AN ABSTRACT OF THE DISSERTATION OF

Judith W. Hernández Chapar for the degree of Doctor of Philosophy in Education presented on June 10, 2016.

Title: Leveraging the Power of Institutional Agents for Students of Color: Understanding the Factors Which Influence Engagement at Community Colleges

Abstract approved:

Felisha Herrera Villarreal

Student engagement with faculty is positively associated with increases in the retention and graduation rates of students enrolled in institutions of higher education. Although a considerable amount of research has focused on understanding the engagement experiences of students enrolled at four-year colleges and universities, little emphasis has been placed on the experiences of Students of Color whose first experience in higher education within the community college system.

The overarching purpose of this study was to investigate the factors which contribute to the frequency of engagement of Students of Color with institutional agents. Three research activities sought to address the factors which influence engagement for Students of Color. Manuscript I is a synthesis of the research related to student engagement with faculty, specifically the engagement practices of Students of Color with institutional agents. Nora, Barlow and Crisp’s (2006) Student Engagement Model and Stanton-Salazar’s (1997) concept of institutional agents served as the conceptual model for manuscripts II and III and guided the selection of the dependent (interaction with institutional agents) and independent (factors which influence engagement) variables. The second manuscript sought to examine the demographics,
pre-college experiences, environmental pull factors, and undergraduate experiences which influence frequency of informal or social interaction with institutional agents outside of the classrooms and office hours during the first year. Finally, the third manuscript investigated the pre-college student factors and undergraduate experiences which influence frequency of interaction with institutional agents outside of the classroom and office hours to discuss academic matters during the first year of enrollment.

Manuscripts II and III utilize descriptive statistics and regression analysis to explore (a) the factors which influence the frequency of informal interaction outside of class with institutional agents for Students of Color and (b) the factors which influence the frequency of interaction for Students of Color with institutional agents to discuss academic matters outside of class or office hours. Both manuscripts utilize the publicly available data of the Beginning Postsecondary Students Longitudinal Study (BPS), a national probability sample representative of about 4 million students who began their post-secondary education in 2003/2004. The BPS collected data from students beginning their educational career at colleges and universities across the United States for the first time in the academic year 2003/2004. The final sample in this study is limited to degree-seeking students and the approximately 35.3% (n~2,400) of students who self-identified as Black, Asian American/Pacific Islander, Latino/Hispanic students who first enrolled in a community college in the 2003/2004 academic year.

Results from manuscript I underscored the importance of engagement on personal (Komarraju et al., 2010; Sax et al., 2005) and academic (Kim, 2010; Kuh et al., 2007; Tinto et al., 1993) gains leading to increased retention and graduation (Price & Tovar, 2014) of Students of Color. Manuscript II demonstrated that Students of Color have low informal engagement with institutional agents, specifically, less than one third (31%) of all Students of Color met
informally with faculty. Additionally, Latinos/as had lower frequencies of engagement with institutional agents in comparison to their Black peers after controlling for pre-college experiences, environmental pull factors, and undergraduate experiences. Participation in study groups and social integration, on the other hand, were positive predictors of informal engagement with institutional agents. Manuscript III underlined the importance of undergraduate experiences for Students of Color as predictors of interaction with institutional agents, since there were five positive predictors of engagement for Students of Color, including: enrolling full-time, declaring a major, taking remedial courses, participating in study groups and social integration. Two demographic variables were also predictors of engagement: Females had higher frequencies of engagement in comparison to males whereas Latinos/as had lower frequencies of engagement in comparison to their Black peers when discussing academic matters outside of the class or office hours.

The results of this study underscore the importance of undergraduate experiences of engagement with institutional agents for Students of Color and highlight several implications for policy, research and practice, including: (a) addressing the effects of campus climate on Students of Color engagement with institutional agents, (b) creating institutional practices that support students’ selection of a major within the first year of enrollment, (c) requiring students to participate in orientation and advising services with faculty, also within the first year of enrollment, (d) supporting part-time faculty in the development of their own information networks, (e) providing financial incentives for part-time faculty to engage with students.

**Keywords**: Student engagement, community college, Students of Color
Leveraging the Power of Institutional Agents for Students of Color:
Understanding the Factors Which Influence Engagement at Community Colleges

by

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A DISSERTATION

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APPROVED:

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Dean of the College of Education

Dean of the Graduate School

I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

___________________________
Judith W. Hernández Chapar, Author
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DEDICATION

To my husband.

I am forever thankful to have you in my life. I know that with you at my side, anything is possible.

A mi madre.

Tus sacrificios me enseñaron el valor de la persistencia. Tu amor, un ejemplo a seguir.

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Chapter I: General Introduction

Community colleges are open access institutions that support all students regardless of academic background. For Students of Color and older students, community colleges are the primary gateway to education (Bailey et al., 2004; Kotamraju & Blackman, 2011). Community college students generally show low levels of engagement with faculty (Chang, 2005), and their college experience is primarily classroom based (Barnett, 2011; Chang, 2005). Student interaction with faculty during the first year of college is of particular importance since it has the potential to impact students’ sense of belonging in later years of college (Hurtado & Carter, 1997) and is a positive predictor of student retention to the second year of college (Upcraft, Gardner, & Overman, 2004). Informal engagement with faculty influences students’ academic success, social satisfaction (M. E. Levin & Levin, 1991), and self-efficacy (Santos & Reigadas, 2002). Student involvement in educational activities, and especially engagement with faculty, increases the chances of student success (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007), leading to personal (Komarraju, Musulkin, & Bhattacharya, 2010; Sax, Bryant, & Harper, 2005) and academic gains (Kuh et al., 2007; Price & Tovar, 2014; Tinto, Goodsell-Love, & Russo, 1993).

Purpose of the Study

Although student engagement with institutional agents leads to overall student success, there is a lack of attention to the experience of students enrolled in community college (Wirt, 2010) and there is little “understanding of the process by which such interactions take place” (Cox & Orehovec, 2007, p. 344). The purpose of this study is to examine the factors which contribute to students’ engagement with institutional agents in community colleges across the United States. The first manuscript is a systematic review of the literature on student engagement
with faculty whose main purpose is to synthesize research related to the engagement practices of Students of Color enrolled at two-year public institutions. The purpose of the second manuscript is to examine the factors which influence informal engagement with faculty for Students of Color, whereas the third manuscript focuses on the academic engagement between Students of Color and faculty. Taken as a whole, the three manuscripts expand understanding of the frequency of interaction for Students of Color with faculty at community colleges.

**Significance**

This research advances knowledge of the engagement experiences of Students of Color at community colleges. Community colleges enroll more than half of all minority undergraduate students (Mullin, 2012) and students enrolled in community colleges have lower engagement patterns than students enrolled in four-year institutions (Flowers, 2006). Increased understanding of the variables which influence engagement for Students of Color is of upmost importance, especially for practitioners and policy makers. For practitioners, knowing the factors which influence engagement allows educators to understand the student populations they serve and create evidence-based programs that address potential challenges and concerns (Cox & Orehovec, 2007). When practitioners understand which environmental pull factors and campus environments have the potential to influence students’ education, then they are able to create practices that can impact the success of students. This study analyzes the engagement patterns of Students of Color enrolled at community colleges across the United States. From a public policy perspective, understanding the factors which contribute to, or hinder student engagement with institutional agents, allow policy makers to know which interventions to support (Wirt, 2010).
Key Definitions

The following section provides definitions of key terms. These will be used throughout this work.

Students of Color. In the present student, Students of Color are those who identified as Black, Asian American/Pacific Islander and Latino/a students. Native American students were excluded from the study due to the low number of students within the final sample. The terms Black and Latino/a are intentionally used throughout the study. Sigelman, Tuch and Martin (2005) found equal preferences for the labels “Black” and “African American” in a nationally representative study of Americans of African descent. For Black students, the term African American may be used when referring to sources and studies that use this term specifically. Similarly, Latino/a is used primarily to describe students of students otherwise classified by the United States census as Hispanics: “In 1978 the Federal Office of Management and Budget issued Directive No. 15 which instituted the name Hispanic, at the suggestion of the king of Spain, for all those ‘whose culture or origin is Spanish, regardless of race’” (Alcoff, 2005). The term Hispanic ignores the complex identities of Latino/a students, and systematically erases connections to indigenous roots and other racial ancestries. The term Hispanic will be used in the present study whenever referencing sources and studies that use the term exclusively.

Community college. Community colleges are defined as two-year public institutions who offer a range of certificates and associate degrees.

Institutional agents. Stanton-Salazar (2011) defines institutional agents as people within the educational setting who can utilize their “position, status and authority […] in a strategic and supportive fashion” (p. 17) to affect student success. Institutional agents, as utilized in this study, are faculty at community colleges who are familiar with institutional practices and procedures.
and have the power to use their position to support the success of students. Faculty member refers to both full-time and contingent instructors who teach or, by the nature of their position, have the responsibility to counsel students in their academic pursuits.

**Student engagement and student involvement.** Student engagement and student involvement are used interchangeably in the literature to describe students’ participation in activities inside and outside the classroom with either faculty or peers (Saenz et al., 2011) and is an “active behavioral process” in which the student invests physical and psychological energy (Astin, 1984, p. 519). In this active process, students seek to gain either the support of faculty or peers to further understand the educational environment that surrounds them to successfully progress through their academic goals. The present study focuses solely on interactions and engagement activities that occur with institutional agents outside of the classroom.

**Research Objectives and Design**

The present study was guided by the concept of institutional agents developed by Stanton-Salazar (2011) and Nora, Barlow and Crisp’s (2006) Student Engagement Model. Stanton-Salazar (1997) defined institutional agents as individuals within a complex organization that have the power and authority to act on behalf of others with less access to institutional resources. For Students of Color enrolled in community college, institutional agents provide a plethora of resources and opportunities to “overcome social structural barriers and experience school success and social mobility” (Carrasco-Nungaray, 2011, p. 11). Stanton-Salazar (1997) emphasizes the incongruence between students’ lived experiences and cultural values and that of the institution. He posits that students who are low-income or Students of Color must not only navigate the processes by which to become a student, but also navigate an educational system that was not built with their cultural values and experiences at the forefront. For Students of
Color, specifically, enrolling in higher education means experiencing a disconnect with their social capital, and that which is needed to be successful within the educational setting. Social capital, defined as “privilege knowledge, resources, and information” (Soria & Stebleton, 2012), is maintained and reproduced through the transmission of information channels within social networks (Coleman, 1990). Within higher education, faculty, as institutional agents serve as social networks for students, providing “a whole spectrum of social and institutional support that contributes to [the students’] social development and academic performance” (Stanton-Salazar, 2011, p. 1069, emphasis in original). For Students of Color who might be unfamiliar with the educational system, relationships with institutional agents are the primary means by which students pursue their educational goals (Dika, 2012; Komarraju et al., 2010) since institutional agents provide guidance, support and advocacy on behalf of students (Bensimon & Dowd, 2009; Carrasco-Nungaray, 2011).

Nora, Barlow, and Crisp’s Student Engagement Model (2006) is a holistic model to understanding the factors which impact students’ continued reenrollment in higher education. The model proposes six components which influence persistence: (a) precollege/pull factors, (b) sense of purpose and institutional allegiance, (c) academic and social experiences, (d) cognitive and non-cognitive outcomes, (e) goal determination/institutional allegiance, and (f) persistence (Nora et al., 2006). The first component acknowledges that students join institutions of higher education with varied lived experiences, and in turn, these experiences influence how the student interacts with the educational setting. The second aspect of the model focuses on students’ commitment to enroll and continue to be enrolled at the institution, as well as their initial degree aspirations. Third, Nora et al. (2006) acknowledge the importance that academic and social experiences within the institution on students’ continued persistence. Embedded within academic
and social experiences is the role faculty play in influencing students’ persistence. While Nora et al. emphasize the importance of faculty on students’ success, it does not explicitly focus on the factors which influence student engagement with faculty. Hence, Stanton-Salazar’s (1997) concept of institutional agents adds an additional dimension to understanding the process by which faculty can impact the success of students. The fourth component of the model refers to the cognitive (academic and intellectual development) and non-cognitive (appreciation of the arts, increased self-esteem, etc.) gains which are achieved when the student is immersed within the educational institution. Goal Determination and Institutional Allegiance is the fifth component in the model and addresses the students’ sense of belonging and the resulting experiences which includes both the academic and social experiences. The five components of the model highlighted above culminate in the sixth component – persistence. Persistence is defined by continuous enrollment or graduation from the institution.

Stanton-Salazar’s (1997) concept of institutional agents, coupled with Nora et al.’s (2006) Student Engagement Model, guided the present study in its three research objectives:

- **O₁**: to synthesize research related to the engagement practices of Students of Color with institutional agents.
- **O₂**: to examine the demographics, pre-college experiences, environmental pull factors, and undergraduate experiences which influence frequency of informal or social interaction with institutional agents outside of the classrooms and office hours during the first year.
- **O₃**: to understand the pre-college student factors and undergraduate experiences which influence frequency of interaction with institutional agents outside of the classroom and office hours to discuss academic matters during the first year.
The first manuscript is a systematic review of the literature; its purpose is to synthesize, appraise and communicate the results and implications (Boote & Beile, 2005) of the engagement patterns of Students of Color. The literature review was conducted between June, 2014 and May, 2016. Peer-reviewed articles whose main focus was (a) student engagement with faculty; (b) community college students; and (c) Students of Color were selected for initial review. Additional articles on the impact of campus culture and faculty employment type were reviewed to synthesize the effects of the community college context on the engagement patterns of Students of Color.

The second and third manuscripts focus on quantitative methodology to answer (a) what are the factors which influence the frequency of informal interaction outside of class with institutional agents for Students of Color and (b) what are the factors which influence the frequency of interaction for Students of Color with institutional agents to discuss academic matters outside of class or office hours. Both manuscripts utilize the Beginning Postsecondary Students Longitudinal Study (BPS), a national probability sample, representative of approximately 4 million students who began their post-secondary education in 2003/2004. The BPS collected data from students beginning their educational career at colleges and universities across the United States for the first time in the academic year 2003/2004. BPS collects data on various topics, including student demographic characteristics, enrollment patterns, persistence and completion, as well as in-school experiences, including students’ engagement with faculty. The National Center for Education Statistics provides access to the BPS dataset through the online statistical tool, PowerStats. PowerStats contains detailed descriptions of the BPS survey questions and provides the tools necessary to conduct statistical analysis of the publically available data, including appropriate statistical analysis weights for the BPS dataset and ensures
that data utilized for analysis will be viable by accounting for the complex sampling design.

Additionally, PowerStats provides report estimates which meet the NCES reporting standards by rounding to the nearest 10 and limiting analysis of data with fewer than 30 cases. The final sample in this study is limited to degree-seeking students and the approximately 35.3% (n~2,400) of students who self-identified as Black, Asian American/Pacific Islander, Latino/Hispanic students who first enrolled in a community college in the 2003/2004 academic year.

Nora, Barlow and Crisp’s (2006) Student Engagement Model and Stanton-Salazar’s

Figure 1. Conceptual Model to examine Students of Color Interaction with Institutional Agents. (1997) concept of institutional agents served as the conceptual model of each of the studies and guided the selection of the dependent (interaction with institutional agents) and independent (factors which influence engagement) variables (see Figure 1). Although both dependent variables are listed together in Figure 1, they were addressed separately in each of the
manuscripts. The dependent variable for the second manuscript was faculty informal meetings. Faculty academic matters was the dependent variable for the third manuscript.

Blocked hierarchical ordinary least squares (OLS) multiple regression analyses were utilized to examine the factors which contribute to the frequency of students’ engagement with institutional agents. Additionally, cross tabulations were used to (a) gather descriptive statistics of the data to understand student demographic patterns and (b) understand the relationship between the dependent variable and each of the independent variables. The blocked regression analysis is organized in two blocks which reflect the variables outlined in Nora et al.’s (2006) Student Engagement Model. The first regression model includes the group of variables associated with pre-college and environmental pull factors (Model 1), which included (a) demographic variables (gender, race, and age) (b) pre-college factors (parent’s highest education, low income, and delayed enrollment) (c) environmental pull factors (employment and dependency status) and (d) degree aspirations: Master’s or above degree aspirations. The final regression analyses include the first model with the additional variables that highlighted students’ undergraduate experiences (Model 2), namely: enrollment intensity, full-time, college GPA, declared major, remedial course taken, participation in student groups and social integration.

**Overview of the Manuscript Format**

Collectively, this dissertation represents an effort to improve knowledge of the factors which aid or hinder interaction between Students of Color who attend community colleges and institutional agents. To this end, the dissertation is divided into three manuscripts, each focused on understanding one of the research objectives. The first manuscript, titled: *A Systematic Review of Research Focused on Students of Color and the Factors Contributing to Community*
College Students Engagement with Institutional Agents, seeks to synthesize prior research related to student engagement with institutional agents, particularly Students of Color enrolled at two-year public institutions. The research synthesis uses an exploratory approach to gather information related to students’ interaction with faculty. After the research was gathered, themes were formed based on prior literature, utilizing the Student Engagement Model as the foundation. The research synthesis concludes with future areas of study, thus situating the following two manuscripts.

The second manuscript, titled: Investigating the Factors Which Contribute to Mentoring Relationships between Students of Color and Institutional Agents in Community Colleges, focuses on students’ informal interactions with institutional agents. Student’s informal or social contacts with faculty outside of classroom are a representation of mentoring relationships between faculty and students (Crisp & Cruz, 2009). Mentoring, defined by Campbell and Campbell (1997) as “a situation in which a more-experienced member of an organization maintains a relationship with a less-experienced, often new member to the organization and provides information, support, and guidance so as to enhance the less-experienced member’s chances of success in the organization and beyond” (p. 727), leads to students’ successful outcomes, including: feeling valued and important (Cox & Orehovec, 2007); socially integrated into the institution (Allanbrook Barnett, 2011); increased access to resources and information (Santos & Reigadas, 2002); higher grade point averages and increased chances of persistence (Campbell & Campbell, 1997; Crisp & Cruz, 2009; Kincey, 2007). Across the board, students’ engagement with faculty outside of the classroom for informal and social interactions is crucial in increasing students’ overall academic, career and personal development.
The third manuscript is titled *Understanding the Factors that Predict the Academic Engagement of Students of Color with Institutional Agents at Community Colleges*. This manuscript focuses on the interactions experiences of Students of Color with institutional agents outside of the class or office hours to discuss academic matters. Community college students generally show low levels of engagement with faculty (Chang, 2005) and when they do interact with faculty, most of their engagement is within the classroom (Barnett, 2011; Chang, 2005). Students who engage with faculty outside of class report personal and academic gains. Personal gains include: increased satisfaction with college (Astin, 1984); a sense of community with the institution (Cotten & Wilson, 2006), increased view of themselves as scholars, higher levels of political engagement, changes in critical thinking skills, augmented interest in becoming a research scientist (Sax et al., 2005), increased motivation (Komarraju et al., 2010) and gains in cultural awareness (Sax et al., 2005). Related to academic improvements, students who engage with faculty demonstrate active and collaborative learning (Umbach & Wawrzynski, 2005); higher college GPAs (Kim, 2010), increased chances of persistence (Kuh et al., 2007; Tinto et al., 1993) and graduation (Price & Tovar, 2014). In short, student engagement with faculty outside of the classroom is an important component of the college experience and leads to overall student success. Chapter five concludes this dissertation, summarizing findings for all manuscripts and underscores policy and practice implications to increase engagement of Students of Color with institutional agents at community colleges.
Chapter II: Manuscript I

A Systematic Review of Research Focused on Students of Color and the Factors Contributing to Community College Students Engagement with Institutional Agents.

