional status was

the strongest positive predictor of institutional departure while age and B&IT major were strong negative predictors of institutional departure.

Model 12 – Hypothesis 4: Base Model + Economic Capital (Quartile including Private Schools)

Model 12 broke up the income-to-poverty ratio into four quartiles and combined that with a measure for private schools, producing a variable with five categories. The results for the quartile variables from this model are consistent with the results from the income-to-poverty ratio variable from the previous model. Also consistent with the previous model were the results from the control variables. Age and B&IT demonstrated negative, significant relationships with institutional departure, while non-traditional student status was the only variable with a positive relationship on departure.

Model 13 – Hypothesis 4: Base Model + Economic Capital (Quartile including Private Schools)

The third model for Set Four split up the quartile variable into separate binary measures: one for each of the four quartiles of economic capital and a fifth for attending private high schools in CC's state. The first quartile of economic capital was left out as the reference group. The results for the economic capital dummy variables confirmed support for Bourdieu's notion of economic habitus at the institutional level. The lowest dummy variable (2nd quartile) and the middle dummy variable (3rd quartile) were not statistically significant with institutional departure at CC. The fourth dummy variable (4th quartile) and the final dummy variable (private school attendance) both showed negative relationships with departure. The impact of the private school variable was above the threshold for substantive significance, suggesting that economic capital reflected in attending private schools – compared to the reference group – is important in college retention. When compared with those attending a public high school in the poorest neighborhoods, students attending a private high school within the state of CC were associated

with a 0.76 decrease in the predicted probability of departing CC within twelve months of initial enrollment.

Full Model

Model 14 (N = 73,387; Pseudo-R^2 = 15.00%) includes select measures from each set in this chapter, combining past academic performance (high school GPA), Tinto's notion of integration (participation in institutional programs), and Bourdieu's notions of economic and cultural capital (dummy variables representing quartiles) to predict institutional departure.

Model 14 – Full Model

Model 14 presents perhaps the most complete picture of the impact both institutional program participation and organizational habitus have on institutional departure at CC. The strongest predictor in the full model was participation in the Honors program, which led to a 0.249 decrease in the predicted probability of institutional departure at CC. The CC Achieves program was also negatively associated with institutional departure at CC, as participation in CC Achieves leads to a 0.095 decrease in the predicted probability of institutional departure at CC. Participation in concurrent enrollment, while also negatively associated with institutional departure, was below the threshold for substantive significance. Developmental education participation, however, was positvely associated – both statistically and substantively significant – with institutional departure at CC. Taking developmental education courses led to a 0.081 increase in the predicted probability of institutional departure.

Model 14 also provided insight into the importance of cultural and economic capital on institutional departure. All three variables reflecting high school cultural capital (2^{nd}, 3^{rd}, and 4^{th} public school quartiles) were negatively associated with departure, although none of the variables were above the threshold for substantive significance. Attending a private high school within CC's state, however, was negatively associated – both statistically and substantively– with

institutional departure. This suggests that students attending private schools in the state are more likely to be retained at CC than students who attended public schools with the lowest institutional cultural capital. The measures for economic capital tell a different story, which is important in and of itself. Students attending the schools from the second-poorest neighborhoods are more likely to depart CC with twelve months of initial enrollment, when compared to students who attended public schools in the poorest neighborhoods. Students attending schools from the wealthiest neighborhoods are more likely to be retained at CC within 12 months of initial enrollment, when compared to students who attended public schools in the poorest neighborhoods. Private school students are the most likely to be retained, when examining economic disparity. Students attending schools located in the 3rd quartile of neighborhood wealth were found to have no statistically significant link to institutional departure.

CONCLUSION

Results from the full model suggest that increased participation in certain institutional programs will decrease the probability of institutional departure, which makes sense when considering Tinto's notion on the importance of integration on persistence. CC has the ability to oversee implementation of programs which can increase student integration in the college. These results suggest the programs are also increasing the probability of retention. The Honors program seems to have the largest positive impact on CC student retention rates. While some critics of Honors programs at community colleges claim that they perpetuate elitism in an open-access institution, the impact of the program on retention rates at CC in overwhelmingly positive. The Honors program at CC reflects an additional level of academic investment the students must make while taking classes. This additional investment, according to Tinto, is key to increasing persistence. The models in this chapter also suggest that CC Achieves is providing a similar impact on student retention rates. When students make connections at deeper levels, they are more likely to persist.

The full model also shows that students attending schools with the highest levels of economic and cultural capital are the ones least likely to depart within their first year at CC. This captures something – such as the *illusio* and *nomos* of higher education – are found in those spaces where capital is highest. This is important for CC, as its open-access policy provides admission for everyone. It is important to understand students who may need better access to those institutional support programs to increase the probability of retention. In the next chapter, I conclude my empirical research by testing out predictors of the pinnacle for most college-going students: a college degree.

Table 5.1 Average Discrete Change Effects of Variables in Models Predicting Institutional Departure

	Model 1 (N=118,546)	Model 4 (N=54,186)	Model 5 (N=73,387)	Model 6 (N=73,387)	Model 10 (N=73,387)	Model 13 (N= 73,387)	Model 14 (N=73,387)
Female	-0.052***	-0.044***	-0.011***	-0.023***	-0.041***	-0.040***	-0.025***
White	-0.045***	-0.001	0.002	-0.026***	-0.013***	-0.016***	-0.021***
Age	-0.132***	-0.162***	-0.057***	-0.152***	-0.163***	-0.162***	-0.154***
Non-Trad	0.245***	0.233***	0.091***	0.152***	0.217***	0.223***	0.148***
B&IT	-0.091***	-0.104***	-0.022***	-0.077***	-0.090***	-0.090***	-0.077***
Metro	-0.020***	-0.013***	-0.014***	-0.003	-0.010*	-0.005	-0.005
ACT Scores		-0.001					
HS GPA		-0.032***	0.010***	-0.065***	-0.048***	-0.048***	-0.066***
Total Credits			-0.297***				
Online Credits			-0.033***				
Honors Credits			0.018***				
Concurrent Credits			-0.005**				
Dev Ed Credits			-0.006***				
Honors Participation				-0.250***			-0.249***
Concurrent Participation				0.031***			-0.029***
Dev Ed Participation				0.079***			0.081***
CC Achieves Participation				-0.102***			-0.095***
Cultural Capital Index (Quartile 2)						-0.034***	-0.049***
Cultural Capital Index (Quartile 3)						-0.051***	-0.054***
Cultural Capital Index (Quartile 4)						-0.039***	-0.035***
Cultural Capital Index (Quartile 5)						-0.097***	-0.093***
Economic Capital Index (Quartile 2)						-0.010	0.012*
Economic Capital Index (Quartile 3)						0.001	0.007
Economic Capital Index (Quartile 4)						-0.031***	-0.028***
Economic Capital Index (Quartile 5)						-0.076***	-0.093***
MODEL FIT STATISTICS							
AIC	1.205	1.063	0.618	1.056	1.117	1.116	1.051
BIC	1.205	1.063	0.619	1.058	1.119	1.118	1.051
Psuedo-R^2	0.073	0.113	0.501	0.147	0.097	0.098	0.151