Student engagement with faculty increases student persistence and impacts the likelihood of graduation (Cole, 2010). For community college students, who often are older, attend part-time, from low-income (Bastedo & Jaquette, 2011; Mullin, 2012) and first generation backgrounds (American Association of Community Colleges, 2016), engagement with faculty is a powerful influence on the overall success of students (Glaser, 2011). Students of Color enrolled in community colleges engage with faculty primarily within the classroom setting (Barnett, 2011), speaking up or engaging during class discussion (Chang, 2005). Student engagement with faculty outside of the classroom serves as a vehicle for the transmission of institutional knowledge which impacts students’ sense of community on campus (Hampton, 2010), self-efficacy and academic goals (Santos & Reigadas, 2002). Although the relationship between student engagement with faculty and subsequent academic success is highlighted within the literature, the factors which affect Students’ of Color engagement with institutional agents, and their perceived benefits, are not well documented. The following review of the literature begins to identify the engagement patterns of Students of Color with institutional agents, including the factors which have the potential to influence engagement. The review also outlines areas for future research.

Research Synthesis Approach

The literature review provides a foundational understanding of student engagement with faculty at community colleges across the United States. It highlights areas where faculty interactions with students provide support and encouragement to students, brings to light gaps in
current knowledge and highlights opportunities for future research. Initial research into the topic of student and faculty engagement began with Google Scholar (scholar.google.com) to gather a basic understanding of the current literature. After the initial search on Google Scholar, the Educational Resource Information Center (ERIC) and Academic Search Premier databases were utilized to gather peer reviewed articles and other publications. As a beginning step to the literature review, the words “student” and “faculty” were used together to begin gathering information. A second wave of literature gathering added the compound words of “student engagement,” “student involvement” and “faculty.” This second step proved useful in collecting a large amount of information both at four-year college or university level and community colleges. Since the primary interest of this research is to understand faculty and student engagement at the community college, the next step was to add “community college” to the search terms. The addition of “community college,” however, provided a limited number of sources. Studies which investigated student engagement outside of the United States, or focused on high school students, teachers, and faculty members were excluded.

**Literature on Student Engagement with Faculty**

Quantitative and qualitative studies have consistently demonstrated the value of student engagement with faculty on students’ successful outcomes, including personal and academic gains. Specifically, student engagement with institutional agents outside of the classroom leads to higher college GPAs (Kim, 2010), increased satisfaction with college (Astin, 1984), a sense of community between the student and the institution (Cotten & Wilson, 2006), increased students’ view of themselves as scholars, fosters “higher levels of political engagement, self-rated changes in critical thinking skills, increased interest in becoming a research scientist” (Sax et al., 2005, p. 647), higher levels of effort in science courses (Thompson, 2001), increased motivation
(Komarraju et al., 2010), active and collaborative learning (Umbach & Wawrzynski, 2005) and gains in cultural awareness (Sax et al., 2005). In short, student engagement with faculty outside of the classroom is an important component of the college experience, leading to overall student success. The above findings emphasize the importance of student-faculty engagement on student success, thus necessitating further understanding of how and why faculty impact the success of students.

**Institutional agents.** Students enroll in community colleges with diverse cultural, social and educational backgrounds. Unfortunately, higher education often excludes the experiences of low-income and underrepresented student populations, including Students of Color. (Stanton-Salazar, 2011). For Students of Color, choosing to enroll in higher education not only means learning about the processes involved in being a student, but also navigating a system that forces them to choose between their cultural values and strengths, and melding into institutional norms (Stanton-Salazar, 2011). Faculty, as institutional agents have the capacity to act on behalf of the student and transmit social capital. Social capital, defined as “privilege knowledge, resources, and information” (Soria & Stebleton, 2012), is maintained and reproduced through the transmission of information channels within social networks (Coleman, 1990). Social networks serve as “lifelines” (Stanton-Salazar, 2011) for students, providing resources and opportunities to “overcome social structural barriers and experience school success and social mobility” (Carrasco-Nungaray, 2011, p. 11).

These lifelines, as Stanton-Salazar (1997) describes them, are institutional agents. Institutional agents “occupy relatively high positions in the multiple dimensional stratification system, and … are well positioned to provide key forms of social and institutional support” (Stanton-Salazar, 2011, pp. 1074–1075). In the context of community colleges, institutional
agents are faculty members with knowledge of the institution that can provide “a whole spectrum of social and institutional support that contributes to [the students’] social development and academic performance” (Stanton-Salazar, 2011, p. 1069, emphasis in original). For Students of Color who might be unfamiliar with the educational system, relationships with institutional agents are the primary means by which students pursue their educational goals (Dika, 2012) since institutional agents provide guidance, support and advocacy on behalf of students (Bensimon & Dowd, 2009; Carrasco-Nungaray, 2011).

Institutional agents, as representatives of the institution, occupy positions of power in which they can utilize their social capital, knowledge of the educational setting and access to resources to aid in the integration of students into the institution. Faculty, in their capacity as institutional agents, are individuals who (a) possess the capacity to transmit knowledge, (b) serve as bridges or gatekeepers, granting inclusion or exclusion, (c) advocate on behalf of the student, (d) model institutional values, (e) provide emotional and moral support, (f) provide feedback, advice and guidance to students (Stanton-Salazar, 2011) and (g) serve as empowerment agents (Stanton-Salazar, 2011). It is important to note, however, that the extent to which institutional agents are able to act on behalf of the student is largely dependent upon the “structure and resourcefulness of their own social networks” (Stanton-Salazar, 2011, p. 1068). That is to say, institutional agents are able to act on behalf of the student if they are themselves connected to the institution and possess the necessary resources to serve as agents of inclusion.

The preceding pages highlight the positive relationship between student engagement with institutional agents and subsequent academic and social gains. Further, it is clear that institutional agents, acting on behalf of students, can facilitate the transmission of institutional knowledge that has compensatory factors for students to navigate institutional barriers that
hinder their success. The following pages present three student engagement models, and situate understanding of student engagement for Students of Color within the larger higher education scope.

**Student engagement models.** Over the last four decades, researchers have sought to understand the role student engagement with faculty plays in facilitating student success, retention and completion. Pascarella and Terenzini’s (1980) Conceptual Model of the Drop Out Process and Bean’s (1981) Synthetic Model of Student Attrition, provide a foundational analysis for understanding the importance of faculty-student interactions.

Bean (1981) synthesized variables affecting student attrition. His Synthetic Model of Student Attrition proposed five clusters of factors which should be considered in analyzing student’s attrition. The five factors are: background, organizational, environmental, attitudinal, and outcome variables. Background variables refer to characteristics which affect students before entering college. Organizational variables are those aspects which indicate the students’ interaction with the organization. Bean referred to variables in which the institution has little or no control over as environmental variables (i.e. students’ full-time employment). Attitudinal and outcome variables are related to students’ attitude towards education and declared goals, respectively. Finally, Bean hypothesized the variable “intent to leave” as a factor comprised of all of the previously mentioned variables and served as the best indicator of students’ drop out decisions. This composite variable laid the foundation for understanding the students’ drop-out experience or rather the students’ intent to stay, as a multi-faceted process which is influenced by the students’ background characteristics, the students’ interaction with the educational institution, its environment and the greater community in which the student lives and actively participates. However, Bean’s model is far too simplistic in its account of background variables
which have the potential to influence student departure, focusing solely on previous
performance, socioeconomic status, parental education, state residency, distance from home,
religion and hometown size. Bean’s model excludes the potential for race/ethnicity and students’
responsibilities outside of education to impact students’ drop out decisions. In short, the
background variables analyzed focus on traditional-aged, four-year students, and are not
representative of the educational experiences of students enrolled in community colleges.
Furthermore, although Bean includes the potential for environmental and organizational
variables to impact persistence, neither variable focuses on the effects of racial campus climate
on students’ intent to persist.

Pascarella and Terenzini’s Conceptual Model of the Dropout Process emphasized the
importance of informal contact with faculty (Pascarella & Terenzini, 1980). In their study, the
authors found, on average, that students who interacted with faculty tended to score
approximately one standard deviation higher in the persistence scale, as compared to those
students who did not interact with faculty. Pascarella and Terenzini (1980) concluded, “the
quality and impact of student-faculty informal contacts may be as important to students’
institutional integration and, thereby, their likelihood of persisting in college” (p. 72). Pascarella
and Terenzini, therefore, underscored the importance of contact with faculty in reducing
students’ dropout rates. Similar to Bean’s (1981) model, Pascarella and Terenzini’s (1980)
Conceptual Model of the Dropout Process focused on students enrolled at four-year schools who
lived on campus. The authors did not account for other variables which may restrict students’
ability to persist, including for example, working full-time, commuting to campus or having
dependents. Thus, although the model underscores the importance of engagement with faculty, it
fails to account for the engagement experiences of non-traditional students who commute to campus, are enrolled in non-residential campuses, or are community college students.

The models proposed by Pascarella and Terenzini (1980) and Bean (1981) provide a foundational understanding of the factors which influence student engagement with institutional agents, but are primarily focused on the experiences of traditionally aged students at four-year institutions. While Bean (1981) emphasized some demographic variables, the variables utilized were representative of the characteristics of White, traditional-aged students enrolled in four-year institutions and excluded students’ race as a possible predictor of persistence. Pascarella and Terenzini’s (1980) model highlighted the potential effects of race/ethnicity, parental income and education as possible influences on persistence, but also focused on students enrolled in four-year schools. Additionally, the model does not account for the effects of the organizational structures/services on students’ persistence (i.e. receiving financial aid).

Nora, Barlow and Crisp’s (2006) Student Engagement Model. Nora et al.’s (2006) Student Engagement Model (see Figure 2) proposes six major components which influence persistence: (a) precollege and pull factors, (b) sense of purpose and institutional allegiance, (c) academic and social experiences, (d) cognitive and non-cognitive outcomes, (e) goal determination/institutional allegiance, and (f) persistence.
Figure 2. Nora et al.’s (2006) Student Engagement Model.

The first component in Nora’s Student Engagement Model highlights students’ background characteristics, which include: academic ability, financial need, familial support, and psychosocial factors. Academic ability includes factors related to previous high school success. The first component incorporates the notion that students join institutions of higher education with varied lived experiences, and in turn, these experiences influence how the student interacts with the educational setting. For example, a student may have obligations associated with family and work in addition to class attendance and coursework completion requirements. The postsecondary educational experience is different for students with multifaceted responsibilities in comparison to students who are able to devote a significant amount of time and attention to their studies.

The second aspect of the Student Engagement Model refers to students’ commitment to enroll and continue enrollment at the institution. This component also includes the students’
educational aspirations. An aspect associated with the ability to predict future student success is related to a student’s educational aspirations. Beyond a student’s commitment to complete a specific degree, the second component highlights the student’s commitment to remain enrolled at a specific institution.

The third component in Nora et al.’s (2006) Student Engagement Model speaks to the academic and social experiences students are involved with within the educational institution. These experiences encompass both formal and informal interactions with faculty, involvement in learning communities and social experiences with peer groups or other campus organizations. The students’ experiences with the above mentioned factors are impacted by the greater campus climate. Although this component of the model includes involvement with faculty as an indicator of persistence, it does not highlight the reasons why student engagement with faculty matters. Stanton-Salazar’s (2011) concept of institutional agents introduces the benefits of student engagement with faculty and expands the notion of how power dynamics within the institution can affect students’ success. The power dynamics mentioned above may influence and even hinder access to resources and campus connections for students who are unfamiliar with the educational system. As institutional agents, faculty are connected to the institution, they can act on behalf of, and in collaboration with the student, to access valuable campus resources. Taken as a whole, the third component of the model speaks to the interaction between the student and the institution, and highlights the interconnectedness of student interactions with faculty and ensuing persistence.

The cognitive and non-cognitive outcomes component is the fourth aspect of the Student Engagement Model. Cognitive and non-cognitive gains are achieved when the student is immersed within the educational institution, including involvement with institutional agents.
Cognitive gains include academic performance and academic and intellectual development. Non-cognitive gains include appreciation of the fine arts, and increased understanding of diverse perspectives. The fifth component – Goal Determination and Institutional Allegiance – addresses the students’ sense of belonging and the resulting experiences which includes both the academic and social experiences. The five components of the model highlighted above culminate in the sixth component – persistence. Persistence is defined by continuous enrollment or graduation from the institution.

In short, institutional agents serve as knowledge brokers and connectors to the greater institutional campus who have the potential to mitigate students’ pre-college and environmental pull factors resulting in successful outcomes for these students. Additionally, institutional agents can assist students’ transition into the college culture by increasing students’ sense of belonging and understanding of the campus environment. As such, greater understanding of the factors which influence students’ engagement with institutional agents leads to increased understanding of how institutional agents can intervene on behalf of students. Consequently, Stanton-Salazar’s concept of institutional agents and Model of Student Engagement work hand-in-hand to facilitate understanding of the factors which influence the engagement of Students of Color with institutional agents.

Major Themes from Literature

Nora et al.’s (2006) Student Engagement Model provided a conceptual model to explore the factors which influence students’ engagement with institutional agents. Discussion of the literature as it relates to the factors which influence engagement with institutional agents for Students of Color enrolled in community colleges begins with a focus on community colleges. Second, the engagement experiences of Students of Color in the literature are presented. Finally,
informed by Nora et al.’s (2006) model factors that have the potential to influence engagement with institutional agents for Students of Color are highlighted.

**Focus on community colleges.** There are 1,108 community colleges in the United States that educate half of all undergraduate students (American Association of Community Colleges, 2016) and provide access to nearly half of all minority undergraduate students (Mullin, 2012). Community colleges have a heavy burden to offer educational opportunities that are three-fold: (a) developmental (also known as remedial) education (b) vocational/technical education and (c) transfer preparation to four-year institutions (Cohen & Brawer, 2009; Ireland, 2015). This multifaceted approach to education has received both criticism and support. Critics of community colleges highlight the potential of community colleges to serve as gatekeepers (Dowd, 2007). The gatekeeping function of community colleges can occur in two ways. First, as community colleges expand their educational services to a greater portion of undergraduate students, four-year institutions do not have to worry about extending their services to that sector of the population. Dowd (2007) underlines this point: “By enrolling the lion’s share of new entrants to higher education, community colleges [act] as gatekeepers, reducing the pressure on four-year colleges and universities to expand by enrolling larger numbers of students” (p. 408). Secondly, a high proportion of students who are not academically prepared to enroll in four-year colleges and universities, and students who want to pursue a technical/vocational degree, enroll in community colleges at higher rates than four-year colleges or universities (Kotamraju & Blackman, 2011). As a result, community colleges serve as funneling agents into the workforce, thus limiting the number of students who pursue a baccalaureate degree (Dowd, 2007).

On the other hand, community colleges serve as open access institutions that support all students regardless of their academic background. For underrepresented racial minorities,
women, older students and those without prior education beyond the high school diploma, community colleges are the primary gateway to education (Bailey et al., 2004; Kotamraju & Blackman, 2011). The focus on community colleges as gateways to education gained additional traction in 2009 with President’s Obama’s call to increase the number of students who receive a higher education degree or certificate by 2020 through the establishment of the American Graduation Initiative (AGI) (“Building American skills through community colleges,” 2016). AGI calls for institutions of higher education to provide “comprehensive, personalized services to help them plan their careers, stay in school, and graduate” (“Building American skills through community colleges,” 2016). This call for comprehensive services is of particular importance for community colleges who provide services to a varied student population.

Community colleges enroll students who are older, attend part-time, and come from low-income (Bastedo & Jaquette, 2011; Mullin, 2012) and first generation backgrounds (American Association of Community Colleges, 2016). Additionally, community college students tend to be less academically prepared (Bailey, Jeong, & Cho, 2010; Price & Tovar, 2014) than students enrolled in four-year institutions. Female students enroll in community colleges at higher rates than their male counterparts (American Association of Community Colleges, 2016). Similarly, Students of Color enroll in community colleges at greater numbers than at four-year institutions (Mullin, 2012; Vasquez Urias & Wood, 2014). In short, community colleges enroll a higher proportion of students with diverse educational and demographic backgrounds in comparison to four-year institutions.

High enrollment rates of Students of Color enrolled in community colleges is associated with decreased degree completion of full time, first time students (Bailey, Calcagno, Jenkins, Kienzl, & Leinbach, 2005). Hurtado, Milem, Clayton-Pedersen, and Allen (1998) highlight the
importance of increasing the diversity of the student body as a means to improve the educational experiences of all students. Unfortunately, other researchers highlight the negative relationship between increased Students of Color and ensuing graduation rates, both at community colleges and four-year colleges or universities (Bailey et al., 2005; Bank, Slavings, & Biddle, 1990; Oseguera & Rhee, 2009; Titus, 2004). Bailey et al., (2005) explain that minority students are less likely to graduate from higher education institutions when they attend community colleges with high percentages of minority students. Congruent with Bailey et al. (2005), Oseguera and Rhee’s (2009) multilevel analysis of four-year students articulates the negative relationship between peer climates, defined as the aggregate student body composition, and lower graduation rates. In short, increases in Students of Color within the educational setting leads to decreases in individual student gains.

Community colleges, in addition to enrolling students from diverse backgrounds, have higher proportions of part-time faculty in comparison to four-year colleges, accounting for almost two thirds at community colleges. (J. S. Levin & Hernandez, 2014) and nearly half of all instruction at community colleges (D. Jacoby, 2006). High proportions of part-time faculty are associated with lower levels of student engagement (Porter, 2006), as part-time faculty report interacting with students at lower frequencies than tenured and tenure-track faculty (Umbach, 2007). The impact of part-time faculty on engagement is particularly troublesome for Students of Color. A high proportion of part-time faculty is not only correlated to lower engagement rates for Students of Color but is also directly related to student outcomes, including lower retention (Jaeger & Hinz, 2008), graduation (Bailey et al., 2005; Calcagno, Bailey, Jenkins, Kienzl, & Leinbach, 2008; Ehrenberg & Zhang, 2005) and transfer rates (Eagan & Jaeger, 2009). The combination of high percentages of Students of Color and high proportions of part-time faculty,
therefore, has a negative effect of the overall success of Students of Color. One way to mediate the effects of a negative campus climate is to create opportunities for students to develop interpersonal relationships with faculty (Cress, 2008), since faculty validation is a strong predictor of students’ sense of academic integration (Barnett, 2011).

**Students of Color and engagement with institutional agents.** Students of Color have different patterns of faculty/student engagement (Kim, 2010). Kim (2010) analyzed data from the 1994 Student Information Form (SIF) and the 1998 College Student Survey (CSS) of the Cooperative Institutional Research Program to investigate how the effects of student-faculty interactions on educational outcomes vary by student’s race: White, African American, Asian American and Latinos. Kim utilized two measures to operationalized student-faculty interaction: academic and personal. Academic interaction focused primarily on course-related contact with faculty whereas personal interaction was informal and less-course related. The author found that a student’s race was a predictor of student involvement with faculty. Kim found African American students were more likely than any other student groups to have academic interactions with faculty whereas White students reported the highest level of personal interactions with faculty. For Asian students, academic interactions with faculty leads to higher college GPA, which in turn predicts higher academic engagement. Personal interactions, on the other hand, influence students’ GPA, but GPA does not influence students’ personal engagement with faculty. For all students, academic and personal student-faculty interactions affected student’s college GPA. College GPA is also a predictor of student informal and academic engagement with faculty for all racial groups except Asian Americans, but it is stronger for African American and Latino students. Student-faculty interaction was a positive predictor of White students’ educational aspirations but not for any of the other racial groups. Educational aspirations were
predictors of academic and informal interaction for all student groups, thus suggesting that degree aspirations for Students of Color are not impacted by interactions with faculty.

Kim’s (2010) study was successful in highlighting the differential engagement patterns of White, African American, Asian American and Latino students. However, this study intentionally excluded community college students since community college students were underrepresented in both the SIF and the CSS. Community colleges enroll nearly half of all Students of Color enrolled in undergraduate institutions (Mullin, 2012). Thus, there is a real need to understand the engagement patterns of Students of Color who begin their educational trajectory at a community college.

Chang’s (2005) study is one of the few that discusses faculty engagement with students at the community college level. The researcher sought to address how interaction differs among racial subgroups of students, as well as the background characteristics and college environments which lead students to interact with faculty. Chang used a representative sample of 5000 students enrolled at the nine campuses of the Los Angeles Community College District during the spring of 2001 and used descriptive statistics and ordinary least squares regression analysis to examine the data. Chang found that students were more likely to interact with faculty through active participation in classroom discussions or by posing questions to faculty before and/or after class. Additionally, African American students are more likely than any other racial group (White, Latino, Asian American/Pacific Islanders) to interact with faculty. Chang’s study begins to address the engagement patterns of community college students, more specifically of Students of Color. However, the study has several limitations. First, the author collected data at only one point in time. It is possible that students’ engagement patterns changed throughout their educational enrollment. Second, although the study benefits from a large sample, the sample is
not nationally representative and therefore not generalizable to students outside of the Los Angeles Community College District.

Flowers (2006), conducted a quantitative study on the effects of attending a two-year institution for African American males and subsequent social and academic integration during the first year of college. Flowers conducted descriptive and multivariate analysis of the 1996/1998 Beginning Postsecondary Students Longitudinal Study (PBS). The author included the engagement experiences of African American males enrolled at two-year and four-year institutions and found that students enrolled at four-year public institutions reported higher levels of academic and social integration during the first year of college. Specifically, African American males at four-year colleges or universities participated in study groups outside of class, met with faculty to discuss academic matters outside of class, met informally or socially with faculty, and met with an academic advisor at higher frequencies than African American male students at two-year public institutions. Although Flower’s (2006) study emphasizes the differential engagement patterns of Black male students enrolled in two- and four-year institutions, it does not address the variables which predict engagement for students enrolled at each of the institutions.

Wood and Ireland (2014) sought to understand the student-level background, academic and environmental factors, structural variables and academic factors which influence engagement with faculty in and outside of the classroom for Black male students enrolled in community colleges. The authors, based on prior literature, developed a theoretical model addressing the determinants of faculty-student engagement. The model focused on the impact of pre-college and background/defining considerations, structural, environmental, academic and psycho-social factors on faculty-student engagement. Wood and Ireland utilized the Community
College Survey of Student Engagement (CCSSE) delivered in 2011 to community college students. The final sample in the study was limited to Black male students who were enrolled in community colleges where more than 20 Black male students were retained. The final sample included a total of 11,384 Black students within 260 community colleges.

The researchers analyzed the data using hierarchical, multiple regression and included four models. The first model (the null model) accounts for variation between the colleges. The second model added background/defining factors at the student level and structural factors. The third model included previous models and added academic factors. The final model accounted for the previous three models and included environmental pull-factors. The researchers found that commuting to campus, providing care for dependents, attending medium colleges, participation in reading remediation, learning communities and study skill courses, and the number of credits earned were predictors of engagement with faculty for Black male students.

Wood and Ireland’s (2014) research brings to the forefront the engagement experiences of Black male students enrolled in two-year public institutions and attempts to highlight the variables which predict engagement for Black male students. This study, although focused singularly on the experiences of male students, is critical in expanding understanding of the variables which have the potential to influence engagement for all Students of Color enrolled in community colleges.

The above studies highlight the differential engagement patterns for Students of Color and begin to address the factors which influence engagement with institutional agents for Students of Color. Kim’s (2010) study highlighted different patterns of engagement, and subsequent benefits of interaction for White students and Students of Color enrolled at four-year institutions, excluding the engagement experiences of community college students. Chang’s
(2005) is a seminal study in understanding the predictors of engagement for Students of Color enrolled in two-year public institutions. However, Chang’s study is bounded within the Los Angeles Community College District, thus limiting its ability to be generalizable outside of the pre-established geographical area. Flowers (2006) and Wood and Ireland (2014) focused their respective studies solely on Black male students, thus limiting the generalizability of their studies to Black female students, and students of other ethnicities. Furthermore, although Flowers (2006) work highlighted differential engagement patterns for students enrolled in two- versus four-year institutions, it did not address predictors of engagement.

Pre-college factors. Students join institutions of higher education with lived experiences and diverse backgrounds. These experiences have the potential to influence their ability to achieve their educational goals. Some of the most salient factors that influence student’s ability to leverage the support of institutional agents and achieve their academic goals are further explained below:

Gender. Sax et al. (2005) studied how faculty and student interactions affected male and female students at 204 four-year institutions within the United States. The researchers found women have more frequent and positive interactions with faculty, but men tended to have higher gains in promoting racial understanding, cultural awareness and liberal political views. Moreover, for men and women, their academic identities, gender-role expectations, sense of self-esteem and orientations towards community, are all affected by how much time they spend with faculty and how faculty responds to such interaction (Sax et al., 2005). Sax ex al. (2005) identified that for men, being supported by faculty resulted in more egalitarian views on gender roles. Women who reported, “receiving honest feedback from faculty reported gains in their sense of physical and emotional health, academic performance, and overall drive to achieve” (p.
The results of the study are consistent with Nora, Cabrera, Hagedorn, & Pascarella's (1996) findings which suggests one of the most significant predictors of persistence for female students was the interaction they had with their professors outside the classroom. Overall, female and male students benefited from interactions with faculty members, but the outcomes of interaction varied.

**First-generation.** Status as a first-generation college student is a negative predictor of student involvement (Lundberg, Schreiner, Hovaguimian, & Slavin Miller, 2007). Soria & Stebleton (2012) investigated the differences in academic engagement between first-generation and non-first-generation students enrolled in a mid-western university classified by the Carnegie Foundation as having very high research activity. The researchers used logistic regression to predict retention from first to second year while controlling for race, gender, social class, grade point average, campus climate and sense of belonging. After the regression analysis, the researchers utilized t-tests to examine differences between first-generation and non-first generation students in relationship to academic engagement measures. The researchers found that students from a first-generation background, compared to their non-first generation peers, report lower mean scores on engagement inside the classroom, including contributing to a class discussion, asking questions during class, bringing up ideas from other courses and interacting with faculty during class lectures. The above finding is supported by Hu and Kuh (2002) who found that parental education was positively associated with student engagement.

**Income status.** Arzy, Davies and Harbour (2006) studied the engagement patterns of low-income and traditional aged students enrolled in four universities in a mid-western US state. The authors conducted in-depth interviews with 14 students in their freshmen through senior year of college and sought to understand how students participated in academic and social life on
campus. Arzy, et al. (2006) reported that low-income students approached engagement with faculty cautiously within and outside the classroom setting. Within the classroom setting, low-income students tended to feel disconnected to their peers and faculty, and were uncomfortable sharing their ideas. Outside of the classroom, students opted to work in isolation instead of asking faculty for assistance for fear that the faculty might be annoyed.

**Environmental pull factors.** The students’ academic success may be impacted by background characteristics such as race and gender, but also environmental factors, including the level of institutional aid students receive, status as a non-traditional student, and degree aspirations.

**Non-traditional students.** Non-traditional students, defined as students older than 25 years of age with delayed or interrupted enrollment into the higher education pipeline (Bailey, Calcagno, Jenkins, Kienzl, & Leinbach, 2005), attend community colleges with more frequency than four-year colleges or universities (Williams-Chehmani, 2009; Wirt, 2010). Research studies highlighting the engagement patterns of non-traditional students yield contradicting results. Whereas Wyatt (2011) found non-traditional students to have differential engagement patterns than traditional aged students, Rosenthal, Folse, Alleman, Boudreaux, Soper and Von Bergen (2000) and Wirt (2010) found similarities in engagement characteristics of both groups.

Wyatt (2011), utilized data from the 2006 National Survey of Student Engagement to highlight differential engagement patterns between traditional and non-traditional students: traditional students are more likely than their non-traditional peers to be engaged in community services, research with faculty members, and extra-curricular activities. On the other hand, non-traditional students tend to participate more actively within the classroom setting. Congruent with the National Survey of Student Engagement, research findings from this qualitative study
verified that non-traditional undergraduate students have different engagement patterns than their traditional student peers. Furthermore, while non-traditional students had difficulty engaging outside the classroom, they were likely to engage with faculty and students in the classroom if “they like the instructor, course, or students” (Wyatt, 2011, p. 16).

Contrary to Wyatt (2011), Rosenthal et al. (2000), found non-traditional and traditional students enrolled in four-year universities do not report differences in their interaction tendencies. Rosenthal et al. surveyed 193 students enrolled in a small southern university to assess the impact of faculty and student interaction on course outcomes as well as to compare the interaction tendencies, and their subsequent effect on traditional and non-traditional students. The researchers hypothesized non-traditional students and traditional students differ in (a) tendencies to initiate one-on-one contact, (b) overall satisfaction with interaction, (c) the effect of negative and positive interactions on course outcomes, (d) the effect of positive or negative interactions on the students’ evaluation of the professor and (e) the students’ narratives of interaction (p. 316). The results of the study led the researchers to conclude both non-traditional and traditional students have similar interaction tendencies. Furthermore, students’ quality of interaction with one faculty member tended to impact their perception of interaction with other faculty. For example, students who reported a positive interaction with one professor, reported satisfaction with all other faculty. The opposite is also true: students who reported a negative experience with professors tended to report significantly lower satisfaction with all faculty. Congruent with Rosenthal et al. (2000), Wirt (2010) found similar patterns of engagement between traditional-aged and non-traditional students enrolled in community colleges.

**Degree aspirations.** Students who begin community colleges have degree aspirations beyond the associate degree and more than one-fourth of students at public and private two-year
colleges indicated intentions to obtain a bachelor’s or master’s degree (Laanan, 2003). Students’ aspirations to receive a higher education are closely related to the students’ intellectual self-concept (Cole, 2007). Intellectual self-concept – when students believe they are capable of succeeding; they are more likely to achieve their goals – leads to greater degree attainment (Cole, 2007). Faculty, as institutional agents, play a crucial role in influencing students’ degree aspirations (Bensimon & Dowd, 2009; Chang, 2005). Bensimon and Dowd highlight the importance of institutional agents in facilitating students’ success: “Students have aspirations and hopes, but without the guidance, support, and active involvement of … [institutional] agents, they may not have access to the resources they need to be successful” (2009, p. 651). Unfortunately, Kim (2010) found that interactions with faculty increase only the degree aspirations of White students, and appear to have no effect on African Americans, Asian Americans and Latino students’ aspirations to obtain an advanced degree. At the same time however, Kim (2010) also found a strong and positive relationship between students’ degree aspirations and subsequent interaction with faculty. Across all racial groups, students who aspired to higher degree attainment tended to interact more informally and academically with faculty. Thus, while interaction with faculty does not appear to impact the degree aspirations of Students of Color; increased degree aspirations influence interaction with faculty.

**Undergraduate experiences.** Undergraduate experiences speak to the activities in which students engage in within the educational setting. Similar to students’ background characteristics and environmental pull-factors, academic and social experiences have the potential to influence the students’ engagement with institutional agents. These experiences include: enrollment intensity, overall academic success, social integration, whether students participated in remedial courses or study groups, and overall integration into the institution.
**Enrollment intensity.** Enrollment intensity—whether students enroll as part- or full-time students—affects student engagement with institutional agents. Students who enroll part-time tend to be older, financially independent and often the first in their families to attend college (B. Jacoby, 2014). Unfortunately, there exists a negative relationship between part-time enrollment and greater risk of not attaining their educational goals (Jacoby, 2014). To elaborate further, adult learners who enroll full-time tend to have higher engagement patterns than students who attend higher education institutions part-time (Southerland, 2010). Southerland’s finding is unsurprising because students who are enrolled part-time may be more disconnected from the institution, and/or have other life responsibilities preventing them from engaging with faculty outside of the classroom setting.

**Academic success.** The impact of academic success on student engagement is supported by Cole (2010) and Kuh, Cruce, Shoup, Kinzie, and Gonyea (2008). Cole (2010) studied the effects of student-faculty interactions on the academic achievement of minority students. Cole investigated minority students’ interactions with faculty at 10 predominantly White, four-year institutions. The author utilized the College Student Experiences Questionnaire (CSEQ) administered in 1997 to gather a sample of 2,073 African American, Asian American and Hispanic students. Cole attempted to disaggregate data by race/ethnicity to show patterns of student and faculty interactions and their impact on college grades. Findings from Cole’s study reveal that course related contact and mentoring relationships positively influenced minority students’ GPA, whereas receiving advice and criticism from faculty was negatively related to students’ GPA. However, after disaggregating data by race/ethnic group, the effects of faculty contacts on GPA were nonexistent for Latino students. Students’ interactions with faculty for
course related contact remained significant for African American and Asian American students, but the relationship was negative for Asian American students.

Kuh et al. (2008) examined the link between student engagement and academic achievement and persistence. The authors focused their research on 18 baccalaureate-granting institutions which utilized the National Survey of Student Engagement (NSSE). For the purposes of their study, the researchers operationalized student engagement as time spent studying as well as time spent in co-curricular activities. Kuh et al. (2008) used logistic regression analysis to measure the effects of time studying, time spent in co-curricular activities on academic year grade point average and persistence to the second year. In the first model of the regression analysis, which included students’ demographic characteristics, pre-college experiences and prior academic achievements, the researchers found that previous high school academic success was the strongest predictor of grade point average within the first year of college. In the second model, which included students’ background characteristics and in-college experiences, students’ pre-college experiences remained statistically significant, but decreased their impact. The results of the study demonstrated that a one standard deviation an increase in engagement during the first year of college predicted a .04 increase in GPA. Similarly, the authors found student engagement in the first year of college served as a positive predictor of persistence to the next academic year. The study also concluded, “who students are when they start college – their background characteristics and pre-college behavior—is associated to a non-trivial degree with what they do in the first college year” (p. 546, emphasis in original). The preceding study, although based on student engagement at baccalaureate institutions, highlights the importance of engagement. Student engagement, as demonstrated by Kuh et al. (2008) is a strong predictor of academic success and persistence. The connection between academic success and student
engagement with faculty is also supported by DeFreitas and Bravo (2012) who found that when students are able to connect with faculty about academic matters outside of the classroom, they perform better inside the class.

**Academic and intellectual development.** Lundberg and Schreiner (2004) investigated the relationship between learning and student engagement with faculty in a sample of 4,501 Students of Color who took the College Student Experiences Questionnaire (CSEQ) between 1998 and 2001 and were enrolled in four-year institutions across the United States. The majority of student respondents were female (61.7%), 19 years of age or younger and first-generation. The authors measured the frequency of student interaction with faculty outside the classroom related to academic or personal issues, social interactions, interactions which caused students to work harder or interactions related to issues of a student organization. The dependent variable for the study was learning, a composite variable that was constructed by using the average scores of 25 items which were representative of five areas: general education, science and technology, personal development, vocational preparation, and intellectual skills. Lundberg and Schreiner (2004) found the quality of relationships with faculty was “the only variable that significantly predicted learning for all the racial/ethnic groups” (p. 555). Furthermore, faculty interaction “contributed more to student learning for Students of Color than it did for White students” (p. 557). The more salient conclusion from Lundberg and Schreiner’s (2004) study was the “positive influence faculty members have on student investment of energy in academic endeavors” (p. 559).

**Declared major.** The relationship between declaring a major and ensuing persistence and degree completion is unclear. Titus (2004) found that for students who enrolled in a four-year institution, declaring a major is unrelated to college persistence. However, later studies by the
author found a positive relationship between students who declared a major and their future persistence (Titus, 2006b) and degree completion (Titus, 2006a). Ronco and Cahill (2004) also found a correlation between declaring a major during the first year of enrollment and retention: entering higher education, and specifically a four-year institution, without declaring a major lowers retention by 17 percentage points by the second fall of enrollment. Related to student engagement with faculty, Cole (2007) found that the effects of declaring a specific major were different depending on the type for student engagement with faculty. For example, declaring a major in Agriculture, English or Physical Science was a strong and positive predictor of students’ interaction with faculty for course-related matters. Similarly, majoring in Fine Arts is a positive predictor of engagement with faculty for advice and criticism; whereas majoring in Engineering, Math or Physical Science is a negative predictor of engagement in the advice and criticism engagement factor. Finally, Cole (2007), found that declaring a major in Biological Sciences, English, Health, Physical Sciences or Social Sciences were positive predictors of mentoring relationships. In contrast, majoring in Business was a negative predictor of engagement.

**Remedial education.** Enrollment in remedial courses is a positive predictor of engagement with faculty (Glaser, 2011; Wood & Ireland, 2014) and the percentage of students who enroll in developmental education and interact with faculty has steadily increased over the last 10 years. In 2004, 24% of students who enrolled in developmental education worked with instructors on activities other than coursework. By 2014, the percentage rose to 30% (Center for Community College Student Engagement, 2015). Students who identify as female, Black or Latino/a tend to need more levels of developmental education (Bailey et al., 2010). As highlighted earlier (Chang, 2005), Black, Latino/a and female students have the highest
engagement frequencies with faculty, suggesting that “students needing the most remediation are also the students with highest engagement scores implying that they are working harder and achieving less” (Glaser, 2011, p. 118).

**Study groups.** Participation in study groups is a strong predictor of engagement with faculty (Chang, 2005; Cole, 2007), especially for Students of Color. For Black students in particular, participation in study groups positively influences academic performance and social integration (Kincey, 2007). Furthermore, for all Students of Color enrolled in community colleges, participation in study groups is closely associated with increased sense of comfort and belonging (Deil-Amen, 2011).

**Social integration.** Social integration is a key component in facilitating student retention; When students feel they are part of the institution, they are more likely to enroll for a second year (Hausmann, Ye, Schofield, & Woods, 2009). Karp, Hughes, and O’Gara (2010), investigated community college students’ integration into the college campus and subsequent progress towards a degree in an exploratory qualitative study of persistence in community college students. For the purpose of their study, Karp et al. defined student integration as “having a sense of belonging on campus” (p. 75). To investigate students’ sense of belonging, the authors interviewed 44 second-semester students at two community colleges in the Northeast region of the United States. Six months after the initial interview, the researchers attempted to conduct a second interview with the same 44 students, but contact was made with 36 students. Karp et al. (2010) found that “integration is related to community college students’ persistence” (p. 84). In the same study 90% of students who described being integrated into the college persisted to second year, whereas two thirds of those who felt they were not integrated did not persist.
Social integration, for Karp et al., (2010) happens when students are able to participate in information networks or “social ties that facilitate the transfer of institutional knowledge or procedures” (p. 76). In their research, the authors emphasized the need for students to feel connected to the campus community and found students benefited from their interactions with institutional agents. Their study, although significant, is limited in its ability to generalize findings to the larger population of community college students due to the small sample size and geographical location since the sample may not be representative of the larger community college populations throughout the United States.