Notes: Selected variables came from CC's Institutional Research and Assessment Office
*p<0.05, **p<0.01, ***p<0.001

CHAPTER VI

DEGREE ATTAINMENT

"Students do not seek to be retained. They seek to persist." – Vincent Tinto

Degree attainment is the primary goal of most college-seeking students. Within the field of higher education, the *illusio* of a college degree is undeniable. Some institutions require a student to declare a major within the first two years of coursework, which allows the institutions to place the students on a curriculum map toward degree completion. While there are many measures of student success while in college, the primary measure of achievement is contained in the college diploma. This is certainly the case outside of academia, where employment opportunities potentially hinge on minimum qualifications such as a college degree. Even though the College-for-All mentality is widespread in America (Ahearn 2016), the true *illusio* of higher education lies in the degree completion agenda. Degree attainment is the most student-centered outcome in college, as it is a transferrable measure of success to graduate schools or on the job market.

As Bourdieu noted, a student's habitus has a profound impact on their understanding of the importance of higher education. Elite habitus would convey the importance of a college degree, thus making degree attainment a "default" goal. Degree attainment at a community college, however, might not satisfy expectations as much as earning a college degree from prestigious institutions would. While students with an elite habitus would understand the importance of academic achievement and understand the importance of retention in college, they might not place the same value on a two-year degree as a first-generation student might. This dynamic is difficult for community colleges, as they cater to students from all backgrounds and

most allow all applicants the opportunity to study at their institution.

Due to this dynamic, many community colleges have implemented programs emphasizing integration at the community college while also highlighting degree completion. Vincent Tinto's (1993) framework of persistence and integration, while conceptualized with retention in mind, has a natural conclusion of student graduation. If a student is integrated in the social and academic environment at the school, they are more likely to achieve academic success and less likely to withdraw from school. If they persist long enough through the institution, they will inevitably near graduation ceremonies. Even though students might not be aware of institutional measures like retention rates, they are aware of anticipated dates of graduation from institutions of higher education. In this chapter, I expectations for models predicting degree attainment at CC. I then test these expectations using data from CC's Institutional Research and Assessment program. I conclude with a discussion of the theoretical implications as well as policy recommendations.

HYPOTHESES

As with expectations for institutional departure models, I do not anticipate a linear relationship between pre-CC institutional habitus and degree attainment at CC. Because of the research linking financial obligations with decreased graduation rates, I expect to find that organizational economic capital will impact degree attainment. I believe students who attend high schools in neighborhoods of average wealth will be associated with higher rates of degree attainment at CC when compared with students who attend high schools in the poorest neighborhoods. Due to the importance of pre-college preparations on persistence, I expect to find that organizational cultural capital will impact degree attainment. I believe that students who attended high schools with average levels of academic capital will have the highest rates of degree attainment at CC, when compared with students who attended high schools with the lowest levels of academic capital.

As with Chapter Five, I anticipate participation in institutional programs to have mixed results on degree attainment at CC. Because of the accessible four-year institutions near CC, I expect participation in concurrent enrollment to be negatively associated with degree attainment at CC. Because of the completion agenda inherent in CC Achieves, I expect participation in CC Achieves to be positively associated with degree attainment. I expect participation in developmental education courses and online courses to be negatively associated with degree attainment at CC. Finally, I expect participation in the honors program at CC to increase academic integration at the community college and, therefore, increase degree attainment rates.

RESULTS

Each model within Chapter 6 utilizes a binary measure for credential attainment as the dependent variable of the logistic regression models. Certificate attainment was another potential outcome, but I chose to exclude it from the study because the data is highly skewed. The measure used in the following models defines credential as any earned associate degree (AA, AS, or AAS) from CC. Because the outcome variable is binary (1=Earned degree, 0=Did not earn degree), I utilized logistic regression models in the analysis. In the following write-ups, as well as in Table 6.1, I report the average discrete change coefficients for the variables. These coefficients are global measures that average discrete change effects across every case in the sample. Because my sample is representative of the CC student population, this approach was the best at determining both statistical and substantive significance. After the models were run, I determined a relative threshold of +/- 0.075 to report substantive significance for degree attainment at CC. This threshold is approximately one standard deviation of the predicted probabilities in the base model for this measure. Due to the large sample size, it is important to set a threshold for substantive significance due to the high number of statistically significant relationships based solely on N.

Model 1 is the base model for the chapter and contains only the dependent variable and the control variables (gender, race, age, traditional student status, declared major, and primary

campus). There are four main sets of models in this chapter, beyond the control model: the first set (Models 2-4) explores the impact that prior academic achievement (high school GPA and ACT composite scores) has on degree attainment at CC. The second set (Models 5 and 6) are a direct application of Tinto's theory, with a focus on how academic integration (both in credits earned and participation in institutional programs) impacts degree attainment at CC. The third set (Models 7-9) test includes measures of Bourdieu's notion of institutional habitus, specifically focusing on cultural capital in the form of academic success. All three models in the third set have some measurement of the academic success of students' high school organizations. The final set (Models 10 and 11) test includes measures of Bourdieu's notion of institutional habitus, specifically focusing on economic capital. These two models in the fourth set measure the economic success of students' high school organizations.

Base Model

The base model (N = 118,549) for degree attainment (Pseudo-R^2 = 4.5%) includes demographic variables such as gender, race, age, non-traditional status, academic major, and primary campus location. Several key results were found prior to introducing integration, cultural capital, or economic capital variables.

Model 1 – Base Model: Dependent Variable (CC GPA) plus control variables

Like the base model for institutional departure in Chapter Five, the degree attainment model shows three variables as statistically and substantively impacting degree attainment at CC. The variable with the strongest impact on degree attainment was non-traditional status. On average, identifying as a non-traditional student leads to a 0.082 decrease in the predicted probability of earning a degree at CC. This is consistent with results from Chapter Five, which showed that non-traditional students were more likely to depart within twelve months of initial enrollment. It is also understandable that non-traditional students might have more external

obligations – such as work or family – that create obstacles on the way to graduation. Age has a positive association with degree attainment, but that could be explained due to the relation between age and graduation. Obviously, students need to earn a certain amount of credits prior to graduating and that age is important as no first-year CC student can earn enough credits to graduate with a degree. The final control variable of note on degree attainment was majoring in a Business & Information Technology discipline, which – on average – led to a 0.074 increase in the predicted probability of degree attainment.