Karp, Hughes, and O’Gara (2010) are not the only researchers who have focused their attention on the impact social integration has on persistence and student success. For example, Tinto and Pusser (2006) posited that the more students are socially and academically integrated into the institution, the more likely they are than their peers to persist toward graduation. Social integration into the institution happens through various mediums. Barnett (2011), through an exploratory factor analysis, established four components of integration: (a) students are known and valued; (b) caring instruction; (c) appreciation for diversity, and (d) mentoring. Barnett’s (2011) study serves to highlight the importance of caring and mentoring relationships between institutional agents and students. Students who feel cared for are likely to engage with faculty. Stanton-Salazar’s (2001) findings are also congruent with Barnett’s research outcomes. Stanton-Salazar articulates, “When such bonding between agent and student becomes a defining characteristic of the school community as a whole, students experience a certain ‘we-ness’, a collective identity that is highly consonant with increased effort engagement and academic achievement” (p. 13).
In short, social integration within the institution leads to higher retention rates, persistence, and overall student success. However, the most powerful predictor of student integration is the development of student-faculty relationships. Student engagement with faculty, therefore, not only facilitates students’ sense of “we-ness” but also reinforces students’ sense of belonging. When students feel as though they belong, their commitment towards degree completion strengthens.

Significance for Practice and Research

The majority of research on student engagement with faculty focuses on the engagement experiences of students enrolled at four-year colleges and universities (Wirt, 2010), often excluding the lived experiences of community college students. Students of Color attend community colleges at higher rates than they do four-year institutions (Arbona & Nora, 2007). While the relationship between student interaction with faculty and subsequent academic success (i.e. retention, graduation and transfer) has been documented, “there is little understanding of the process by which such interactions take place” (Cox & Orehovec, 2007, p. 344). This literature synthesis integrated (a) the relationship between engagement patterns of Students of Color with faculty, and the benefits associated from engagement, and (b) explored the factors which influence engagement. For practitioners, understanding the factors that promote and hinder involvement serves as a starting point for the creation or removal of institutional practices that mitigate student engagement with faculty (Price & Tovar, 2014). In light of national initiatives (e.g. American Graduation Initiative) that seek to increase the number of students who graduate with at least an Associate’s degree or certificate by 2020 (“Building American skills through community colleges,” 2016), it is of the upmost importance to increase knowledge of the educational experiences of students enrolled in community colleges. This narrative contributes to
scholarship on community colleges by expanding understanding on the engagement experiences of the fastest growing student demographic, Students of Color (Chang, 2005).

**Implications for Future Inquiry and Practice**

The above literature review focuses heavily on the engagement experiences of students enrolled at four year schools, excluding community colleges. For example, Sax et al. (2005) and Nora et al. (1996) highlight the dissimilar effects of gender on student engagement. However, both Sax et al. (2005) and Nora et al. (1996) focused on the engagement experiences of students enrolled at four-year schools. Similarly, status as a first-generation college student (Lundberg et al., 2007; Soria & Stebleton, 2012) and being from a low-income background (Arzy et al., 2006), influences student engagement with faculty for students enrolled at four-year schools. Academic success (i.e. GPA) is positively associated with student engagement with faculty for four-year students (Cole, 2010), and student engagement with faculty positively affects Students of Color GPA (DeFreitas & Bravo, 2012; Kuh et al., 2008). Overall, while researchers have emphasized variables which have the potential to influence the engagement of Students of Color, the effect of being a community college Student of Color has not yet been fully explored.

The few studies which focus on the experiences of Students of Color are either not nationally representative or have a granular focus within a specific population (i.e. Black males). Chang (2005) focuses on understanding the predictors of engagement for Students of Color enrolled in two-year public institutions, however that study analyzed only data within the Los Angeles Community College District. Students who participated in the study may not be representative of all students enrolled in community colleges across the United States, thereby limiting the ability of the author to generalize the results outside of the Los Angeles area. Flowers (2006) and Wood and Ireland (2014) focused their respective studies solely on Black
male students, thus limiting the generalizability of their studies to Black female students, and students of other ethnicities.

The above literature review situated the engagement experiences of Students of Color within the community college context, highlighted the differential engagement patterns of Students of Color, and grounded the variables which have the potential to influence student engagement with institutional agents within Nora et al.’s (2006) Student Engagement Model. The present research synthesis also highlighted the need for further research that focuses on the engagement experiences of community college students, and the effects of campus climate for Students of Color on engagement.

High rates of Students of Color impact the institutional campus climate. Hurtado et al. (1998) conceptualized institutional campus climate as the intersection of four dimensions that result from educational programs and practices. The four dimensions include: (a) the institution’s historical legacy of inclusion or exclusion; (b) its structural diversity; (c) the psychosocial climate of perceptions and attitudes between and among groups; and (d) behavioral climate. While each of the dimensions listed above are of key importance in creating a campus climate that support the success of Students of Color, the structural diversity of the campus warrants special consideration as it relates to the engagement relationships between Students of Color and institutional agents. Hurtado et al. (1998) highlight the importance of increasing the diversity of the student body as a means to improve the educational experiences of students. Unfortunately, other researchers highlight the negative relationship between increased Students of Color and ensuing graduation rates (Bailey et al., 2005; Bank et al., 1990; Oseguera & Rhee, 2009; Titus, 2004); For example, Bailey et al., (2005) explain that minority students are less likely to graduate from community colleges when they attend colleges with high percentages of minority students.
Congruent with Bailey et al. (2005), Oseguera and Rhee (2009) articulate the negative relationship between peer climates, defined as the aggregate student body composition, and lower graduation rates. In short, increases in Students of Color within the educational setting lead to decreases in individual student gains.

As demonstrated by Karp et al. (2010), Hausmann et al. (2009) and Tinto and Pusser (2006), students’ sense of social integration is a strong component in facilitating not only student engagement with faculty, but also enrollment into the second year and persistence towards graduation. Hurtado et al. (1998) underscore that racially and ethnically diverse students tend to have different views of the campus climate. Furthermore, unfavorable perception of the campus climate has a direct and negative effect on students’ sense of belonging, especially for Latino students (Hurtado & Carter, 1997). It is important for future research to explore not only the negative effects between increased Students of Color within an organization and decreased overall student success and engagement with faculty. More importantly, the reasons why the relationship between the two factors exist must be analyzed. Therefore, additional research on Hurtado et al.’s (1998) campus climate model, and specifically the psychological dimension of the campus climate, requires further exploration, particularly as it relates to students’ perception of the campus racial climate and its effects on subsequent engagement with faculty. Future research on the engagement patterns of Students of Color enrolled in community colleges should focus not only on the quantity of interaction, but also the quality of said interaction. Additionally, future research should focus on factors which more holistically represent the undergraduate experiences of community college students.
Summary

Over the last 40 years, much attention has been given to student success at four-year colleges and universities. As a consequence, there has been a growth in the understanding of what factors influence student persistence and graduation. One factor which impacts student persistence and graduation rates are the interactions between faculty and students. Faculty interactions with students outside of the classroom are a key factor in increasing student engagement resulting in the student’s graduation from the institution. There has been a growth in the understanding of students at four-year colleges and universities. However, the experiences of students who enroll or begin their educational career at two-year community colleges are less examined; this is especially true about the engagement experiences of Students of Color. The preceding pages outlined the current understanding of the factors which influence student engagement with institutional agents and included the relationship between pre-college factors, environmental pull factors, undergraduate experiences and student engagement.
Chapter III: Manuscript II

Investigating the Factors Which Contribute to Mentoring Relationships Between Students of Color and Institutional Agents in Community Colleges.

Increasing student retention and completion remains an important issue in our society, especially considering President Obama’s American Graduation Initiative that seeks to increase the number of students who receive an Associate’s Degree/Certificate or above (“Building American skills through community colleges,” 2016). Community colleges stand to be the main contributor to the American Graduation Initiative (AGI) (Kotamraju & Blackman, 2011). The AGI calls for community colleges to meet students’ needs, offering students “comprehensive, personalized services to help them plan their careers, stay in school, and graduate” (“Building American skills through community colleges,” 2016). Student interaction with faculty not only helps to address the intent of the aforementioned initiative, but is exalted by educational researchers as a tool to increase students’ successful outcomes (Crisp & Cruz, 2009).

Previous research supports the importance for Students of Color to maintain frequent informal interaction with faculty (Campbell & Campbell, 1997). For example, M. E. Levin and J.R. Levin (1991) posit that the frequency of interaction with faculty “bears heavily on both academic success and social satisfaction” of students (p. 325). Similarly, Santos and Reigadas (2002) found that frequency of contact with faculty mentors is positively associated with the college adjustment of Latino students. The more Latino students interact with faculty, the more they demonstrate higher levels of self-efficacy, define their academic goals, perform well and meet academic obligations. For African American students, frequent interaction with faculty is also associated with increased access to resources essential for academic success (Kincey, 2007). Student interaction with faculty during the first year of college is of particular importance since it
has the potential to impact students’ sense of belonging in later years of college (Hurtado & Carter, 1997) and is a positive predictor of student retention to the second year of college (Upcraft et al., 2004). In short, higher frequency of interactions with faculty led to higher cognitive and non-cognitive outcomes.

Several factors impact the success of Students of Color and first generation students during the first year of enrollment. First generation students have higher attrition rates during the first year of enrollment in comparison to students who have at least one parent with a college education (Ishitani, 2003). Similarly, Black males have lower persistence at end of end of the first year of enrollment than their White and Asian/Pacific Islander counterparts (Wood & Turner, 2010) and show lower levels of social integration in the first year of college (Flowers, 2006). Male students in general and students with lower abilities tend to have lower grades at the end of their first year (Pike, Kuh, & Massa-McKinley, 2008). Finally, large portions of part-time faculty results in lower GPAs throughout the first year (Ronco & Cahill, 2004). However, student engagement within the first year of enrollment in educationally purposeful activities has compensatory effects on persistence (Kuh et al., 2008), especially engagement with faculty (Rendón Linares, 1993).

Student’s informal or social contacts with faculty outside of classroom are a representation of mentoring relationships between faculty and students (Crisp & Cruz, 2009). Mentoring, defined by Campbell and Campbell (1997) is “a situation in which a more-experienced member of an organization maintains a relationship with a less-experienced, often new member to the organization and provides information, support, and guidance so as to enhance the less-experienced member’s chances of success in the organization and beyond” (p. 727), leads to students’ successful outcomes. For Students of Color, mentoring relationships
have several benefits. First, students’ informal interactions with faculty leads students to “feel valued and important” (Cox & Orehovec, 2007, p. 355). When Students of Color feel valued and important, they are more likely to persist in their educational studies (Allanbrook Barnett, 2011). Second, mentoring relationships facilitate students’ personal and social adjustment to college by providing emotional support and access to resources and information (Santos & Reigadas, 2002). Beyond integration into the educational system, students in mentoring relationships are more likely than their peers who lack faculty mentoring relationships to have higher grade point averages and increased chances of persistence (Campbell & Campbell, 1997; Crisp & Cruz, 2009; Kincey, 2007). Across the board, students’ engagement with faculty outside of the classroom for informal and social interactions is crucial in increasing students’ overall academic, career and personal development. Although student informal or social engagement with faculty outside the class leads to increases in student successful outcomes, much of the research has focused on four-year institutions, with traditionally aged students, in predominantly residential campuses (Chang, 2005; Wirt, 2010). Community colleges enroll more than 45% of the total undergraduate population and 51% of students who attend community colleges are Students of Color (American Association of Community Colleges, 2016). Consequently, it is of upmost importance to understand the factors that influence student engagement with faculty at community colleges since “there is little understanding of the process by which such interactions take place” (Cox & Orehovec, 2007, p. 344).

Student engagement with faculty, however, is complicated when faculty employment status is considered. Part-time faculty account for more than two thirds of all the faculty at community colleges (J. S. Levin & Hernandez, 2014), and teach nearly half of all courses (D. Jacoby, 2006). High levels of part-time faculty are associated with decreased students’ successful
outcomes, including student engagement (Porter, 2006), retention (Jaeger & Hinz, 2008), graduation (Bailey et al., 2005; Calcagno et al., 2008; Ehrenberg & Zhang, 2005) and transfer rates (Eagan & Jaeger, 2009).

**Purpose and Research Question**

The purpose of this study is to understand the factors which contribute to the frequency of students’ informal engagement with institutional agents during the first year of enrollment in community colleges across the United States. The research question that will guide this study is:

- What student demographics, pre-college experiences, environmental pull factors, and undergraduate experiences influence frequency of informal or social interaction with institutional agents outside of the classrooms and office hours during the first year, among Students of Color at community colleges?

**Theoretical Perspectives**

The present study is guided by two theoretical perspectives: (a) Stanton-Salazar’s (1997) conceptualization of institutional agents and (b) Nora, Barlow and Crisp’s (2006) Student Engagement Model.

**Institutional agents.** A high proportion of Students of Color are low income and first generation college students (Stanton-Salazar, 2011). Institutions of higher education operate with middle class values that support White students from middle class backgrounds (Stanton-Salazar, 2011). Students of Color, in addition to learning to be students, have to learn to navigate middle-class processes to be successful in school. Students can gain the information and resources to succeed through by increasing their social capital. Social capital, defined as “privilege knowledge, resources, and information” (Soria & Stebleton, 2012) is maintained and reproduced through the transmission of information channels within social networks (Coleman, 1990).
Social networks serve as “lifelines” (Stanton-Salazar, 2011) for students, providing resources and opportunities to “overcome social structural barriers and experience school success and social mobility” (Carrasco-Nungaray, 2011, p. 11).

One example of these lifelines, as Stanton-Salazar (1997) describes them, are institutional agents. Institutional agents “occupy relatively high positions in the multiple dimensional stratification system, and … are well positioned to provide key forms of social and institutional support” (Stanton-Salazar, 2011, p. 15). In the context of community colleges, institutional agents can be faculty members with knowledge of the institution that can provide “a whole spectrum of social and institutional support that contributes to [the students’] social development and academic performance” (Stanton-Salazar, 2011, p. 8, emphasis in original). For Students of Color who might be unfamiliar with the educational system, institutional agents provide guidance, support and advocacy on their behalf (Bensimon & Dowd, 2009; Carrasco-Nungaray, 2011).

**Nora et al.’s (2006) Student Engagement Model.** Over the last four decades, researchers have sought to understand the role student engagement with faculty plays in facilitating student success, retention and completion. Pascarella and Terenzini’s (1980) Conceptual Model of the Drop Out Process and Bean’s (1981) Synthetic Causal Model of Student Attrition, provide a foundational analysis for understanding the importance of faculty-student interactions. Although the models proposed by Pascarella and Terenzini (1980) and Bean (1981) provide a foundational understanding of engagement, they focus on traditionally aged students at four-year institutions, frequently excluding community college students who often are Students of Color, non-traditional students who commute to campus, work at least part time, and have other life responsibilities (i.e. familial obligations) (Elsner, 2002; McClenny & Greene,
The Student Engagement Model provides a holistic approach to understanding the factors which affect student persistence, serves as the theoretical model for this study, and highlights the importance of understanding not only the student background characteristics, but also the context in which the student attends school and the connection to the campus community. The Student Engagement Model proposes six components which influence persistence: The first component encompasses precollege factors, including students’ background characteristics, previous academic abilities, financial need and familial support. Including in this component are pull factors: aspects within the students’ lives that may pull students away from the educational setting, including but not limited to financial assistance received and the number of hours the student is required to work. Second, sense of purpose and institutional allegiance, highlights students’ commitment to enroll and continue to be enrolled at the institution. The third component, academic and social experiences, focuses on the experiences students have once enrolled at a community college. Embedded within the third component are students’ interaction with institutional agents, including faculty, and counseling/advising staff. In this sense, the model highlights the importance of students’ engagement with institutional agents to impact persistence. Fourth, the model centers on the cognitive (i.e. academic performance) and non-cognitive (i.e. appreciation for the arts) gains that students have while enrolled at the institution. The fifth aspect of the model emphasizes students’ sense of belonging at the institution as a result of their involvement within the institution. The final component in the model, persistence, is impacted by the students’ pre-college, environmental factors, and academic and social experiences within the institution.
Prior Literature

Figure 3 is a theoretical framework adapted from Nora et al.’s (2006) Student Engagement Model that highlights the factors which influence students’ engagement with institutional agents. Previous literature has highlighted the effects of pre-college and pull-factors, sense of purpose, academic and social experiences, and institutional allegiance on students’ interaction with institutional agents and is further explained below.

Pre-college factors. Students’ pre-college factors and pull-factors influence students’ ability to interact with institutional agents. To begin with, students’ race and gender have the potential to impact how/if they interact with institutional agents. African American students are more likely than any other group to have personal interactions with faculty whereas Asian/Pacific Islander students were least likely to interact (Kim, 2010). Similarly, there is a discrepancy in the interaction between male and female students: Whereas female students interact with faculty at higher frequencies in comparison to male students, the effects of such
interaction are greater for male students (Nora et al., 1996; Sax et al., 2005) Status as a first generation college student, and being from a low-income household also impacts engagement with institutional agents. First, status as a first-generation college student, that is, neither parent obtained a bachelor’s degree, is a negative predictor of student engagement with faculty (Lundberg et al., 2007; Soria & Stebleton, 2012). Finally, low-income students approach engagement cautiously, often working in isolation rather than consulting with faculty (Arzy et al., 2006).

**Environmental pull factors.** Environmental pull-factors force students to focus their attention away from their educational studies and impact students’ interaction with institutional agents. To begin with, employment status, whether students work outside the school setting impacts students’ engagement with institutional agents. The more students work outside of school, the less likely they are to be engaged with faculty (Pike et al., 2008; Southerland, 2010). Furthermore, non-traditional students, defined as students older than 25 years of age with delayed or interrupted enrollment into the higher education pipeline (Bailey, Calcagno, Jenkins, Kienzl, & Leinbach, 2005) have different enrollment patterns than traditional students (Bailey et al., 2004; Wirt, 2010; Wyatt, 2011), and tend to interact with faculty primarily within the classroom setting.

**Undergraduate experiences.** Academic and social experiences, including whether students enroll full- or part-time, are academically successful, participate in study groups and feel socially integrated into the institution, impact engagement with institutional agents. First, students who enroll full-time tend to have higher engagement patterns than students who attend higher education institutions part-time (B. Jacoby, 2014; Southerland, 2010). Student engagement with faculty is a strong predictor of academic success (DeFreitas & Bravo, 2012).
Students who engage with institutional agents have higher grade point averages than those students who do not engage (Kuh et al., 2008). Finally, social integration – when students feel connected to the campus community, including other students, is a strong predictor of students’ engagement with institutional agents and subsequent persistence (Barnett, 2011; Stanton-Salazar, 2001).

Conceptual Model

Nora et al.’s (2006) Student Engagement Model and Stanton-Salazar’s (1997) concept of institutional agents bound the present study. The Student Engagement Model, a holistic view into the factors that influence students’ persistence in higher education, was utilized to identify the independent variables that have the potential to influence students’ interaction with institutional agents (see Figure 4). Stanton-Salazar’s concept of institutional agents provided guidance in the selection of the dependent variable. Within the context of this study, institutional agents are defined as faculty members at community colleges whom are familiar with institutional practices and procedures and have the power to use their position to support the success of students. The term faculty member refers to both full-time and contingent instructors who teach or, by the nature of their position, have the responsibility to counsel students in their academic pursuits. In this study, students’ frequency of informal or social contacts with faculty members outside of the classrooms and the office is a representation of students’ contact with institutional agents.
Methodology

**Instrument.** The Beginning Postsecondary Students Longitudinal Study (BPS) is a national probability sample, representative of about 4 million students who began their post-secondary education in 2003. BPS obtains its initial cohorts from the National Postsecondary Study Aid Study (NPSAS); a nationally representative study with the purpose to examine how students at postsecondary institutions pay for college. The most recent iteration of the BPS followed students for six years and concluded in 2009. The BPS collected data from students beginning their educational career at colleges and universities across the United States for the first time in the academic year 2003/2004. BPS collects student data in three phases. During the first phase, students are invited to complete a questionnaire either online or through the phone and receive a $30 incentive. During phase two, non-respondents are followed-up and asked to complete the survey through an automated telephone interview system. For the final phase, remaining students are asked to participate in in-person interviews (Cominole, Wheeless,
Dudley, Franklin, & Wine, 2007). Student participants were selected to be interviewed during or just after their first year in 2004 and interviewed again in their third and sixth year after initial enrollment (Berkner & Choy, 2008). BPS collects data on various topics, including student demographic characteristics, enrollment patterns, persistence and completion, as well as in-school experiences, including students’ engagement with faculty. For the purpose of this study, data will be used from the first year.