Set One

Three models were included in Set One. Model 2 (N = 73,387; Pseudo-R^2 = 9.06%) included the first pre-CC academic achievement variable, high school grade point average. Model 3 (N = 54,186; Pseudo-R^2 = 9.16%) included the second pre-CC academic achievement variable ACT Composite scores. The final model of Set One, Model 4 (N = 54, 186), added both prior academic achievement models and was the best model of the three (Pseudo R^2 = 10.44%).

Model 4 – Hypothesis 1: Base Model + Prior Academic Achievement (HS GPA + ACT)

When factoring in both measures of pre-CC academic achievement, Model 4 shows that high school GPA has the stronger effect of the two variables on the predicted probability of degree attainment. High school GPA was statistically significant but fell below the threshold of +/-0.075. The weak, positive association between high school GPA and degree attainment is consistent with previous research, as prior academic achievement is a reliable predictor of future academic achievement. The other measure of prior academic performance, ACT composite scores, was found to not be a significant predictor in degree attainment.

As was the case in the base model, three control variables were substantive predictors of degree attainment. Age was the strongest predictor of degree attainment, as – on average – a one

standard deviation increase in age leads to a 0.141 increase in the predicted probability of earning a degree from CC. Majoring in a program from the B&IT school also had a positive effect on degree attainment. Identifying as a non-traditional student was the only variable that was negatively associated with degree attainment. On average, identifying as a non-traditional student leads to a 0.071 decrease in the predicted probability of earning a degree at CC.

Set Two

Two models were included in Set Two, both testing Vincent Tinto's theory of academic integration by including measures of institutional participation at CC. The models differed in how participation was defined. In Model 5 (N = 73,387; Pseudo R^2 = 54.71%), participation was defined continuously by accounting for credits earned across a variety of categories such as total credits earned (*mean total credits earned: 25.99)*, concurrent credits earned (*mean concurrent credits earned: 1.08)*, online credits earned (*mean online credits earned: 4.29)*, honors credits earned (*mean honors credits earned: 0.44)*, and developmental education credits earned (*mean developmental education credits earned: 2.18)*.

The definition for participation in Model 6 (N = 73,387; Pseudo R^2 = 13.97%) was binary (1=Yes, 0=No) for concurrent enrollment (*mean: 0.13)*, honors courses (*0.075)*, and participation in the CC Achieves program (*mean: 0.15)*. Model 6 also included an ordinal measure for developmental education, which split students into one of three categories: have completed no developmental education credits, have completed both developmental education and on-level credits, or have only completed developmental education credits.

Model 5 – Hypothesis 2: Base Model + HS GPA + Institutional Integration (Credits Earned)

This model defines Tinto's notion of integration as credits earned at CC. Total credits earned was the strongest predictor of earning a degree at CC. On average, a one standard

deviation increase total credits earned leads to a 0.214 increase in the predicted probability of degree attainment. Surprisingly, this was the only variable above the threshold for determining substantive significance. While the Psuedo-R^2 for this Model (54.71%) was very high, it appears as if total credits earned accounts for most of the explanation. This might be misleading, as a core requirement of a degree is at least 60 credits earned.

Model 6 – Hypothesis 2: Base Model + HS GPA + Institutional Integration (Participation)

Model 6, which defined integration as any participation in the institutional programs, provided different results. Two institutional programs were positively associated with degree attainment. On average, participating in the Honors program lead to a 0.219 increase in the predicted probability of earning a degree at CC. This finding would support Tinto's emphasis on the importance of academic integration in college. On average, participating in the CC Achieves program lead to a 0.068 increase in the predicted probability of degree attainment. This finding would also support Tinto's insistence on the importance of integration, as CC Achieves requires students to maintain a 2.0 GPA while also volunteering in the community. Both of those components touch on academic and social integration at the community college, so it makes sense that CC Achieves is positively associated with degree attainment.

Two institutional programs were negatively associated with degree attainment at CC. Participating in CC courses as a concurrent enrollment student lead to a 0.088 decrease in the predicted probability of earning a degree at CC. That variable was the strongest negative predictor in the model. This was expected, as research showed that concurrent students – often the best-performing students in high school – do not usually earn a degree with the institution in which they initially take college courses. Developmental education was also negatively associated with degree attainment at CC, but the effect was not as strong. It is also understandable that taking developmental education courses is negatively associated with degree

attainment. Students taking developmental education courses are those whose academic skills are the least refined and need the most work to begin taking courses that count toward degree attainment.

Set Three

Set Three contains models with variables operationalizing Pierre Bourdieu's notion of cultural capital at the institutional level. Each of the four models in Set Three presents a slightly different attempt at capturing the effect of institutional cultural capital. Model 7 (N = 59,911; Pseudo-R^2 = 9.84%) examined academic performance of high schools within CC's state using three separate measures: graduation rates, college-going rates, and remediation rates. Model 8 (N = 59,911; Pseudo-R^2 = 9.80%) combined those three measures into an index variable. Model 9 (N = 63,411; Pseudo-R^2 = 9.62%) split the index variable into quartiles (1-4) and then added a fifth category (5) to represent students who attended private schools. Model 9 assumes that cultural capital associated with attending private schools is beyond the cultural capital associated with attending the best in-state public high school. The final model using Bourdieu's notion of cultural capital, Model 10 (N = 73,387; Pseudo-R^2 = 9.15%), split up the variable from Model 9 into separate binary measures: one for each of the four quartiles of the public high school performance and a fifth for attending private high schools in CC's state.

Model 7 – Hypothesis 3: Base Model + HS GPA + Cultural Capital (Public HS Performance)

Model 7 factored in public high school organizational performance into predictions of degree attainment. While two of the measures – graduation rates and college-going rates – were statistically significant, none of the three measures of public high school performance had any substantive impact on the predicted probabilities of earning a degree at CC. As with the attainment models, age, high school GPA, and B&IT had the strongest positive impact while non-traditional status had the strongest negative impact.

Model 8 – Hypothesis 3: Base Model + Cultural Capital (Indexed Performance of Public HS)

The indexed variable, while statistically significant, did not have much substantive impact on degree attainment in Model 8. Age, B&IT major, and high school GPA were all significantly and substantively related to a positive increase in the predicted probability of degree attainment. Non-traditional status was related to a decrease in the predicted probability of degree attainment.

Model 9 – Hypothesis 3: Base Model + Cultural Capital (Quartile including Private Schools)

The high school performance variable was positively associated with the predicted probability of earning a degree from CC, although the relationship was very weak and well below the threshold for substantive significance. High school GPA, age, and B&IT were all positively associated with predicted probability of degree attainment, while non-traditional status was negatively associated with the outcome measure.

Model 10 – Hypothesis 3: Base Model + Cultural Capital (Dummy Variables including Private)

Model 10 was determined to be the best model of this set, as it showed differences between the private high school and public high school binary measures. All of the public high school measures were positively associated with degree attainment, but the private high school measure was not significantly related to degree attainment. That suggests perhaps there is not a linear relationship between high school status and community college degree attainment, with private high school students possibly moving onto another institution prior to graduation. Consistent with the other models in this set, three control variables (age, high school GPA, and B&IT major) were all positively associated with predicted probability of degree attainment while non-traditional status was negatively associated with the dependent variable.

Set Four

The models within Set Four all contained variables operationalizing Pierre Bourdieu's notion of economic capital at the institutional level. Each of the three models in Set Four presents a slightly different attempt at capturing the effect of institutional economic capital. Model 11 (N = 60,380; Pseudo-R^2 = 9.76%) tested out Bourdieu's notion of economic capital with income-to-poverty ratio, a continuous measure of neighborhood wealth surrounding the public high school attended. Model 12 (N =63,880; Pseudo-R^2 = 9.61%) broke up the income-to-poverty ratio into four quartiles (1-4) and added a fifth category (5) for private schools, producing a variable with five categories. Model 12 assumes that economic capital associated with attending private schools is beyond the economic capital associated with attending the in-state public high school located in the wealthiest neighborhoods. The final model using Bourdieu's notion of economic capital, Model 13 (N = 73,387; Pseudo-R^2 = 9.10%), split up the variable from Model 12 into separate binary measures: one for each of the four quartiles of the income-to-poverty ratio and a fifth for attending private high schools in CC's state.

<u>Model 11 – Hypothesis 4: Base Model + Economic Capital (Income-to-Poverty Ratio)</u>

Model 11 tested out Bourdieu's notion of economic capital with a continuous measure of neighborhood wealth surrounding the public high school attended. Income-to-poverty ratio had a statistically significant – but not substantively significant – positive relationship with the predicted probability of degree attainment. Age, high school GPA, and B&IT were positively associated with earning a degree at CC, while non-traditional student status was the only variable with a negative association on the dependent variable.

Model 12 – Hypothesis 4: Base Model + Economic Capital (Quartile including Private Schools)

Model 12 broke up the income-to-poverty ratio into four quartiles and combined that with a measure for private schools, producing a variable with five categories. The results for the quartile variables from this model are consistent with the results from the income-to-poverty ratio variable from the previous model. Also consistent with the previous model were the results from the control variables. Age, high school GPA, and B&IT demonstrated positive, significant relationships with earning a degree at CC, while non-traditional student status was the only variable with a negative impact on degree attainment.

Model 13 – Hypothesis 4: Base Model + Economic Capital (Quartile including Private Schools)

The third model for Set Four split up the quartile variable into separate binary measures: one for each of the four quartiles of economic capital and a fifth for attending private high schools in CC's state. The first quartile of economic capital was left out as the reference group. The results for the economic capital dummy variables were not expected. The lowest dummy variable (2nd quartile) was not statistically significant with degree attainment at CC. The middle dummy variable (3rd quartile) showed a weak, positive relationship with degree attainment. The fourth dummy variable (4th quartile) also showed a weak, positive association with the predicted probability of degree attainment. The final dummy variable (private school attendance) had a weak, negative association with degree attainment. None of impacts of these dummy variables were above the threshold for substantive significance, but the differences between the categories is noteworthy.

Full Model

Model 14 (N = 73,387; Pseudo-R^2 = 14.10%) includes select measures from each set in this chapter, combining past academic performance (high school GPA), Tinto's notion of integration (participation in institutional programs), and Bourdieu's notions of economic and cultural capital (dummy variables representing quartiles) to predict institutional departure.

Model 14 – Full Model

Model 14 presents perhaps the most complete picture of institutional program participation and its impact on predicting degree attainment at CC. One key finding was the impact of participation in the Honors program, which led to a 0.220 increase in the predicted probability of degree attainment at CC. The CC Achieves program was positively associated with earning a degree at CC, although the effect was below the threshold for substantive significance. Developmental education participation, while also below the threshold for substantive significance, was negatively associated with degree attainment. Participation in concurrent enrollment, however, was negatively associated – both statistically and substantively significant – with earning a degree at CC. Taking CC courses while in high school led to a 0.088 decrease in the predicted probability of degree attainment.

As for the measures of institutional habitus, few were statistically significant, and none were substantively significant. All three dummy variables reflecting public high school cultural capital (2nd, 3rd, and 4th quartiles) were positively associated with degree attainment. Attending a private high school within CC's state was not significantly related to earning a degree at CC. As for the impact of economic habitus at the institutional level, slightly different results were found. Students who attended public high schools with neighborhood income-to-poverty ratios in the 2nd

and 3rd quartiles were not significantly related to degree attainment at CC. Students who attended public schools with neighborhood income-to-poverty ratios in the 4th quartile, however, were positively associated with earning a degree at CC when compared to students attending public schools in the poorest neighborhoods. Students who attended private schools were not significantly associated with degree attainment. That 4th quartile is the only quartile where economic and cultural capital is positively associated with degree attainment.

CONCLUSION

Once again, variables such as high school GPA and age were significant in explaining individual-level factors in degree attainment. Additionally, the models found in this chapter on degree attainment support Vincent Tinto's claim that student integration is critical to many measures of student success in college – most notably, degree attainment. Community colleges have implemented many programs to increase graduation rates and CC is no exception. The Honors program seems to have the largest positive impact on CC student degree attainment rates. This makes sense when applying Tinto's notion of the importance of academic integration on persistence. There is much debate to the existence of Honors courses at community colleges, with critics arguing that Honors courses are contradictory to the open-access model. At CC, however, the Honors courses are having an important—and positive—impact on degree attainment. Students taking Honors courses at CC are making an additional academic investment in their individual college career and possibly feel more invested in the institution. As a result, they are more likely to persist at CC through to graduation. For most students taking Honors courses, the academic rigor of a community college might not be much of a concern.