**Sample.** Table 1 outlines the limitations placed on the full BPS sample to create the analytical sample for this study. The recent BPS dataset (2003-04 to 2008-09) contains approximately 16,100 respondents as first-time beginners who had sufficient data to be considered panel respondents for the BPS:04/09 sample (Cominole, Riccobono, Siegel, & Caves, 2010). Approximately 43.1% of all first-time students surveyed in 2004 began their educational career at a public two-year institution (Berkner & Choy, 2008). The final sample in this study is limited to degree-seeking students and the approximately 35.3% (n~2,400) of students who self-identified as Students of Color, specifically Black, Asian American/Pacific Islander, Latino/Hispanic students who first enrolled in a community college in the 2003/2004 academic year. While the experience of American Indian students is important to consider, this group is excluded from the analysis due to the small sample size. Students of Color are disproportionately represented at two-year community colleges and the factors which influence their engagement patterns with institutional agents have not been fully examined (Chang, 2005). Therefore, studying the factors which influence the engagement pattern of Students of Color at two-year community colleges is crucial. This is especially true for traditionally underrepresented Students of Color (Chang, 2005).
Table 1
Roadmap to the Final Sample

<table>
<thead>
<tr>
<th>Survey</th>
<th>Description</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPSAS: 04</td>
<td>NPSAS:04 sample members</td>
<td>23,090</td>
</tr>
<tr>
<td>BPS: 04/09</td>
<td>NPSAS:04 sample members eligible for inclusion in the BPS:04 cohort</td>
<td>18,640</td>
</tr>
<tr>
<td>BPS: 04/09</td>
<td>BPS:04/09 eligible students that had sufficient data to be considered panel respondents</td>
<td>16,580</td>
</tr>
<tr>
<td>BPS: 04/09</td>
<td>BPS:04/09 approximate sample included within Powerstats</td>
<td>16,100</td>
</tr>
<tr>
<td>BPS: 04/09</td>
<td>BPS:04/09 approximate Powerstats sample of respondents whose first institution of attendance was a public 2-year college</td>
<td>6,940</td>
</tr>
<tr>
<td>BPS: 04/09</td>
<td>BPS:04/09 approximate Powerstats sample after filtering out non-degree seeking students and limiting to Students of Color</td>
<td>2,400</td>
</tr>
</tbody>
</table>

Note: Student numbers are rounded per NCES reporting guidelines.
Students of color include: Asian/Pacific Islander, Black, and Latino/a students

Access to data. The National Center for Education Statistics provides access to the Beginning Postsecondary Students Longitudinal (BPS) dataset through the online statistical tool, PowerStats. PowerStats contains detailed descriptions of the BPS survey questions and provides researchers with the tools to conduct statistical analysis of the publically available data. Additionally, PowerStats provides the appropriate statistical analysis weights for the BPS dataset and ensures that data utilized for analysis will be viable by accounting for the complex sampling design of the NPSAS and the BPS. Therefore, the estimates generated for this study, utilized appropriate methods (i.e., balanced repeated replication) to adjust variance estimation for the complex sample design (Cominole et al., 2010). PowerStats provides indicators for estimates which are unstable, correcting and allowing for accurate interpretation, in addition to reporting estimates which meet the NCES reporting standards by rounding to the nearest 10 and limiting analysis of data with fewer than 30 cases.

Variables and coding. The dependent variable for this study is “faculty informal meeting” (FREQ04A) which asked students to indicate whether or how often the respondent had
informal or social contacts with faculty members outside of the classrooms and the office during the 2003-2004 academic year. Students were given three options to select the frequency of interaction: never (value = 0), sometimes (value = 1) and often (value = 2). The independent variables are included in two categories. The first category includes precollege factors and pull-factors. The second category includes undergraduate experiences. Both are further explained below. See Table 2 for a complete description of variables and coding procedures utilized in this study.

Table 2  
Variables and Coding

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coding Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variables</strong></td>
<td></td>
</tr>
<tr>
<td>Interaction with Institutional Agents</td>
<td></td>
</tr>
<tr>
<td>Faculty informal meeting</td>
<td>Never: 0, Sometimes: 1, Often: 2</td>
</tr>
<tr>
<td><strong>Pre-College Experiences</strong></td>
<td></td>
</tr>
<tr>
<td>Demographic Characteristics</td>
<td></td>
</tr>
<tr>
<td>Gender: Female</td>
<td>0: male 1: female</td>
</tr>
<tr>
<td>Race: Black (reference group)</td>
<td>0: no 1: yes</td>
</tr>
<tr>
<td>Race: Latino</td>
<td>0: no 1: yes</td>
</tr>
<tr>
<td>Race: Asian American &amp; Pacific Islander</td>
<td>0: no 1: yes</td>
</tr>
<tr>
<td><strong>Pre-college Experiences</strong></td>
<td></td>
</tr>
<tr>
<td>Parent’s highest education level</td>
<td>1: Did not complete high school</td>
</tr>
<tr>
<td></td>
<td>2: High school diploma or equivalent</td>
</tr>
<tr>
<td></td>
<td>3: Vocational or technical training</td>
</tr>
<tr>
<td></td>
<td>4: Less than two years of college</td>
</tr>
<tr>
<td></td>
<td>5: Associate's degree</td>
</tr>
<tr>
<td></td>
<td>6: Two or more years of college but no degree</td>
</tr>
<tr>
<td></td>
<td>7: Bachelor's degree</td>
</tr>
<tr>
<td></td>
<td>8: Master's degree or equivalent</td>
</tr>
<tr>
<td></td>
<td>9: First-professional degree</td>
</tr>
<tr>
<td></td>
<td>10: Doctorate/equivalent</td>
</tr>
<tr>
<td>Low Income</td>
<td>0: no 1: yes</td>
</tr>
<tr>
<td>Dependency status 2003-04</td>
<td>0: dependent, 1: independent</td>
</tr>
<tr>
<td><strong>Environmental Pull Factors</strong></td>
<td></td>
</tr>
<tr>
<td>Worked full-time 2003-04 (exclude work-study)</td>
<td>0: no 1: yes</td>
</tr>
</tbody>
</table>
Delayed enrollment 0: no 1: yes
Master’s or above degree aspirations 0: no 1: yes

**Undergraduate Experiences**

Enrollment intensity: full-time 2003-04 0: no 1: yes
College GPA 2003-04 0: Less than 2.0 1: 2.0 – 2.99 2: 3.0 or above
Declared a major 2003-04 0: no 1: yes
Remedial course: any taken in 2003-04 0: no 1: yes
Participation in study groups 0: no 1: yes
Social integration index Range: 0 to 200
Composed variable derived from attended fine arts activities, participated in sports, participated in school clubs

**Precollege experiences.** The first block of independent variables focused on demographic characteristics, precollege factors and environmental pull-factors. Within this category, the first component was student demographic characteristics and included gender (male = 0, female = 1); student’s self-identified race (where 0 = no, 1 = yes) as Asian American or Pacific Islander, Latino, or Black, which was selected as reference group since this demographic represents the largest group in the sample. The second component was precollege factors and included: parent’s highest education (1=less than HS, 10=Doctorate/equivalent), low-income (0=no 1=yes); and delayed enrollment, (0=no 1=yes). The third component included environmental pull factors and contained variables related to working full time (0 = no, 1 = yes); dependency status (0=dependent, 1=independent) and Master’s or above degree aspirations (0 = no, 1 = yes).

**Undergraduate experiences.** The second block of independent variables focused on the undergraduate experiences of students. The following variables were used to represent the experiences of students within the institution: enrollment intensity 2003-04: full-time (0 = no, 1 = yes); college GPA (0 = Less than 2.0, 1 = 2.0 – 2.99, 2 = 3.0 or above); declared major 2003-
remedial course taken 2003-04 (0 = no, 1 = yes); participation in study groups (0 = no, 1 = yes). Social integration (Range: 0 to 200) is a composite variable derived from the following variables: attended fine arts activities, participated in sports, participated in school clubs during the first year of enrollment.

Data Analysis

To understand the factors that contribute to the frequency of students’ engagement with institutional agents, data analysis includes three steps. The first step is to conduct a cross tabulation between the independent and dependent variables by race. The purpose of the first cross tabulation is to gather descriptive statistics of the data to understand student demographic patterns. The second step is a cross tabulation between the dependent variable and each of the independent variables. Finally, regression analyses are used to analyze the variables that predict students’ interaction with institutional agents.

Blocked hierarchical ordinary least squares (OLS) multiple regression analysis was conducted. OLS is a standard linear regression procedure which assumes the values of items are ordinal and is used to analyze two or more independent measures to predict a dependent outcome (Astin & Antonio, 2012). A key advantage in utilizing regression analysis is the ability for the researcher to control for potential biases, thus clarifying the role of each of the independent variables on the dependent variables (Astin & Antonio, 2012). Blocked entry regression analysis is employed, in which the independent variables were entered in two blocks. The blocks divide the different types of variables which are included in sequence (such as students' precollege and college experiences). In the present study, student’s pre-college factors, environmental pull-factors, and undergraduate experiences variables are used to predict student interaction with faculty informally outside of the classroom and office hours.
The blocked regression analysis is organized in two blocks congruent with Nora et al.’s (2006) Student Engagement Model. Linear regression analysis is conducted to determine which variables predicted the frequency of student interaction with faculty informally outside of the classroom and office hours. Blocked regression analysis is used to assess the contribution of each set of variables to the model. The first regression model includes the group of variables associated with pre-college and environmental pull factors (Model 1), which included (a) demographic variables (gender and race) (b) pre-college factors (parent’s highest education, income, and dependency status) (c) environmental pull factors (employment, delayed enrollment and degree aspirations: Master’s or above degree aspirations). The final regression analysis includes the first model with the additional variables that highlighted students’ undergraduate experiences (Model 2), namely: enrollment intensity: full-time, college GPA, declared major, remedial course taken, participation in student groups and social integration.

**Limitations**

There are several limitations to this study that are acknowledged before proceeding with the reporting of the findings. First, this study was limited by the publicly available data of the Beginning Post-Secondary Survey housed by the National Center for Education Statistics (NCES), thus limiting the researcher’s ability to account for all factors that might impact students’ interaction or select variables most closely aligned with mentor relationships between institutional agents. Furthermore, the dependent variable only measures frequency and does not reveal whether or not these were positive or negative experiences or the quality of interactions. The utilization of the Powerstats interface for the analyses also limited the possibilities for combining variables and the types of the analyses that could be conducted. While the weighting capability in Powerstats allowed for viable estimates and a nationally representative sample, it
did not allow for multilevel modeling of the students nested with colleges and did not allow for
the examination of institutional effects. Similarly, due to the small sample size, this study was
unable to include American Indian students in the analyses. Furthermore, this study utilizes
secondary data to assess student engagement with institutional agents. Consequently, the data
within the Beginning Post-Secondary Survey (BPS) does not fully represent all of the
engagement experiences of students who begin enrollment at community colleges.

Results

The results of this study are presented in the following pages. To begin with, the results
of the first cross tabulation are explained. The purpose of the first cross tabulation was to gather
Next, the results of the second cross tabulation are presented, which include the frequency of
interactions of Students of Color by each of the independent variables. Finally, the results of the
regression analysis are discussed.

Approximately 2,400 students of color began post-secondary education at two-year
public institutions in the 2003/2004 academic year and were included in the analyses. Table 3
outlines the demographic characteristics of students who enrolled in two-year public institution
by race, and demonstrates that 47% of students who were included as participants in the study
were Black, 40.1% identified as Latino/a and 12.9% were Asian American or Pacific Islander.
Black females and Latina students were the majority of participants in the final sample (61.9%
and 60.7% respectively). For Asian American or Pacific Islander, however, males were the
majority (55.1%).
Table 3
*Demographic Characteristics of Students Who Enrolled in Two-Year Public Institutions by Race*

<table>
<thead>
<tr>
<th></th>
<th>Total (%)</th>
<th>Black (%)</th>
<th>Latino/a (%)</th>
<th>Asian-Pacific Islander (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>47.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latino</td>
<td>40.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian-Pacific Islander</td>
<td>12.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>59.0</td>
<td>61.9</td>
<td>60.7</td>
<td>44.9</td>
</tr>
<tr>
<td>First generation</td>
<td>74.9</td>
<td>74.2</td>
<td>79.0</td>
<td>62.8</td>
</tr>
<tr>
<td>Low income</td>
<td>53.9</td>
<td>62.6</td>
<td>50.7</td>
<td>39.0</td>
</tr>
<tr>
<td>Dependency status: Independent</td>
<td>40.2</td>
<td>45.9</td>
<td>40.5</td>
<td>22.7</td>
</tr>
<tr>
<td>Worked full-time (exclude work study)</td>
<td>31.8</td>
<td>30.9</td>
<td>37.6</td>
<td>15.7</td>
</tr>
<tr>
<td>Delayed postsecondary enrollment</td>
<td>50.0</td>
<td>53.9</td>
<td>49.1</td>
<td>41.8</td>
</tr>
<tr>
<td>Aspire to Master's degree or above</td>
<td>49.5</td>
<td>45.5</td>
<td>49.6</td>
<td>61.0</td>
</tr>
<tr>
<td>Enrolled full-time</td>
<td>43.2</td>
<td>48.1</td>
<td>39.8</td>
<td>40.0</td>
</tr>
<tr>
<td>GPA 2.0 or higher</td>
<td>84.3</td>
<td>81.6</td>
<td>84.9</td>
<td>90.2</td>
</tr>
<tr>
<td>Declared major</td>
<td>62.6</td>
<td>73.3</td>
<td>54.7</td>
<td>56.8</td>
</tr>
<tr>
<td>Took remedial courses</td>
<td>33.8</td>
<td>32.9</td>
<td>34.1</td>
<td>35.6</td>
</tr>
<tr>
<td>Participated in study groups</td>
<td>40.5</td>
<td>42.1</td>
<td>37.4</td>
<td>45.9</td>
</tr>
<tr>
<td>Met informally with faculty</td>
<td>31.0</td>
<td>31.9</td>
<td>27.5</td>
<td>39.5</td>
</tr>
</tbody>
</table>


**Precollege factors.** The final sample included more than two thirds (74.9%) of students who identified as first-generation college students – neither of their parents received a Bachelor’s degree or higher. A higher proportion of Latino/a students, in comparison to Black and Asian/Pacific Islander students, were from a first-generation college student background. Close to 4 in 5 Latino/a students were from a first-generation background (79%). This number decreases slightly for Black students to 74.2% and to 62.8% for Asian/Pacific Islander. Close to two thirds of Black students were from low income backgrounds (62.6%), as operationalized in this study by household earnings at or below 185% of the 2003 national poverty level (add
citation for National poverty level). Latino/a students were the group with the second highest percentage of low income students: 50.7%. Thirty-nine percent of Asian/Pacific Islander students were from low income backgrounds. Less than half (40.2%) of all students who enrolled in public two-year colleges in 2003/2004 identified “independent” as their dependency status for the purpose of receiving financial aid. Independent students must meet at least one of the following characteristics: (a) 24 years of age or older, (b) married, (c) veteran or current member of the armed forces, (d) have legal dependents, (e) emancipated minor, or (f) homeless or at risk of becoming homeless (Federal Student Aid, 2016). A greater rate of Black and Latino students, in comparison to Asian/Pacific Islander were independent (45.9% for Black and 40.5% for Latino/a versus 22.7% for Asian/Pacific Islander) for the purpose of receiving financial aid.

**Environmental pull factors.** A greater percentage of Latino/a students (37.6%) worked full-time in comparison to Black (30.9%) and Asian/Pacific Islander (15.7%) students. Over 53% of Black students delayed enrollment into postsecondary education compared to 49.1% of Latino/a and 41.8% of Asian/Pacific Islander students. Sixty-one percent of Asian/Pacific Islander students aspired to obtain a Master’s degree or higher; whereas 45.5% of Black and 49.6% of Latino/a students had degree aspirations above a Master’s degree.

**Academic and Social Experiences.** Black students had higher rates of full-time enrollment into postsecondary education compared to Asian/Pacific Islander and Latino/a students. A total of 48.1% of all Black students enrolled full-time in higher education, compared to 40% of Asian/Pacific Islander and 39.8% of Latino/a students. A greater percentage of Asian/Pacific Islander (90.2%) students had GPAs above a 2.0 than did Latino/a (84.9%) and Black (81.6%) students. Black students declared a major upon entrance in to higher education at higher rates than their Latino/a and Asian/Pacific Islander counterparts. Approximately one third
of all students who began postsecondary education in public two-year institutions took remedial courses. However, Asian/Pacific Islander (35.6%) students took remedial courses at higher rates compared to Latino/a (34.1%) and Black (32.9) students. In comparison to Black and Latino/a students, Asian/Pacific Islander students participated in study groups at higher rates.

**Cross tabulations**

Table 4 illustrates the percentages of students who had informal or social contacts with faculty members outside of the classrooms and the office during their first year. Over two thirds (69.2%) of community college students who began post-secondary enrollment in the 2003-2004 academic year never met with their faculty informally or socially outside of the class while 24.8% met sometimes and 6.1% met often. Contrary to Sax et al. (2005) who found that female students had higher frequencies of interactions with faculty, male students met at least sometimes at slightly higher rates than female students (31.8% for male students and 30.9% for females). A higher percentage (6.9%) of Black students met often with their faculty members than their Latino/a and Asian/Pacific Islander counterparts. This finding is consistent with Greene, Marti and McClenny (2008) and Kim (2010) who found that Black students engaged more with faculty. However, when considering students who met at least sometimes, Asian/Pacific Islander students (39.5%) met at higher frequencies than did Black students (32.0%). Asian/Pacific Islander students (5.7%) were the second group to meet often with their faculty outside of class or office hours to discuss academic matters, closely followed by Latino/a students (5.6%).

<table>
<thead>
<tr>
<th>Students’ Frequency of Informal Interaction with Faculty</th>
<th>Never (%)</th>
<th>Sometimes (%)</th>
<th>Often (%)</th>
<th>Sometimes and Often (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>69.2</td>
<td>24.8</td>
<td>6.1</td>
<td>30.9</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Race/Ethnicity</th>
<th>First Generation</th>
<th>Low Income</th>
<th>Delayed enrollment</th>
<th>Worked Full-Time (exclude work study)</th>
<th>Dependency status 2003/04</th>
<th>Degree Aspirations</th>
<th>Attended Exclusively Full Time (2003/04)</th>
<th>Grade Point Average (2003/04)</th>
<th>Declared Major</th>
<th>Took Remedial Course(s) 2003/04</th>
<th>Participated in Study Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>68.2</td>
<td>69.8</td>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>25.9</td>
<td>24</td>
<td>Female</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.9</td>
<td>6.9</td>
<td>Black</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>31.8</td>
<td>24.0</td>
<td>Latino</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|                         | 68   | 25.1   | Asian or Pacific Islander | 60.5 | 33.8 | 5.7 | 39.5 | 64.9 | 29.2 | 5.9 | 35.1 | 71.8 | 24 | 4.2 | 28.2 | 66.6 | 25.5 | 7.9 | 33.4 | 67.1 | 26.9 | 5.8 | 32.7 | 69.1 | 23.8 | 7.1 | 30.9 | 69.2 | 25.4 | 5.4 | 30.8 | 71.8 | 24 | 4.3 | 28.3 | 64.1 | 26.3 | 9.6 | 35.9 | 77.2 | 20.2 | 2.6 | 22.8 | 57.4 | 31.5 | 11.1 | 42.6 |)

*Note.* ! Interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.
Pre-college factors. Consistent with prior literature (Lundberg et al., 2007; Soria & Stebleton, 2012), students who identified as first generation had slightly higher frequencies of never meeting informally with faculty (70.1%) compared to students who were not first generation (68.3%). Students who reported being low income had higher frequencies of meeting informally sometimes with their faculty (26.2%) than their non-low income peers (23%). This finding is contrary to Arzy, Davies, & Harbour (2006) who found that students from low income backgrounds tended to feel disconnected from their faculty, often opting to work in isolation instead of asking faculty for support. Finally, 73.3% of students who delayed enrollment into postsecondary never met with faculty informally in comparison to 64.9% of students who did not delay enrollment. This finding supports Wyatt’s (2011) findings which highlight that students who delay enrollment tend to interact less with faculty outside of the classroom compared to their peers who did not delay enrollment.

Environmental pull factors. A higher proportion of independent students (75.5%) never met with faculty informally in comparison to students who were dependent (64.9%). Status as an independent student is a component of being a non-traditional student. Non-traditional students tend to meet with faculty outside of the class at lower rates than traditional students (Wyatt, 2010). Students who worked full time, excluding work study, have higher frequencies of never meeting with their faculty informally than do their counterparts who did not work full time. More than 72% (72.3%) of students who worked full time never met with faculty, compared to 67.7 percent of students who did not work full time.

Undergraduate experiences. Students who aspired to obtain a Master’s degree or above had higher frequencies of interaction (sometimes and often) with faculty and lower frequencies
of never interacting with faculty informally than did students who aspired to obtain a bachelor’s degree or below. The percentage of students who attended part-time and met with faculty is lower (28.4%) than for those student who attended exclusively full time (34.0%). Students with a GPA between 2.0 and 2.99 had the highest percentage (71.4%) of students who never met with faculty informally in comparison to students whose GPA was less than 2.00 (70.3%) and students whose GPA was 3.0 or higher (67.1%). Students with higher GPAs had the highest percentage of students interacting with faculty sometimes (26.9%) compared to students in the lower GPA brackets. Interestingly, students with GPAs below 2.00 had higher frequencies of interacting often with faculty. The percentage of students who met sometimes with faculty informally is slightly higher for students who declared a major than for students who did not declare a major: 25.4% versus 23.8%. Students who took remedial courses interacted more frequently with their faculty informally than their peers who did not take remedial courses. Students who took remedial courses had twice the frequency of interacting often with faculty compared to students who did not take remedial courses (9.6% versus 4.3%). Thirty-one point five percent of students who participated in study groups met with their faculty sometimes compared to 20.2% of students who did not participate in study groups. Similarly, a higher percentage of students who participated in study groups met often with faculty in contrast to students who did not participate in study groups: 11.1% versus 2.6%.

The above results highlight the characteristics of students who began public 2-year colleges in 2003/2004. The majority of all Students of Color were female, from a first-generation college background, low-income, academically successful (GPA 2.0 and higher) and had declared a major. Black and Latino/a students were most likely to be from low-income backgrounds, independent, and work full-time in comparison to Asian/Pacific Islander students.
Furthermore, the above results also demonstrate low parentages of informal or social engagement for Students of Color with institutional agents. Students who identified as Latino/a, low-income, worked full-time, were independent, with degree aspirations of a Bachelor’s degree or below, and those who did not participate in study groups exemplified highest percentages of never meeting with their faculty. Students who participated in study groups, took remedial courses, and did not delay enrollment had the highest percentages of interactions with faculty.

**Regression Analyses Results**

The following regression analyses demonstrate the impact of students’ demographic characteristics, pre-college factors, environmental pull-factors and undergraduate experiences on students’ frequency of informal or social interaction with institutional agents outside of the classroom and the office during the first year of community college. There are two regression models which correspond with the conceptual model in Figure 4, and the results from both models are highlighted in Table 5. The first regression model accounts for students’ demographic characteristics, pre-college factors and environmental pull factors. The second model accounts for students’ background variables and adds undergraduate experiences to assess the effect of students’ educational experiences on students’ informal or social engagement with faculty outside the class or office hours. Thus, the regression analyses answer the following research question:

- What student demographics, pre-college experiences, environmental pull factors, and undergraduate experiences influence frequency of informal or social interaction with institutional agents outside of the classrooms and the office during the first year, among Students of Color at community colleges?
Table 5
Regression Analysis Predicting Student Informal Interaction with Faculty

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>S.E.</td>
<td>β</td>
<td>b</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.567</td>
<td>.074</td>
<td>.270</td>
<td>.093</td>
</tr>
<tr>
<td><strong>Demographic Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-.029</td>
<td>.029</td>
<td>-.024</td>
<td>-.009</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>.033</td>
<td>.045</td>
<td>.019</td>
<td>.053</td>
</tr>
<tr>
<td>Latino</td>
<td>-.080</td>
<td>.031</td>
<td>-.066**</td>
<td>-.062</td>
</tr>
<tr>
<td><strong>Pre-College Experiences</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First generation</td>
<td>.003</td>
<td>.006</td>
<td>.014</td>
<td>.000</td>
</tr>
<tr>
<td>Low-income</td>
<td>-.032</td>
<td>.029</td>
<td>-.026</td>
<td>-.019</td>
</tr>
<tr>
<td>Dependency status: Independent</td>
<td>-.089</td>
<td>.038</td>
<td>-.070*</td>
<td>-.062</td>
</tr>
<tr>
<td><strong>Environmental Pull Factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worked full-time (exclude work study)</td>
<td>-.008</td>
<td>.033</td>
<td>-.006</td>
<td>.037</td>
</tr>
<tr>
<td>Delayed postsecondary enrollment</td>
<td>-.021</td>
<td>.035</td>
<td>-.017</td>
<td>-.010</td>
</tr>
<tr>
<td>Aspire to Master's degree or above</td>
<td>.031</td>
<td>.029</td>
<td>.026</td>
<td>.006</td>
</tr>
<tr>
<td><strong>Undergraduate Experiences</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolled full-time</td>
<td>.018</td>
<td>.029</td>
<td>.015</td>
<td></td>
</tr>
<tr>
<td>College grade point average 2003-04</td>
<td>.002</td>
<td>.007</td>
<td>.009</td>
<td></td>
</tr>
<tr>
<td>Declared major</td>
<td>.024</td>
<td>.030</td>
<td>.019</td>
<td></td>
</tr>
<tr>
<td>Remedial course taken</td>
<td>.044</td>
<td>.028</td>
<td>.035</td>
<td></td>
</tr>
<tr>
<td>Participation in study groups</td>
<td>.155</td>
<td>.021</td>
<td>.174***</td>
<td></td>
</tr>
<tr>
<td>Social integration</td>
<td>.003</td>
<td>.000</td>
<td>.200***</td>
<td></td>
</tr>
</tbody>
</table>

*Note. * p<0.05  **p < 0.01  ***p<0.001

**Model 1—Precollege experiences and environmental pull factors.** Of all the pre-college and environmental pull factors that were controlled for in Model 1 only two variables were significant predictors of interaction with institutional agents: being independent and identification as Latino/a. Being independent for the purpose of receiving financial aid was a negative predictor of informal engagement with institutional agents outside of the class or office-hours for community college students. It is expected that students were independent, compared
to students who were dependent, will have a .089 decrease in the frequency of interaction with faculty informally or socially outside of class.

Latino/a students experience increases in college self-efficacy, have better defined academic goals (Santos & Reigadas, 2002) and develop their sense of belonging into the educational setting through their interactions with faculty (Hampton, 2010). Unfortunately, the findings of this study underscore the low rates of Latino engagement with faculty in informal or social interactions. Identification as Latino/a is a statistically significant negative predictor of students’ informal or social contacts with faculty members outside of classrooms and office hours. Latinos interact with faculty outside class/office hours at a .080 lower frequency than Black students, the reference group.

**Model 2—Undergraduate experiences.** After controlling for undergraduate experiences, only one pre-college experience retained its predictive power: identification as Latino/a, who interact with faculty outside class/office hours at a .062 lower frequency than Black students, the reference group. There were two undergraduate experiences that made a significant impact on students’ interactions with faculty—participation in study groups and social integration. Students that participated in study groups have higher frequencies of interaction with faculty informally than students who do not participate in study groups. After controlling for all other variables, it is expected that students who participate in study groups, compared to students who do not, will have a .155-point increase in the frequency of interaction with faculty informally or socially outside of class. Participation in study groups is a strong predictor of student interaction with faculty ($\beta=.174$). The association between participation in study groups and subsequent interaction with faculty has been documented in prior literature (Chang, 2005). Increasing students’ participation in study groups is crucial, especially for
community college students, and Students of Color. For students enrolled in two-year colleges, study groups create a sense of comport and belonging (Deil-Amen, 2011). Furthermore, for Students of Color, participation in study groups positively influences academic performance and social integration (Kincey, 2007).

**Social integration.** Social integration, which measures students’ participation in fine arts activities, sports, and school clubs is a positive predictor of student interaction with faculty informally outside of class or office hours. After controlling for all other variables, it is expected that students who were socially integrated into the institution will be .003 points more likely to interact with institutional agents in comparison to students who were not socially integrated. Social integration is the strongest predictor of student social or informal interaction with faculty ($β=.200$). The relationship between students’ social integration and interaction with faculty has been documented by numerous researchers. In a qualitative study of student integration factors, Karp, Hughes, & O’Gara (2010) found a that students who interacted with faculty reported feeling more integrated into the institution. Additionally, students who demonstrated higher levels of integration persisted to the next academic year. Consistent with the findings of this study, and Karp et al., (2010) Hausmann, Ye, Schofield, & Woods (2009) found that social integration plays a crucial factor on African American’s students engagement.

**Discussion**

The purpose of this study was to understand the factors which contribute to the frequency of informal engagement with institutional agents for Students of Color in community colleges across the United States. Students in this study began post-secondary education for the first time in community college during the 2003/2004 academic year. Asian/Pacific Islander students were underrepresented in the sample of this study as only 12.9% of all Students of Color were of
Asian/Pacific Islander descent. However, Asian/Pacific Islander students met informally with faculty and aspired to a Master’s degree or above in greater numbers compared to Latino/a and Black students. Black students represented the largest student group in this study (47%), followed by Latino/a students (40.1%). Findings of this study underscore low engagement frequencies for Students of Color with institutional agents in informal or social activities. For first generation, independent and Latino/a students, low engagement frequencies with institutional agents warrant further discussion.

First generation students were a significant portion of students in this sample, and comprised 74.9% of all Students of Color. Students of Color who were first generation students demonstrated high frequencies of never meeting with their faculty informally outside of class. This finding is unsurprising as prior literature has highlighted the lower engagement patterns of first-generation students (Soria & Stebleton, 2012). Soria and Stebleton (2012) found status as a first generation college student to be a negative predictor of engagement with faculty within the classroom. In this study, status as a first generation college student was not a statistically significant predictor of informal engagement with faculty. However, the lower frequencies of engagement for first generation students merit additional consideration as involvement in academic experiences for first generation students contributes to the increase of social capital (Lundberg et al., 2007). Specifically, informal involvement with institutional agents has the potential to mediate a campus culture that, as Stanton-Salazar (1997) suggests, may not have been built with the lived experiences of first-generation students at the forefront.

Less than half of all students in the sample were independent for the purposes of receiving financial aid. However, there were significant differences between Black and Latino/a and Asian/Pacific Islander students. Black students (45.9%) were twice as likely than
Asian/Pacific Islander (22.7%) students to be independent. Latino/a students were the second largest group with students who identified as independent (40.5%). Independent students interacted with institutional agents at lower rates than did dependent students: whereas 35.1% of dependent students met with faculty at least sometimes, 24.6% of independent students met with faculty at least sometimes. Somers (2000) found a strong negative correlation between status as an independent student and subsequent persistence. In this study, being independent was also a negative predictor of engagement with institutional agents before undergraduate experiences were considered.

Latino/a students in this study were predominantly female, first generation and low income. Latino/a students also worked full-time, enrolled in school part-time and had the lowest participation in study groups and meeting informally with faculty in comparison to Black and Asian/Pacific Islander students. Kim (2010) and Lundberg and Schreiner (2004) found parallel engagement patterns for Latino/a students. Similarly, Anaya and Cole (2001) found that while more than 50% of Latino/a students reported interacting with faculty members regarding academic matters, less than 20% reported interpersonal (informal) contact with faculty members. In addition to low frequencies of interaction, in the present study, students’ identification as Latino/a was the only statistically significant variable that negatively predicted informal engagement with faculty, even after controlling for undergraduate experiences. Latino/a students, through informal interaction with faculty, tend to experience increases in college self-efficacy, better defined academic goals, and overall adjustment to college (Santos & Reigadas, 2002). Unfortunately, as this study demonstrates, Latino/a students are missing the benefits of informal interaction with faculty.
Campbell and Campbell (1997) and M.E. Levin and J.R. Levin (1991) underscore the importance of frequent interaction with institutional agents for Students of Color. Other researchers, however, argue that while frequency is important, the perceived quality is far more meaningful in explaining student success (Dika, 2012; Lundberg et al., 2007). While this study is able to highlight the frequency of interactions for students, it is not able to account for the quality of their engagement experiences. Thus, future research should investigate the quality of interaction for Students of Color. Additionally, this study is unable to account for the effects of institutional variables on the frequency of informal interaction for Students of Color with institutional agents. Future research should focus on multilevel modeling to understand the effect of institutional characteristics on engagement.

Finally, this study aggregates racial groups into categories of race that are socially constructed. Therefore, it is impossible to understand the differential engagement patterns of students within each of the racial categories. For example, this study aggregated Asian American and Pacific Islander students into a broad category. However, the experiences of Asian American and Pacific Islander students may be different from one another, and this study does not account for the within group variations. Additionally, this study was unable to account for the engagement experiences of American Indian students. As Garland (2010) explains, this results in increased invisibility of the engagement experiences of American Indian students, a group that continues to be absent from quantitative research. Future research should explore opportunities to account for the engagement experiences of American Indian students.

**Implications for Practice**

As a group, Students of Color demonstrated high levels of disengagement with institutional agents. More than two thirds of Students of Color never met with faculty informally
or socially outside of the classroom or office hours. These findings have important implications for institutions that are committed to increase informal relationships between Students of Color and institutional agents. Low engagement with institutional agents for Students of Color means they miss meaningful connections to resources and mentoring opportunities that have the potential to increase their overall success, including increased self-efficacy and defined academic goals (Santos & Reigadas, 2002). Mentoring relationships between Students of Color and institutional agents have the potential to mediate students’ obstacles in higher education (Pope, 2002). For practitioners, it might be tempting to focus on students’ lack of engagement as something that must be fixed internally, rather than address institutional barriers which may hinder students’ ability to interact with institutional agents, one of which is the notion that to increase student engagement with faculty, faculty should simply invite students to their office hours.

Students’ social integration, defined as participation in clubs, sports and fine arts activities, was the strongest predictor of informal or social engagement with institutional agents outside of the class for Students of Color. Community colleges should leverage these types of activities to foster engagement between students and faculty, thus fostering mentoring relationships between students’ and institutional agents that are multi-faceted and focus on the whole student (Pope, 2002). The antiquated notion that to increase student engagement with faculty, faculty members should host office hours and patiently wait for students to come to them needs to be revisited. For community college students, and especially for Students of Color, who may be unfamiliar with the benefits of networking, simply requiring that faculty make themselves available in their offices is not enough. Rather, community colleges should create opportunities for faculty to purposefully and intentionally interact with students. This approach
shifts the onus of accountability from the student to the faculty, and ultimately to the institution. Faculty members, as institutional agents, are situated within the organization in a position of power (Stanton-Salazar, 2011) and can utilize said power to impact the educational experiences of students who have been historically left out of the conversation, thus serving as empowerment agents (Stanton-Salazar, 2011) – connecting students with resources, and helping to remove institutional barriers. In doing so, faculty can impact not only the success of Students of Color, but the culture of the community college. Quaye and Harper (2014) support shifting the onus of responsibility from the student to the faculty and administration, and state:

> It is essential for faculty and student affairs educators to view engaging diverse populations as ‘everyone’s responsibility,’ including their own. And presidents, deans, and other senior administrators must hold themselves and everyone else on campus accountable for ensuring institutional quality in this regard. A clear signal of institutional deficiency is when there are few ramifications for those who either blatantly refuse or intentionally neglect to enact the practices known to produce rich outcomes for students (p. 6).

The above quote exemplifies the potential for institutional agents to impact the success of students. Once institutional agents begin to advocate on behalf of their students, they can hold not only themselves but the institution as a whole responsible for the overall success of students.

> Simultaneously, community college leadership should consider the employment conditions of faculty members. Part time faculty are a growing presence in higher education, accounting for almost half of faculty in higher education in general and more than two thirds at community colleges (J. S. Levin & Hernandez, 2014). Part time faculty also provide nearly half of all instruction at community colleges (D. Jacoby, 2006). High proportions of part-time faculty are associated with lower levels of student engagement (Porter, 2006), as part-time faculty report interacting with students at lower frequencies than tenured and tenure-track faculty (Umbach,
2007). The impact of part-time faculty on engagement is particularly troublesome for Students of Color.

A high proportion of part-time faculty is not only correlated to lower engagement rates for Students of Color, but also lower retention (Jaeger & Hinz, 2008), graduation (Bailey et al., 2005; Calcagno et al., 2008; Ehrenberg & Zhang, 2005) and transfer rates (Eagan & Jaeger, 2009). Similar to students who may be disconnected from the institution, part-time faculty may have limited agency and resources to act on behalf of students. If community colleges are to make meaningful strides towards increasing student engagement with faculty, the conditions of employment and training of part-time faculty must also be addressed. Furthermore, institutional leaders must also be intentional in fostering opportunities for part-time faculty to connect with students, including encouraging and compensating part-time faculty to serve as club advisors, study group leads, and participate in committees that impact the success of students.