Another conclusion was the negative impact of high school students taking CC courses while concurrently enrolled in high school. Similar to the students in the Honors courses, there is a presumption that these concurrent students are elite high school students. However, these elite

academic students clearly do not have the same level of investment or dedication in earning a degree at CC as the Honors students demonstrate. This could be a possible point of focus for the Concurrent Enrollment program at CC in the future. Over the past couple of years, the Concurrent Enrollment program has adopted a cohort program at several local high schools. This cohort program allows high school students – beginning in their sophomore year – to enroll in CC courses. The students, if they complete the cohort program, would graduate with both a high school diploma and an associate degree at the same time. The results from this chapter suggest the importance of programs like that, where a completion agenda is heavily promoted within the structure of the coursework.

One program aimed at keeping students connected both academically and socially is the CC Achieves program. The results from the models in this chapter suggest it is successful at assisting students with degree attainment at CC. Perhaps even more so than the Honors program or the Concurrent Enrollment program, CC Achieves is providing more of an investment for students by offering actual financial incentives to remain committed to completing coursework at CC. As CC continues to explore future program options or the viability of current programs, they should examine the investment students make with Honors and CC Achieves while also considering if Concurrent Enrollment students lack that same level of commitment to degree completion.

While few of the variables reflecting an institutional interpretation of Bourdieu's notion of habitus were statistically and substantively significant, the unexpected inconsistency in the results suggests a possible non-linear relationship with degree attainment. Students attending the best public schools in terms of cultural capital had an increased predicted probability of earning a degree, when compared to students who attended the worst public schools in terms of cultural capital. Students who graduated from the worst public schools in terms of economic capital had no statistically significant relationship, while students who graduated from the best public schools

in terms of economic capital had an increased predicted probability of degree attainment. This makes sense, as students with greater economic capital would be predicted to transform that into a college degree. However, students attending private high schools in the state showed no statistically significant relationship with degree attainment. This suggests that perhaps habitus from elite institutions are not ideal student populations for CC attainment rates. In the next chapter, I conclude the dissertation with a discussion of the theoretical and policy implications of the study and suggestions for future research.

Table 6.1 Average Discrete Change Effects of Variables in Models Predicting Degree Attainment

	Model 1 (N=118,549)	Model 4 (N=54,186)	Model 5 (N=73,387)	Model 6 (N=73,387)	Model 10 (N=73,387)	Model 13 (N= 73,387)	Model 14 (N=73,387)
Female	0.040***	0.027***	0.006**	0.014***	0.018***	0.018***	0.013***
White	0.039***	0.012***	0.001	0.026***	0.021***	0.021***	0.024***
Age	0.074***	0.141***	0.013***	0.110***	0.129***	0.129***	0.122***
Trad	-0.082***	-0.071***	0.044***	-0.046***	-0.069***	-0.066***	-0.042***
B & IT	0.074***	0.086***	0.040***	0.060***	0.072***	0.072***	0.060***
Metro	0.012***	0.014***	-0.008***	-0.003	0.012***	0.013***	0.000
ACT Scores		0.001					
HS GPA		0.058***	0.022***	0.087***	0.071***	0.073***	0.088***
Total Credits			0.214***				
Online Credits			0.000				
Honors Credits			0.002**				
Concurrent Credits			-0.008***				
Dev Ed Credits			-0.007***				
Honors Participation				0.219***			0.220***
Concurrent Participation				-0.088***			-0.088***
Dev Ed Participation				-0.022***			-0.022***
CC Achieves Participation				0.068***			0.066***
Cultural Capital Index (Quartile 2)						0.026***	0.030**
Cultural Capital Index (Quartile 3)						0.020***	0.024***
Cultural Capital Index (Quartile 4)						0.019***	0.014**
Cultural Capital Index (Quartile 5)						-0.005	-0.006
Economic Capital Index (Quartile 2)						0.019***	-0.002
Economic Capital Index (Quartile 3)						-0.005	0.002
Economic Capital Index (Quartile 4)						0.039***	0.020***
Economic Capital Index (Quartile 5)						-0.008	-0.006
MODEL FIT STATISTICS							
AIC	0.894	0.916	0.447	0.848	0.896	0.894	0.846
BIC	0.895	0.917	0.448	0.850	0.897	0.896	0.848
Pseudo-R^2	0.045	0.104	0.547	0.140	0.092	0.093	0.142

Notes: Selected variables came from CC's Institutional Research and Assessment Office

*p<0.05, **p<0.01, ***p<0.001

CHAPTER VII

CONCLUSION

"Education is the most powerful weapon which you can use to change the world."
- Nelson Mandela

Early life experiences – whether obtained through family interactions or in early education environments – shape the academic opportunities and success rates of community college students at CC. Community colleges occupy a distinct position in the field of higher education and the results from this study have shown that spaces students occupy both before and during college enrollment can significantly influence their ability to persist through to graduation. While one's economic and educational achievements are never solely determined by a primary habitus, they are largely dependent upon primary habitus. The embodied capital – both economic and cultural – in the field of education helps transform seemingly-innate dispositions into greater earning potential or credential attainments. In this way, educational institutions in the field of higher education replicate inequalities and open-access institutions such as community colleges can provide upward trajectories to those with non-elite dispositions.

Community colleges are locations of personal transformation in a College-for-All society by providing opportunities for everyone to improve their social position. Success does not occur randomly throughout the college-eligible population, though. In this dissertation, I have shown how habitus at an institutional-level can be used to predict educational success of CC students. Achieving success at CC is often related to attending elite institutions beforehand. By combining

Bourdieu and Tinto on an underexplored American innovation which provides educational opportunities for millions of college-eligible Americans, this dissertation offers a more complete picture of the community college student experience. Both Tinto's notion of integration at a program level and also Bourdieu's notion of habitus at an organizational level are crucial to understanding the importance of pre-college factors in determining college success. The results from this project have several implications for the study of community college students, the role of habitus in the study of educational attainment, and specific policies enacted at CC to promote persistence.

SUMMARY

Student persistence in community college – measured as academic achievement, institutional departure, and degree attainment – is both a function of institutional habitus and integration – social and academic. Students who are most likely to persist in varying ways at CC are those whose background implies an elite habitus as well as those who can navigate the institutional programs offered. This is especially important for community colleges, whose nearly-universal policy of open-admissions does not restrict individuals based on academic merit. In a College-for-All society, the incentive of a college degree is perhaps taken-for-granted and additional incentive is needed for students to succeed at a non-elite institution such as a community college. CC's programs that provided appropriate incentives – both financial or academic – to the student populations were the most likely to impact persistence. To better understand the complexities of persistence, it's critical to separate and focus on academic achievements, institutional departure, and credential attainment of students.