**Conclusion**

This study sought to understand the factors which affect engagement with institutional agents for Students of Color. Data from the Beginning Post-Secondary Survey (BPS) was collected during the 2003-2004 academic years to conduct descriptive statistics and multiple regression analysis. The most salient results from the study highlight the high levels of disengagement for Students of Color who began their educational career at two-year public colleges. Community colleges must take a proactive approach to increase students’ engagement with institutional agents, shifting the responsibility from the student to the institution, thereby addressing systematic barriers to student success.
Chapter IV: Manuscript III

Understanding the Factors that Predict the Academic Engagement of Students of Color with Institutional Agents at Community Colleges

Despite increased attendance of Students of Color in higher education institutions, Students of Color are less likely to complete a college degree than White students (Eaton & Bean, 1995; McClenney & Greene, 2005; Wang, 2009). Student involvement in educational activities, and especially engagement with faculty, increases the chances of student success (Kuh et al., 2007); leading to personal and academic gains. Student engagement with faculty, particularly during the first year of enrollment, has a positive impact on student retention (Upcraft et al., 2004), and the potential to predict a sense of belonging in the later years of college (Hurtado & Carter, 1997). Additionally, students who engage with faculty report a more rounded student experience (Deil-Amen, 2011), including: increased satisfaction with college (Astin, 1984); a sense of community with the institution (Cotten & Wilson, 2006), increased view of themselves as scholars, higher levels of political engagement, changes in critical thinking skills, augmented interest in becoming a research scientist (Sax et al., 2005), higher levels of effort in science courses (Thompson, 2001), increased motivation (Komarrajju et al., 2010) active and collaborative learning (Umbach & Wawrzynski, 2005) and gains in cultural awareness (Sax et al., 2005). Related to academic improvements, students who engage with faculty demonstrate higher college GPAs (Kim, 2010), increased chances of persistence (Kuh et al., 2007; Tinto et al., 1993) and graduation (Price & Tovar, 2014). In short, student engagement with faculty outside of the classroom is an important component of the college experience and leads to overall student success.
Student engagement and involvement are used interchangeably within the literature to describe students’ participation in activities inside and outside the classroom with faculty (Saenz, Hatch, Bukoski, Kim, Lee & Valdez, 2011). Numerous studies highlight student involvement as a central role in students’ educational experience and success (Astin, 1993; Kuh & Hu, 2001; Kuh, 2001; Pascarella, Duby, & Iverson, 1983; Tinto, Goodsell-Love, & Russo, 1993). For example, Astin (1984) posited, the students’ interaction with faculty is far more important in creating a satisfactory college experience than any other type of student involvement. Similarly, Deil-Amen (2011) proposed, students who are involved in the college campus are also more likely to develop a well-rounded college experience, leading to higher chances of retention and eventual graduation.

Successful student outcomes are highly correlated with students’ engagement since faculty facilitate students’ creation of information networks (Karp et al., 2010). Information networks, defined by Karp et al. (2010) are “social ties that facilitate the transfer of institutional knowledge and procedures” (p. 76) expand the “availability of opportunities and resources” (Rendón Linares & Muñoz, 2011). For Students of Color enrolled in community college, interactions with faculty warrant special consideration since faculty are often the only campus representative students interact with in the institution (Chang, 2005).

Although student engagement with institutional agents has been shown to lead to overall student success, the variables which predict engagement with institutional agents, particularly for Students of Color enrolled in two-year public institutions have not yet been highlighted within the literature. There is a lack of attention to the experience of students enrolled in community college (Wirt, 2010) and the factors which may support or hinder student-faculty engagement. The purpose of this study is to understand the factors which contribute to the frequency of
students’ engagement with institutional agents in community colleges across the United States, specifically the pre-college student factors and undergraduate experiences which influence engagement of Students of Color at two-year public colleges. Although educators know student engagement with faculty is an important component of student success, “there is little understanding of the process by which such interactions take place” (Cox & Oreovec, 2007, p. 344). Chang (2005) in one of the few studies which discusses faculty engagement with students at the community college level and focuses on the engagement experiences of Students of Color found that students were more likely to interact with faculty through active participation in classroom discussions or by posing questions to faculty before and/or after class. Additionally, African American students were more likely than any other racial group (White, Latino, Asian American/Pacific Islanders) to interact with faculty (Chang, 2005). Similarly, older students, students whose parents were highly educated, and students who studied with others, and met with an academic counselor, are more likely to interact with faculty. Chang’s study begins to address the engagement patterns of community college students, more specifically those of Students of Color. Chang’s study has several limitations. First, the author collected data at only one point in time. It is possible that students’ engagement patterns changed throughout their educational enrollment. Second, although the study benefits from a large sample, the sample is not nationally representative and therefore not generalizable to students outside of the Los Angeles Community College District. Therefore, it is important to understand the interaction patterns of Students of Color from a national perspective. The present study seeks to expand understanding of Students of Color from a national perspective.

Faculty members, as representatives of the community college, serve as institutional agents. Institutional agents “occupy relatively high positions in the multiple dimensional
stratification system, and … are well positioned to provide key forms of social and institutional support” (Stanton-Salazar, 2011, pp. 1074–1075) In the context of community colleges, institutional agents can be faculty members with knowledge of the institution that can provide “a whole spectrum of social and institutional support that contributes to [the students’] social development and academic performance” (Stanton-Salazar, 2011, p. 1069, emphasis in original). For Students of Color who might be unfamiliar with the educational system, institutional agents can provide guidance, support and advocacy on their behalf (Carrasco-Nungaray, 2011).

Community colleges serve as open access institutions that support all students regardless of their academic background. For Students of Color, women, older students and those without prior education beyond the high school diploma, community colleges are the primary gateway to education (Bailey et al., 2004; Kotamraju & Blackman, 2011). Community college students generally show low levels of engagement with faculty (Chang, 2005). When students do engage with faculty, most of their college experience is classroom based (Barnett, 2011; Chang, 2005). In addition to enrolling students from diverse backgrounds, community colleges have higher proportions of part-time faculty in comparison to four-year colleges, accounting for almost two thirds at community colleges. (J. S. Levin & Hernandez, 2014) and nearly half of all instruction at community colleges (D. Jacoby, 2006). High proportions of part-time faculty are associated with lower levels of student engagement (Porter, 2006), as part-time faculty report interacting with students at lower frequencies than tenured and tenure-track faculty (Umbach, 2007). The impact of part-time faculty on engagement is particularly troublesome for Students of Color since a high proportion of part-time faculty is not only correlated to lower engagement rates for Students of Color but is also directly related to student outcomes, including lower retention
Purpose and Research Question

The purpose of this study is to understand the factors which contribute to the frequency of students’ engagement with institutional agents in community colleges across the United States. The research question that will guide this study is:

- What pre-college student factors, academic and social experiences and cognitive factors influence frequency of interaction with institutional agents outside of the classroom and the office to discuss academic matters during the first year, among Students of Color at community colleges?

Prior Literature

Prior research on student engagement with faculty highlight the differential engagement patterns of Students of Color, and the effects of pre-college factors, environmental pull influences, and academic and social experiences on student engagement.

Students of Color and engagement with institutional agents. Students of Color have different patterns of engagement with faculty (Kim, 2010), and the outcomes of such engagement is different than their White counterparts (Chang, 2005; Greene et al., 2008). African American students tend to engage more with faculty but receive less benefits from their engagement efforts (Chang, 2005; Greene et al., 2008; Kim, 2010). African American students, therefore, are “working harder to persist and achieve educational goals than their peers, who generally are less academically ‘at-risk’ and who face fewer institutional barriers” (Greene et al., 2008, p. 529). Asian American students on the other hand, engage with faculty the least but engagement with faculty is a strong predictor of increased educational aspirations and higher
GPA (Kim, 2010). For Latino/a students, interaction with faculty is a significant predictor of success (Tovar, 2015).

**Pre-college factors.** Students join institutions of higher education with lived experiences and diverse backgrounds. These experiences have the potential to influence students’ ability to leverage the support of institutional agents and achieve their academic goals. For example, students’ gender is a strong predictor of engagement with faculty for females (Nora et al., 1996). However, for both male and females, engagement with faculty leads to cognitive and non-cognitive gains. Sax, Bryant and Harper (2005) studied how faculty and student interactions affected male and female students and found women have more frequent and positive interactions with faculty, but men tended to have higher gains in promoting racial understanding, cultural awareness and liberal political views as a result of their interaction with faculty. For men, being supported by faculty resulted in more egalitarian views on gender roles. Women who reported, “receiving honest feedback from faculty reported gains in their sense of physical and emotional health, academic performance, and overall drive to achieve” (Sax, Bryant & Harper, 2005, p. 654). Overall, female and male students benefited from interactions with faculty members, but the outcomes of interaction varied.

Two other pre-college factors, status as a first generation college student and being from a low-income household influence engagement with institutional agents. Status as a first-generation college student, neither parent obtained a bachelor’s degree (Ishitani, 2003), is a negative predictor of student engagement with faculty (Lundberg et al., 2007) inside and outside the classroom (Soria & Stebleton, 2012). Similarly, low income students tend to interact with faculty more cautiously, often feeling disconnected to their peers and faculty or afraid to share their ideas (Arzy et al., 2006). Students who are from low income and first generation
backgrounds benefit from engagement with faculty. More specifically, faculty-student engagement is a strong predictor of low-income and first generation college students’ gains in the areas of personal and social development and cognitive and affective growth during college (Filkins & Doyle, 2002).

**Environmental pull factors.** Students’ full-time employment and delayed enrollment have the potential to impact engagement with institutional agents. Southerland (2010) and Pike, Kuh, and Massa-McKinley (2008) argue that the more hours a student works outside of class, the less likely they are to be engaged with faculty. While the association between full-time employment and its negative effect on student engagement with faculty is clear-cut, the effects of students’ status as a non-traditional student are not easily defined. Non-traditional students, defined as students older than 25 years of age with delayed or interrupted enrollment into the higher education pipeline (Bailey, Calcagno, Jenkins, Kienzl, & Leinbach, 2005), show similar patterns of engagement compared to traditional students (Rosenthal et al., 2000). The key difference between the two groups, traditional and non-traditional students, is where the engagement takes place. Wyatt (2011) found that non-traditional students tend to engage with faculty primarily within the classroom setting whereas traditional students engage with faculty both inside and outside the classroom.

**Undergraduate experiences.** Undergraduate experiences speak to the activities in which students engage within the educational setting. Similar to students’ background characteristics and environmental pull-factors, undergraduate experiences have the potential to influence the students’ engagement with institutional agents. Enrollment intensity – whether students enroll as part- or full-time students – affects student engagement with institutional agents (Southerland, 2010), and part-time enrollment puts students at greater risk for not completing their degree (B.
Similarly, students’ grade point average (GPA) is impacted by engagement with faculty (DeFreitas & Bravo, 2012; Kuh et al., 2008), especially for Students of Color (Cole, 2010). While declaring a major is a strong predictor of continued persistence (Titus, 2006b) and degree completion (Titus, 2006a), its effects on student interaction have been absent from the literature. Lastly, students’ sense of social integration is a key component in facilitating student retention into the second year (Hausmann et al., 2009) and subsequent engagement with institutional agents (Stanton-Salazar, 2001). The most powerful predictor of student integration is the development of student-faculty relationships. Student engagement with faculty, therefore not only facilitates students’ sense of “we-ness” but also reinforces students’ sense of belonging. When students feel as though they belong, their commitment towards degree completion strengthens.

Theoretical Perspectives

The present study is guided by two theoretical perspectives: (a) the role institutional agents have in facilitating student success through engagement and (b) Nora et al.’s (2006) Student Engagement Model.

Institutional agents. Woven into the concept of institutional agents is the understanding that academic skills and intellectual ability are not enough for students from disadvantaged backgrounds to enter, and progress through, institutions of higher education. The disconnect between strong academic ability and subsequent academic success is due in part because institutions of higher education have been developed with White students from middle class backgrounds in mind, excluding low-income students and Students of Color (Stanton-Salazar, 2011). Thus, students from low-income backgrounds and Students of Color not only have to navigate the processes to enroll in, and progress through higher education, but also traverse an
educational system that systematically creates barriers for their success (Stanton-Salazar, 2011). Stanton-Salazar (1997) highlights the importance of social networks to mitigate the impact of an educational system that is built to systematically disadvantage Students of Color and students from low income backgrounds.

Social networks serve as “lifelines” (Stanton-Salazar, 2011) for students, providing resources and opportunities to “overcome social structural barriers and experience school success and social mobility” (Carrasco-Nungaray, 2011, p. 11). Stanton-Salazar (1997) described the key role of social networks as the brokering and connection of resources, and emphasized the importance of institutional agents as the transmitters of said processes. Institutional agents are “those individuals who have the capacity and commitment to transmit directly, or negotiate the transmission of, institutional resources and opportunities” (Stanton-Salazar, 2011, p. 6).

Furthermore, institutional agents “occupy relatively high positions in the multiple dimensional stratification system, and … are well positioned to provide key forms of social and institutional support” (Stanton-Salazar, 2011, pp. 1074–1075). Within the context of community colleges, students most often interact with faculty members (D’Amico, Dika, Elling, Algozzine, & Ginn, 2014), hence positioning faculty members as key representatives of the institution. Faculty members, as institutional agents, provide “a whole spectrum of social and institutional support that contributes to [the students’] social development and academic performance” (Stanton-Salazar, 2011, p. 1069, emphasis in original). For Students of Color, institutional agents provide guidance, support and advocacy on their behalf (Carrasco-Nungaray, 2011), which has the potential to mitigate systematic and institutional barriers.

**Nora et al.’s (2006) Student Engagement Model.** Nora et al.’s (2006) Student Engagement Model serves as the theoretical model for this study. The Student Engagement
Model proposes six major components which influence persistence (see Figure 5): (a) precollege and pull factors, (b) sense of purpose and institutional allegiance, (c) academic and social experiences, (d) cognitive and non-cognitive outcomes, (e) goal determination/institutional allegiance, and (f) persistence (Nora et al., 2006).

The first component in Nora’s Student Engagement Model highlights students’ background characteristics, which include: academic ability, financial need, familial support, and psychosocial factors. Academic ability includes factors related to previous high school success. The first component incorporates the notion that students join institutions of higher educations with varied lived experiences, and in turn these experiences influence how the student interacts with the educational setting. For example, a student may have obligations associated with family and work in addition to class attendance and coursework completion requirements. The postsecondary educational experience is different for students with multifaceted responsibilities in comparison to students who are able to devote a significant amount of time of their attention to their studies.

The second aspect of the Student Engagement Model refers to students’ commitment to enroll and continue enrollment at the institution which includes the students’ educational aspirations. An aspect associated with the ability to predict future student success is related to a student’s educational aspirations. Beyond a student’s commitment to complete a specific degree, the second component highlights the student’s commitment to remain enrolled at a specific institution.

The third component in Nora et al.’s (2006) Student Engagement Model speaks to the academic and social experiences a student is involved in at the educational institution. These experiences encompass both formal and informal interactions with faculty, involvement in
learning communities and social experiences with peer groups or other campus organizations. The student’s experiences with the above mentioned factors are impacted by the greater campus climate. Although this component of the model includes involvement with faculty as an indicator of persistence, it does not highlight the reasons why student engagement with faculty matters. Stanton-Salazar’s (2011) concept of institutional agents expands on the benefits of student engagement with faculty and introduces the notion of how power dynamics within the institution can affect students’ success. The power dynamics mentioned above may influence and even hinder access to resources and campus connections for students who are unfamiliar with the educational system. As institutional agents, faculty are connected to the institution, they can act on behalf of, and in collaboration with the student which is a valuable campus resource for students. Overall, the third component of the model highlights the benefits of student engagement within the institution.

The cognitive and non-cognitive outcomes component is the fourth aspect of the Student Engagement Model. Cognitive and non-cognitive gains are achieved when the student is immersed within the educational institution, including involvement with institutional agents. Cognitive gains include academic performance and academic and intellectual development. Non-cognitive gains include appreciation of the fine arts, and increased understanding of diverse perspectives.

The fifth component – Goal Determination and Institutional Allegiance – emphasizes students’ sense of belonging at the institution as a result of their involvement within the institution. The five components of the model highlighted above culminate in the sixth component – persistence. Persistence is defined by continuous enrollment or graduation from the institution.
Figure 5. Nora et al.’s (2006) Student Engagement Model.

Conceptual Model

Nora et al.’s (2006) Student Engagement Model and Stanton-Salazar’s (1997) concept of institutional agents bound the present study. Nora’s Student Engagement Model, a holistic view into the factors that influence students’ persistence in higher education, was utilized to identify the independent variables that have the potential to influence students’ interaction with institutional agents (see Figure 6). Stanton-Salazar’s concept of institutional agents provided guidance in the selection of the dependent variable. Within the context of this study, institutional agents are defined as faculty members at community colleges whom are familiar with institutional practices and procedures and have the power to use their position to support the success of students. The term faculty member refers to both full-time and contingent instructors who teach or, by the nature of their position, have the responsibility to counsel students in their academic pursuits. In this study, students’ frequency of interaction with faculty outside of class
or office hours to discuss academic matters is a representation of students’ contact with institutional agents.

![Conceptual Model to Examine Students of Color Interaction with Institutional Agents](image)

**Figure 6. Conceptual Model to Examine Students of Color Interaction with Institutional Agents.**

**Methodology**

The following section describes the instrument used to answer the research question, the final sample in the study, and the methods employed to analyze the data.

**Instrument.** The Beginning Postsecondary Students Longitudinal Study (BPS) is a national probability sample, representative of about 4 million students who began their post-secondary education in 2003. BPS obtains its initial cohorts from the National Postsecondary Study Aid Study (NPSAS); a nationally representative study with the purpose to examine how students at postsecondary institutions pay for college. The most recent iteration of the BPS followed students for six years and concluded in 2009. The BPS collected data from students beginning their educational career at community colleges and universities across the United States for the first time in the academic year 2003/2004. BPS collects student data in three
phases. During the first phase, students are invited to complete questionnaires either online or through the phone and receive a $30 incentive. During phase two, non-respondents are followed-up and asked to complete the survey through an automated telephone interview system. For the final phase, remaining students are asked to participate in in-person interviews (Cominole, Wheeless, Dudley, Franklin, & Wine, 2007). Student participants were selected to be interviewed during or just after their first year in 2004 and interviewed again in their third and sixth year after initial enrollment (Berkner & Choy, 2008). BPS collects data on various topics, including student demographic characteristics, enrollment patterns, persistence and completion, as well as in-school experiences, including students’ engagement with faculty. For the purpose of this study, data will be used from the first year.

**Sample.** Table 6 outlines the process by which the final sample was obtained. The recent BPS dataset (2003-04 to 2008-09) contains approximately 16,100 respondents as first-time beginners who had sufficient data to be considered panel respondents for the BPS:04/09 sample (Cominole, Riccobono, Siegel, & Caves, 2010). Approximately 43.1% of all first-time students surveyed in 2004 began their educational career at a public two-year institution (Berkner & Choy, 2008). The final sample in this study is limited to degree-seeking students and the approximately 35.3% (n=2,400) of students who self-identified as Students of Color, specifically African American, Asian American/Pacific Islander and Latino/Hispanic students who first enrolled in a community college in the 2003/2004 academic year. While the experience of American Indian students is important to consider, this group is excluded from the analysis due to the small sample size. Students of Color are disproportionately represented at two-year community colleges and the factors which influence their engagement patterns with institutional agents have not been fully examined (Chang, 2005). Therefore, studying the factors which
influence the engagement pattern of Students of Color at two-year community colleges is crucial. This is especially true for traditionally underrepresented Students of Color (Chang, 2005). The final sample used in this analysis includes approximately 2,400 degree-seeking Students of Color who began postsecondary education at a 2-year public institution.

Table 6
Roadmap to the Final Sample

<table>
<thead>
<tr>
<th>Survey</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPSAS: 04</td>
<td>NPSAS:04 sample members</td>
</tr>
<tr>
<td>BPS: 04/09</td>
<td>NPSAS:04 sample members eligible for inclusion in the BPS:04 cohort</td>
</tr>
<tr>
<td>BPS: 04/09</td>
<td>BPS:04/09 eligible students that had sufficient data to be considered panel respondents</td>
</tr>
<tr>
<td>BPS: 04/09</td>
<td>BPS:04/09 approximate sample included within Powerstats</td>
</tr>
<tr>
<td>BPS: 04/09</td>
<td>BPS:04/09 approximate Powerstats sample of respondents whose first institution of attendance was a public 2-year college</td>
</tr>
<tr>
<td>BPS: 04/09</td>
<td>BPS:04/09 approximate Powerstats sample after filtering out non-degree seeking students and limiting to students of color</td>
</tr>
</tbody>
</table>

Note: Student numbers are rounded per NCES reporting guidelines. Students of color include: Asian/Pacific Islander, Black, and Latino students

Access to data. The National Center for Education Statistics provides access to the Beginning Postsecondary Students Longitudinal (BPS) dataset through the online statistical tool, PowerStats. PowerStats contains detailed descriptions of the BPS survey questions and provides researchers with the tools to conduct statistical analysis of the publically available data. Additionally, PowerStats provides the appropriate statistical analysis weights for the BPS dataset and ensures that data utilized for analysis will be viable by accounting for the complex sampling design of the NPSAS and the BPS. Therefore, the estimates generated for this study, utilized appropriate methods (i.e., balanced repeated replication) to adjust variance estimation for the complex sample design (Cominole et al., 2010). PowerStats provides indicators for estimates which are unstable, correcting and allowing for accurate interpretation, in addition to reporting
estimates which meet the NCES reporting standards by rounding to the nearest 10 and limiting
analysis of data with fewer than 30 cases.