In Chapter Four, I showed that both individual-level and organizational-level factors are predictors of cumulative GPA at CC. Achieving success in the form of increased cumulative GPA can be explained by capital held prior to registering at CC. Consistently throughout the

models in Chapter Four, I found that past academic performance (high school GPA) was the strongest and most reliable predictor of academic achievement at CC. There was also support for Tinto's notion of integration in my models on achievement. With few exceptions, increased student participation in programs at CC led to increased cumulative GPA. The programs which focused on building academic capital – honors program, concurrent enrollment, developmental education, and online coursework – were all positively associated with cumulative GPA. CC Achieves, which provides financial assistance to any traditional student living in the area, was the one program which was negatively associated with cumulative GPA.

I also found some support in Chapter Four for testing Bourdieu's notion of habitus at the organizational level. Students who attended private high schools or public schools in the 2nd, 3rd, and 4th quartile of academic performance were predicted to have a higher cumulative GPA when compared to students who attended public high schools in the lowest quartile. Institutional academic success clearly impacted cumulative GPA, but the results for institutional economic success were mixed. Students who attended private high schools and public high schools in the 4th quartile of neighborhood wealth were predicted to have a higher cumulative GPA when compared to the students who attended public high schools in the poorest neighborhoods. However, students who attended public high schools in the 2nd or 3rd quartile of neighborhood wealth were predicted to have a lower cumulative GPA than the students who attended public high schools in the poorest neighborhoods. Many of the results from Chapter Four suggest that students who contain more economic and cultural capital upon enrolling at CC are the most likely to earn the highest cumulative GPA.

In Chapter Five I explored individual and institutional factors impacting retention, specifically probability of institutional departure, at CC. This chapter was largely inspired by Tinto's theory on persistence and tested the overall hypothesis that increased integration in an institution would decrease departure rates. While high school GPA, age, and non-traditional

status were the most substantive individual-level variables, there were several institutional-level variables that had explanatory power. In many ways, the results of this chapter support Tinto's overall theory on persistence as participation in many programs was related with a decrease on the probability of institutional departure. The CC program with the greatest impact on reducing the probability of institutional departure was the Honors program. This program stands apart at CC as providing academic incentive reflected on student transcripts. Students who complete enough Honors credits can graduate from CC with an Honors distinction and I believe that to be a main reason why Honors participation reduces the probability of institutional departure. There is an added level of academic investment inherent in the Honors courses and students who seek out and enroll in those courses are less likely to depart CC than students who do not. Two academic programs which provide financial incentive – CC Achieves and Concurrent Enrollment – were also found to reduce the probability of institutional departure. CC Achieves had a particularly strong impact, which again supports Tinto's emphasis on the importance of student connection beyond the coursework. The impact of developmental education, however, contradicts Tinto's theory of integration. Students who enrolled in developmental education courses had a greater probability of institutional departure, suggesting that perhaps Tinto's theory does not appropriately consider retention of students with the greatest academic needs.

Just as with Chapter Four, my results in Chapter Five support Bourdieu's notion of habitus and capital, and especially cultural capital, at the organizational level. Students who attended private high schools or public schools in the 2nd, 3rd, and 4th quartile of academic performance were associated with decreased probability of institutional departure when compared to students who attended the worst-performing public high schools. In other words, attending good-to-great high schools in CC's state leads to decreased probability of departing CC, when compared to students who attended the worst-performing public high schools. Institutional academic success clearly predicted institutional departure in a straightforward manner, but the

results for institutional economic success were again mixed. Students who attended private high schools and public high schools in the 4th quartile of neighborhood wealth was negatively associated with probability of institutional departure, when compared to the students who attended public high schools in the poorest neighborhoods. However, students who attended public high schools in the 2nd quartile of neighborhood wealth was positively associated with probability of institutional departure, when compared to the students who attended public high schools in the poorest neighborhoods. Many of the results from Chapter Five suggest that students who contain more economic and cultural capital upon enrolling at CC are the most likely to remain at CC 12 months beyond their initial term of enrollment.

In Chapter Six, I shifted my focus to the ultimate achievement of student persistence: degree attainment. Individual-level variables such as high school GPA and age were once again substantive predictors of degree attainment. Also consistent with Chapter Five was the support for Tinto's theory of persistence through increased integration. Once again, CC's Honors program had the strongest positive effect on the probability of degree attainment, with those students who took at least one Honors course at CC more likely to persist to graduation than students who did not. While many critics argue that Honors courses at a community college are paradoxical to the open-access mission statement of community colleges, these results suggest that Honors courses are beneficial to those aspiring to earn credentials. But not all institutional programs were positively associated with degree attainment, even though some programs focused on recruiting the students with the highest academic capital. The concurrent enrollment program, which provides both financial and academic incentive to local high school students, was negatively associated with probability of degree attainment at CC. There is a presumption that these concurrent students are elite high school students, yet these students with elite dispositions do not remain at CC through to graduation. One possible explanation is that these students understand the *nomos* of the field so well that they recognize the benefit of taking some general

education courses at CC and then transferring to another institution for a four-year degree prior to completing a two-year degree at CC.

The results of my models from Chapter Six found weak evidence for a relationship between organizational habitus and probability of degree attainment. As with other models in the dissertation, I found that attending public high schools in the 2nd, 3rd, or 4th quartile of academic performance was positively associated with the probability of earning a degree from CC when compared to students who attended the worst-performing public schools. Interestingly, however, I found that attending a private high school in CC's state was not significantly related to degree attainment when compared to students attending the worst-performing public schools. The models exploring organizational economic capital and degree attainment were even less conclusive. The only significant relationship I found was that students who attended the public high schools in the wealthiest neighborhoods were positively associated with the probability of earning a degree from CC, when compared to students who attended public schools in the poorest neighborhoods.

Overall, my results show evidence that increased integration and habitus, measured individually at the academic level and organizationally in both economic and academic terms, are related to student persistence at CC. Community colleges fulfill a distinct position in the field of higher education and my research suggests the *doxa*, *nomos*, and *illusio* of the community college is noteworthy. While most community colleges adhere to an open-admissions policy for a diverse population, not all students aspire toward the same goals. In general, students with more elite dispositions seemed to persist at CC with higher cumulative GPA. Those same elite students were also more likely to stay at CC 12 months beyond their first term of enrollment. This suggests those students most likely value college credits and understand the importance of pursuing a college degree. The students with elite dispositions, in general, were not positively associated with degree attainment at CC. Some institutional programs were incredibly successful

with keeping students on track toward degree attainment, but there appears to be some barrier for elite students between institutional departure—12 months beyond term of initial enrollment—and graduation. While community colleges value all students regardless of academic or financial background, the inverse does not seem to be the case. It appears as if elite students at CC enroll in courses for multiple semesters, achieve academic success in those courses, and then leave CC prior to graduation presumably to attend another school where they experience continued college success.

THEORETICAL IMPLICATIONS

As researchers studying educational trends under the College-for-All mentality, sociologists pay close attention to structural dynamics providing opportunities for individual agency. Such is the case with CC, as the physical and geographic layout of the college has provided the structure necessary for marginalized individuals to seek upward social mobility. For many students, colleges matter as a vehicle of earning the embodied capital required of being translated into greater economic capital. Just as student success does not happen by chance, the decisions made by CC to provide opportunities to marginalized groups for greater upward mobility are intentional. Institutional decisions – whether it be implementing specific programs, open-access policies, or the physical location of campuses and building – matter in the upward trajectory of the student population. Physical buildings provide structure which stabilize institutions, patterns, social networks, and social life (Gieryn 2002). In the metropolitan area of its location, CC also provides that stability for its students. Campus location sites were chosen to provide greater access for marginalized groups in the area. Just as schools are sites of personal transformation and reflect a history of themselves, so do the physical structures of higher education. These buildings reflect the capital of the community – the capital that Bourdieu claimed contributed to one's habitus. Physical structures endowed with capital look different than others and grant legitimacy to areas of marginalization. In this way, CC's buildings help legitimize and stabilize

underdeveloped areas. They provide these potentially-impoverished bodies with a structure that conveys capital. Community colleges offer structure, stability, and durability in communities where those attributes might be lacking.

Pierre Bourdieu and Vincent Tinto are prominent scholars who both theorize on the importance of education in society, but few researchers have synthesized the two when researching the experiences of college students. While each theorist focuses on a specific part of a students' life, both are needed to understand the full picture. Some have considered Bourdieu's notion of habitus as an individual-level theory. While this is not a direct comparative test of Bourdieu's theory at the individual or institutional level, I argue that habitus can and should be understood at the institutional level as well. Because educational districts in America are defined and influenced by surrounding economic capital and themselves influence the academic capital of the students enrolled, it seems plausible to consider high school institutions as a reflection of the habitus of a location. These institutions, whether rural or urban, public or private, occupy a position in the field of higher education. If families have enough capital to choose between different locations when moving, school districts are an important factor in their decision. Schools are locations that have a history and an identity. It is important for scholars to explore those locations as mechanisms of social inequality when researching persistence, retention, and attainment in higher education.

Likewise, Tinto's contribution to the educational experience should not be overlooked. His focus on the importance of institutional programs that emphasize integration is, in many ways, a focus on the importance of programs that align with an elite habitus. Not all institutions of higher education are the same and some, based on their location and history, can only provide the bare minimum in terms of academic capital for its students. In turn, those students might not be able to transform that academic capital into economic capital without major assistance. While a lot of research has focused on the experiences of non-elite students in elite institutions, few

have focused on the non-elite institutions that are within reach for all. Community colleges are an often-forgotten component of higher education in America, but Bourdieu and Tinto – when taken together – can and should be applied to a student population whose experiences capture a much more accurate representation of the College-for-All population.

POLICY RECOMMENDATIONS

The findings in this dissertation have several implications for policy at CC. First, there is evidence that institutional programs are beneficial for students. Therefore, it would be sensible for administrators at CC to support existing programs so that more students can utilize the programs as a means of increasing integration at the college. Not all programs equally promote academic achievement, retention, and attainment. CC has recently adopted a Pathways model to boost credential attainment rates and programs that impact attainment should be considered first. The program that was most significantly related to improving the probability of degree attainment was the honors program. While this could be a result of self-selection, as students with higher academic capital tend to seek out the honors courses, this could also be a direct result of the dedicated support from the Honors College at CC. Every semester, the honors program prints off miniature course catalogs featuring all the honors courses for the upcoming term. They also offer extracurricular support by providing opportunities for students to present research at local conferences and partake in end-of-the-year awards banquet for honors students. The CC Honors College promotes academic excellence at CC and it appears as if students are meeting the high expectations. Because of the increased academic integration promoted within the Honors College, students who took honors courses were much less likely to depart CC within 12 months of the first term of enrollment. The Honors College at CC appears to excel in student persistence while also increasing academic standards at CC, which should make that program one to study and replicate whenever possible.

Another program that increased the probability of earning a degree at CC was the CC Achieves program. While the Honors College provided an academic incentive to participate, the CC Achieves program provides economic incentive through tuition waivers for eligible students. Programs similar to the CC Achieves were promoted in 2015 by President Obama's College Promise Initiative. As more individuals adopt a College-for-All mentality, programs like CC Achieves could provide real short-term benefit to actors beyond the institution of higher education. CC Achieves not only promotes degree attainment and decreases institutional departure rates, but also provides an opportunity for students to give back to the community through required service-learning hours. More institutions – community college and others – should explore programs like these that incorporate integration into the local society beyond more commonplace programs like residential life, intramural sports, or on-campus activities. CC Achieves helps students with the financial obligation of college and helps them with the completion agenda of college. CC should examine ways to support students within the Achieves program, however, as it appears their cumulative GPA suffers through their participation in it.

Two programs at CC need some extensive re-evaluation and possible support in adjusting the outcomes of the students who participate. Developmental education programs face an uphill battle as they are charged with an unenviable task: elevate the least college-ready students to a place where academic success is attainable. The results from my models touch on the difficult experiences of students who enroll in developmental education. Clearly needing a lot of help before entering CC, developmental education students struggle across most aspects of persistence. Taking developmental education courses was not as detrimental as other factors in terms of lowering cumulative GPA, but it was a barrier to both retention and attainment. CC is an open-access institution and a service college to the community. It is important that everyone receive the same opportunities to achieve academic success at the collegiate level. CC has begun implementing certain components to developmental education, such as co-requisite cohorts for

certain courses, faculty dedicated to teaching developmental education sections, and encouraging students to enroll in the developmental courses within their first year. I would suggest even more support in the same way the Honors College promotes not just student determination but also student achievement.

Other key results from my findings suggest that CC should explores ways to better support the Concurrent Enrollment program. In some areas, Concurrent Enrollment is excelling at CC. Students participating in the program have GPAs almost a half-point higher than students who do not participate in the program. This could be from the newness of taking a college course while in high school or it could be a self-selection factor. Students who are the most capable in high school are those seeking out concurrent courses, so it would be plausible that there is some filtering process occurring. The most concerning impacts of concurrent enrollment on the CC student population are on retention and attainment rates. Students who take classes concurrently are less likely to remain at CC and less likely to graduate from CC. This is a troubling reality, as students who seek out concurrent enrollment may do so to complete general education courses but have no intent on completing a credential at CC. There are several ways to adjust for this and CC is already beginning to implement one way: cohort-driven completion programs. Students enrolled concurrently would be placed on a dual-degree path where, upon graduating from their high school, they would also earn enough CC credits to receive an associate degree. If the best high school students are interested in earning college credits while in high school, cohort programs might be the best way to provide CC coursework at high school locations. Regardless of the intended outcome in improving student persistence, institutional programs can and should be supported to benefit the experiences of all CC students.

In light of the results of my models and the underlying theoretical framework, I believe CC should focus their community presence on those student populations at the most risk of not persisting through to attainment. CC has the resources to provide early-college preparatory

curriculum to surrounding high schools, but has thus far focused on more prominent institutions. While students in those institutions are more likely to ultimately attend CC, it is important for CC to reach the students who background most closely resembles a non-elite habitus. Initially, this may result in decreased academic achievement or increased departure, but could have lasting benefits for the surrounding community. Just as CC was an opportunity for a marginalized population at the collegiate level, CC can provide a similar opportunity for marginalized groups at the high school level. With the College-for-All mentality firmly entrenched in the population surrounding CC, a presence in previously-absent neighborhoods could have a positive impact on social mobility of often-forgotten groups.

LIMITATIONS OF THE RESEARCH

There were several limitations to the research that, if eliminated, could result in far more meaningful conclusions. As discussed in the Methods chapter, the lack of individual-level economic data due to regulations limited the scope of the analysis. It would have been worthwhile to compare the effect of variables capturing individual-level habitus with the variables capturing institutional-level habitus. As a result, the only individual-level habitus variables in my study were high school GPA and ACT composite scores. Neither are entirely representative of cultural capital at the individual-level, but I stand by the assumption that elite academic dispositions can be reflected in both high school and ACT composite scores.

The other major obstacle to providing a complete picture of CC students is the gaps found in pre-CC institutional-level data. Due to the nature of collecting data from high schools in the area, I was only confident of in-state public high school data. CC's IR&A coded high school names in such a way that prevented me from truly verifying high school location of every CC student. This became especially problematic for students who attended out-of-state high schools. Because I could not accurately determine which out-of-state high school they attended, I omitted

them from my analysis. This accounted for approximately 1/3 of the students in my data set. I made the assumption that institutional habitus found in private high schools was greater than the institutional habitus of the wealthiest and best-performing public high schools. If given access to data concerning all high schools – public and private – I might not have settled on that conclusion.

SUGGESTIONS FOR FUTURE RESEARCH

Community colleges are legitimate sources of research for anyone examining the educational experiences of students in America. This dissertation discussed the importance of investigating institutional influences and structures on the individual achievements of students. I believe this can and should be examined more rigorously in future research. In my study, I applied Tinto and Bourdieu to a non-elite student population. I believe that Tinto's theoretical perspective should be modified to explain the community college experience – especially with respect to students who enroll in developmental education courses. While there have been many studies examining that student population, the struggles of those students suggest that a non-elite habitus can remain with a student even after beginning at a community college. I also believe that Bourdieu's notion of habitus can be applied at the institutional level, especially at institutions such as community colleges. While community colleges may be perceived as non-elite to some students and some scholars, they reflect an elite habitus for those students dreaming of greater economic capital and upward mobility. In this way, community colleges and the students who attend them embody the spirit of equality and prosperity.

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APPENDICES

Appendix A

TCC IRB Application Approval

Institutional Review Board
Wed 2/6/2019 8:14 AM

To: Shaun Peevsasser <shaun.peevsasser@tulsacc.edu>
Cc: Institutional Review Board <irb@tulsacc.edu>

Human Subjects Research Review
Proposal Title: Exploring Success at TCC: Identifying Academic Predictors of a Diverse Student Population
IRB # IRB-19-02

Congratulations!

Your IRB Application for the research study titled Identifying Academic Predictors of a Diverse Student Population has been *approved* by the Institutional Review Board at Tulsa Community College.

You are authorized to begin your research and implement this study. This authorization is valid for one year from today, February 6, 2019. After this authorization runs out, you are required to submit a continuation or renewal request for IRB approval.

This approval is granted with the understanding that the research will be conducted within the published guidelines of the TCC Institutional Review Board and as described in your application. Any changes or modifications to the **approved protocols** should be submitted to the IRB for approval. Please use the IRB number provided above in all your communications regarding this study.

Often, reviewers will provide suggestions for your research based on their experience in human subjects research. Please keep in mind that if you wish to implement drastic changes to any aspect of the research project, you will need to submit an IRB Research Modification Form.

The following are the suggestions made by your reviewers:

1. What about the use of Compass scores as a variable?

Thank you for sending us your application for research involving human subjects. By doing so, you safeguard the welfare of our students and federal funding of our College.

Sincerely,

Appendix B

Gmail

Shaun Elsasser <shaun.elsasser@gmail.com>

Non human subjects research

1 message

WATKINS, DAWNETT <dawnett.watkins@okstate.edu> Thu, Apr 25, 2019 at 3:15 PM
To: shaun.elsasser@okstate.edu
Cc: andrew.fullerton@okstate.edu

Shaun,

I have reviewed and approved your application for non human subjects research, AS-19-53, "Community College Persistence: Retention, Attainment, and Satisfaction in a Diverse Student Population". We had a glitch in the system with this one and you may not get an official approval letter via the IRBManager system. Please consider this message your approval.

Thanks,

Dawnett Watkins, CIP

IRB Manager

VITA

Shaun William Peevsasser

Candidate for the Degree of

Doctor of Philosophy

Dissertation: COMMUNITY COLLEGE PERSISTENCE: ACHIEVEMENT, RETENTION, AND ATTAINMENT IN A DIVERSE STUDENT POPULATION

Major Field: Sociology

Biographical:

Education:

Completed the requirements for the Doctor of Philosophy Sociology at Oklahoma State University, Stillwater, Oklahoma in May, 2020.

Completed the requirements for the Master of Science in Sociology at Oklahoma State University, Stillwater, Oklahoma in 2009.

Completed the requirements for the Bachelor of Science in Environmental Studies at University of Nevada, Las Vegas, Las Vegas, Nevada in 2007.

Completed the requirements for the Bachelor of Arts in Sociology at University of Nevada, Las Vegas, Las Vegas, Nevada in 2007.

Experience:

2014 - present	Assistant Professor, Sociology, Tulsa Community College
2010 – 2014	Instructor, Sociology, Oklahoma State University
2009 – 2010	Graduate Research Assistant, Sociology, Oklahoma State University
2007 – 2009	Graduate Teaching Assistant, Sociology, Oklahoma State University