**Variables and coding.** The dependent variable for this study is “faculty talk outside of
talk” (FREQ04B) which asked students to indicate whether or how often the respondent met with
faculty members outside of the classroom and the office to discuss academic matters during the
2003-2004 academic year. Students were given three options to select the frequency of
interaction: never (value = 0), sometimes (value = 1) and often (value = 2). The independent
variables are included in four general categories a) demographic characteristics, b) pre-college
experiences, c) environmental pull factors, and d) undergraduate experiences. Table 7 provides
an in-depth view of the variables and corresponding coding. Each of the variables are also
explained below.

Table 7
*Variables and Coding*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coding Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variables</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Interaction with Institutional Agents</strong></td>
<td></td>
</tr>
<tr>
<td>Frequency of interaction with faculty outside of class and office hours to discuss academic matters.</td>
<td>Never: 0, Sometimes: 1, Often: 2</td>
</tr>
<tr>
<td><strong>Pre-College Experiences</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Demographic Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Gender: Female</td>
<td>1: male 2: female</td>
</tr>
<tr>
<td>Race: Black (reference group)</td>
<td>0: no 1: yes</td>
</tr>
<tr>
<td>Race: Latino</td>
<td>0: no 1: yes</td>
</tr>
<tr>
<td>Race: Asian American &amp; Pacific Islander</td>
<td>0: no 1: yes</td>
</tr>
<tr>
<td><strong>Pre-college Experiences</strong></td>
<td></td>
</tr>
</tbody>
</table>
Precollege factors and pull-factors. The first block of independent variables focused on precollege factors and pull-factors. Within this category, the first component was student demographic characteristics and included gender (male = 0, female =1); student’s self-identified race (where 0 = no, 1 = yes) as Black, Asian or Pacific Islander, Latino/a. The second component was precollege factors and included: parental education (1=less than HS, 10=Doctorate/equivalent), low-income (0 =no 1=yes); and dependency status (0=dependent,
The third component included environmental pull factors and contained variables related to working full time (0 = no, 1 = yes); delayed enrollment, (0=no 1=yes); and Master’s or above degree aspirations (0 = no, 1 = yes).

**Undergraduate experiences.** The second block of independent variables focused on the undergraduate experiences of students. The following variables were used to represent the experiences of students within the institution: enrollment intensity: full-time (0 = no, 1 = yes); college GPA (0 = less than 2.0, 1= 2.0-2.99, 3: 3.0 or above); declared major (0 = no, 1 = yes); remedial course taken (0 = no, 1 = yes); participation in study groups (0 = no, 1 = yes). Social integration (Range: 0 to 200) is a composite variable derived from the following variables: attended fine arts activities, participated in sports, participated in school clubs.

**Data Analysis**

The purpose of this study is to understand the factors which contribute to the frequency of students’ interaction with institutional agents outside of the class or office hours to discuss academic matters. Data analysis is divided into three steps. The first step is a cross tabulation between the independent and dependent variables by race and limited to students who enrolled in two-year public institutions for the first-time in 2003/2004. The purpose of this first analysis is to understand the demographic breakdown of Students of Color in the sample. The second step is a cross-tabulation between each of the independent variables and the dependent variable to gain a clearer picture of the engagement frequencies of Students of Color with faculty outside of class or office hours to discuss academic matters. Finally, regression analyses were ran to understand the factors that predict students’ interaction with faculty on academic matters.

Blocked hierarchical ordinary least squares (OLS) multiple regression analyses were conducted. OLS is a standard linear regression procedure which assumes the values of items are
ordinal and is used to analyze two or more independent measures to predict a dependent outcome (Astin & Antonio, 2012). A key advantage in utilizing regression analysis is the ability for the researcher to control for potential biases, thus clarifying the role of each of the independent variables on the dependent variables (Astin & Antonio, 2012). Blocked entry regression analyses is employed, in which the independent variables were entered in two blocks. The blocks divide the different types of variables which are included in sequence (such as students' precollege and college experiences). In the present study, student’s pre-college factors, environmental pull-factors, and undergraduate experiences variables are used to predict student interaction with faculty outside the classroom to discuss academic matters.

The blocked regression analysis is organized in two blocks congruent with Nora et al.’s (2006) Student Engagement Model. Linear regression analysis is conducted to determine which variables predicted the frequency of student interaction with faculty outside the classroom or office hours to discuss academic matters. For these analyses, blocked regression analysis is used to assess the contribution of each set of variables to the model. The first regression model includes the group of variables associated with pre-college and environmental pull factors (Model 1), which included demographic variables (gender, race,); pre-college factors (parent’s highest education, income, and delayed enrollment); and environmental pull factors (full-time employment and dependency status) and degree aspirations: Master’s or above degree aspirations. The final regression analysis includes the first model with the additional variables that highlight students’ undergraduate experiences (Model 2), namely: enrollment intensity: full-time, college GPA, declared major, remedial course taken, participation in study groups and social integration.
Limitations

The most salient limitation in this study is the lack of primary data. Since BPS is a nationally representative and already established instrument it does not allow for input of additional survey questions. Second, this study represented a snapshot in time of the engagement patterns of students who enrolled as first time students in community colleges during the 2003-2004 academic year. More than a decade has passed from the initial enrollment of this group of students. Therefore, the social, cultural and environmental characteristics of the sample cohort may not be generalizable to the engagement patterns of students presently enrolled in community colleges. Finally, while frequent interaction with faculty heavily influences the academic success and social integration of students (M. E. Levin & Levin, 1991), high quality interactions between students and institutional agents, particularly for Students of Color appear to be the most significant factor in predicting student success (Cole, 2010; Dika, 2012; Lundberg & Schreiner, 2004). This study, however, focuses solely on the frequency of interactions between students and institutional agents, and is not able to account for the quality of said interactions.

Results

The purpose of this study is to understand the factors which contribute to the frequency of interaction for Students of Color with institutional agents outside of the class or office hours to discuss academic matters. The results of the present study are presented below in three categories: Descriptive statistics to highlight trends in the demographic characteristics of Students of Color who began post-secondary enrollment in 2003/2004 in two-year public institutions. The second category discusses the results of a cross tabulation between students’ frequency of interaction with institutional agents and each of the independent variables. Finally, the third category covers the results of the regression analysis.
Descriptive statistics. Approximately 2,400 students began post-secondary education at two-year public institutions in the 2003/2004 academic year and were included in the final regression analysis. The demographic profile of the sample (see figure 7) included 47% Black, 40.1% Latino/a and 12.90% Asian American or Pacific Islander students.

Figure 7. Percentage of Students of Color by Race/Ethnicity who Began Community College in 2003/2004.

Figure 8 provides a breakdown of gender by race/ethnicity and highlights that for Black and Latino/a students, the majority of students in the sample were female. However, for Asian/Pacific Islander students, males represented the majority of participants (55.1%).
Figure 8. Students’ Gender by Race/Ethnicity who Began Community College in 2003/2004.

Figure 9. Percentage of Students of Color meeting with institutional agents to discuss academic matters.

Close to 65 percent of Latino/a students met with faculty outside of the class or office to discuss academic matters. This percentage was the lowest for Latinos/as in comparison to
Asian/Pacific Islander and Black students. Black students had two percentage points higher frequency of interacting with faculty on academic matters in comparison to Latino/a students whereas Asian/Pacific Islander students had 6.4 percentage points higher frequency. Figure 9 provides a visual representation of the frequencies of interaction for each group.

**Cross tabulations.** Table 8 showcases the results of cross tabulations between the outcome variable and each of the predictors.

**Table 8**

*Students’ Frequency of Interaction with Faculty Outside of Class for Academic Matters*

<table>
<thead>
<tr>
<th></th>
<th>Never (%)</th>
<th>Sometimes (%)</th>
<th>Often (%)</th>
<th>Sometimes and Often (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>33.5</td>
<td>51.8</td>
<td>14.7</td>
<td>66.5</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>33.4</td>
<td>53.7</td>
<td>12.9</td>
<td>66.6</td>
</tr>
<tr>
<td>Female</td>
<td>33.5</td>
<td>50.5</td>
<td>16</td>
<td>66.5</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>33.2</td>
<td>48.8</td>
<td>18.1</td>
<td>66.9</td>
</tr>
<tr>
<td>Latino/a</td>
<td>35.2</td>
<td>52.2</td>
<td>12.6</td>
<td>64.8</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>28.8</td>
<td>58.8</td>
<td>12.4</td>
<td>71.2</td>
</tr>
<tr>
<td><strong>First Generation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>29.5</td>
<td>52</td>
<td>18.5</td>
<td>70.5</td>
</tr>
<tr>
<td>Yes</td>
<td>35.8</td>
<td>51.4</td>
<td>13.5</td>
<td>64.9</td>
</tr>
<tr>
<td><strong>Low Income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>34.1</td>
<td>50.6</td>
<td>15.3</td>
<td>65.9</td>
</tr>
<tr>
<td>Yes</td>
<td>32.9</td>
<td>52.9</td>
<td>14.3</td>
<td>67.2</td>
</tr>
<tr>
<td><strong>Delayed enrollment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>28.9</td>
<td>54.1</td>
<td>17</td>
<td>71.1</td>
</tr>
<tr>
<td>Yes</td>
<td>37.5</td>
<td>49.9</td>
<td>12.6</td>
<td>62.5</td>
</tr>
<tr>
<td><strong>Worked Full-Time (exclude work study)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>31.3</td>
<td>53.1</td>
<td>15.7</td>
<td>68.8</td>
</tr>
<tr>
<td>Yes</td>
<td>38.3</td>
<td>49.1</td>
<td>12.6</td>
<td>61.7</td>
</tr>
<tr>
<td><strong>Dependency status 2003/04</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dependent</td>
<td>30.2</td>
<td>53.5</td>
<td>16.3</td>
<td>69.8</td>
</tr>
<tr>
<td>Independent</td>
<td>38.2</td>
<td>49.4</td>
<td>12.4</td>
<td>61.8</td>
</tr>
</tbody>
</table>

**Degree Aspirations**
Demographic characteristics. Of all male students who began post-secondary education at a public, two-year college, 33.4% never met with faculty outside of class to discuss academic matters, while 53.7% met sometimes and only 12.9% met often. Female students showed similar frequency of interactions: 33.5% never met with faculty outside of class to discuss academic matters whereas 50.5% met sometimes. Previous research has highlighted differential engagement patterns for male and female students, noting that women demonstrate more frequent interactions with faculty (Sax et al., 2005). In this study, there is a slight different between engagement frequencies of male and female students, as female students were three percent points higher than male students to often meet with faculty outside of class to discuss academic matters. Asian American/Pacific Islander students met at least sometimes with faculty at higher frequencies (71%) than did Black (67%) and Latino (65%) students. This finding is
incongruent with prior literature which points to Black students as having higher frequencies of interaction with faculty (Greene et al., 2008) whereas Asian/Pacific Islander students interacted with less frequency in comparison to all other student groups (Kim, 2010).

**Pre-college factors.** Non-first generation and first generation students showed similar patterns of sometimes engaging with faculty outside of class (52% for non-first generation versus 51.4 for first generation students). However, students who were not first generation were 5 percentage points higher than their first generation peers to meet often with faculty. This finding is supported by Soria and Stebleton (2012) who found that first generation college students had lower frequencies of interaction with faculty. Low income students, compared to non-low income students had higher frequencies of interaction with faculty: 65.9% of non-low income students met at least sometimes with their faculty compared to 67.2% of low income students. Finally, students with delayed enrollment report lower frequencies of sometimes (49.9% vs. 54.1%) and often (12.6% vs. 17.0%) meeting with faculty members outside of class or office hours to discuss academic matters compared to their peers who did not delay enrollment.

**Environmental pull factors.** Students who are considered independent and work full-time have lower frequencies of interaction with institutional agents outside of class or office hours to discuss academic matters. Unsurprisingly, students who work full time meet less with faculty outside of class or office hours to discuss academic matters than do students who do not work full time: 38.3% of students who worked full time never met with faculty, compared to 31.3% of students who did not work full time. Independent students also met at least sometimes with faculty at lower frequencies. Whereas 69.8% of dependent students met with faculty at least sometimes, only 61.8% of independent students engaged with faculty. Students who aspired to
obtain a Master’s degree or above had higher frequencies of sometimes interacting with faculty than did students with Bachelor’s degree aspirations or lower (54.2% versus 46.5%). Both groups, however, had similar frequencies of often engaging with faculty, 14.6% for students who aspired to a Bachelor’s degree or lower and 14.8% for those who aspired to a Master’s degree or higher.

**Undergraduate experiences.** The percentage of students who attended exclusively full-time and met sometimes with faculty is greater (56.7%) compared to 48.2% of students who did not attend exclusively full-time and sometimes met with faculty. Similarly, students who attended exclusively full-time had higher frequencies of often interacting with faculty than did students who did not attend exclusively full-time (17.2% versus 12.8%). Students with a GPA less than 2.0 had the highest percentage (38.7%) of students who never met with faculty outside of class or office hours to discuss academic matters in comparison to students whose GPA was between 2.00 and 2.99 (30.5%) and students whose GPA was 3.0 or higher (34.1%). Students in the middle GPA range: 2.0 – 2.99 had the highest percentage of students interacting with faculty sometimes compared to students in the lower and higher GPA brackets. However, a higher percentage of students whose GPA was 3.0 or higher interacted often with faculty. The percentage of students who met at least sometimes with their faculty is higher for students who declared a major in the 2003/2004 academic year than for students who did not declare a major: 69.0% versus 62.4%. Students who took remedial courses interacted more frequently with their faculty outside of class or office hours to discuss academic matters. 26.8% of students who took remedial courses never met with faculty outside of class or office hours to discuss academic matters compared to 36.9% of students who did not take remedial courses. Seventy-three percent of students who took remedial courses met with faculty at least sometimes compared to 63.1% of
students who did not take remedial courses. A greater percentage of students who did not participate in study groups never met with faculty outside the class or office hours to discuss academic matters (43.0%) compared to students who participated in study groups (19.5%). Fifty-six percent of students who participated in study groups met with their faculty sometimes compared to 49% of students who did not participate in study groups. Similarly, a higher percentage of students who participated in study groups met often with faculty in contrast to students who did not participate in study groups: 24.5% versus 8%. Thus, students who participate in study groups meet more with faculty outside of class and office hours to discuss academic matters.

**Regression Analysis**

The descriptive results provide a portrait of community college students with respect to background characteristics and their interaction with faculty outside the class or office hours to discuss academic matters. Examining the effects of background characteristics, after controlling for undergraduate experiences broadens understanding of the factors that predict student engagement with faculty. The regression analyses answer the following research question:

- What pre-college student factors, and undergraduate experiences influence frequency of interaction with institutional agents outside of the classroom and the office to discuss academic matters during the first year, among Students of Color at community colleges?

There are two regression models in table 9 corresponding to the conceptual model presented in Figure 6. The first model accounts for students’ background characteristics, including demographic characteristics, pre-college factors and environmental pull factors. Demographic variables are comprised of students’ gender and race/ethnicity. Pre-college factors are
represented by parents’ highest degree of education, whether or not a student is low-income and students’ dependency status. Finally, the first model encompasses environmental pull factors, which incorporates whether students’ worked full-time, delayed postsecondary enrollment and degree aspirations during the 2003/2004 academic year. Model 2 includes all of the variables in model 1 and adds students’ undergraduate experiences while enrolled in postsecondary education. The second model contains enrollment intensity, college GPA, whether students’ declared a major, took remedial courses, participated in study groups, and their sense of social integration.

Table 9
Regression Analysis Predicting Student Engagement with Faculty Outside of Class or Office Hours to Discuss Academic Matters

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(b)</td>
<td>(S.E.)</td>
<td>(\beta)</td>
<td>(b)</td>
<td>(S.E)</td>
<td>(\beta)</td>
</tr>
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<td>.062**</td>
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Note: * \(p<0.05\)  ** \(p<0.01\)  *** \(p<0.001\)
Precollege experiences and environmental pull factors. There are two statistically significant demographic variables after controlling for undergraduate experiences: gender and identification as Latino/a. Congruent with prior literature, (Nora et al., 1996; Saenz et al., 2011; Sax et al., 2005), female students engaged with faculty outside of the class or office hours to discuss academic matters at a .085 points higher frequency than their male counterparts. For students in the sample, identification as Latino/a, compared to Black students, was a negative predictor of interaction with institutional agents. After controlling for all other variables in the model, Latinos/as interact with faculty outside class/office hours at a .075 lower frequency than African American students, the reference group. This finding is supported by Kim (2010) and Greene et al. (2008) who found that Black students tend to engage with faculty at higher frequencies than their peers.

Environmental pull factors. Students’ aspirations to obtain a Master’s degree or above was the only environmental pull factor that was a statistically significant predictor of engagement at Model 2. It is expected that students who aspired to obtain a Master’s degree or above at the beginning of their educational journey will engage with institutional agents at .074 points higher frequency than those students who did not aspire to obtain a Master’s degree. Bensimon and Dowd (2009) highlight the interconnectedness of students degree aspirations and student/faculty engagement. The authors explain that faculty, as institutional agents, play a crucial role in influencing students degree aspirations: “Students have aspirations and hopes, but without the guidance, support, and active involvement of … [institutional] agents, they may not have access to the resources they need to be successful” (2009, p. 651).

Undergraduate experiences. Five undergraduate experiences significantly predicted students’ frequency of interaction with faculty outside of the classroom to discuss academic
matters: enrolling full-time in postsecondary, declaring a major in the first academic year of enrollment, taking remedial courses, participating in study groups and feeling socially integrated. Consistent with Southerland (2010), it is expected that full-time students will have a .093 increase in the frequency of interaction with faculty in comparison to students who enroll part-time. Declaring a major during the first year of enrollment in post-secondary institution is also a positive predictor of continued persistence (Titus, 2006b) and degree completion (Titus, 2006a), and as demonstrated in the findings of this study, declaring a major is predictive of student engagement with institutional agents. Controlling for all other variables, it is expected that students who declared a major will have a .080 higher frequencies of interaction with faculty in comparison to students who have not declared a major. Students who participate in remedial courses, in comparison to their peers who do not, are expected to have higher frequencies of interaction with faculty. The positive relationship between remedial courses and interaction with faculty is also supported by Wood and Ireland (2014) who found that participation in reading remediation and study skills courses were significant predictors of engagement with faculty. Similarly, students who participate in study groups have a .239 higher frequencies of interaction with faculty in comparison to students who did not participate in study groups. Across all other variables, participation in study groups was the strongest predictor of students’ engagement with institutional agents ($\beta = .238$). This finding is consistent with Hurtado and Carter (1997). Hurtado and Carter found that students who frequently discussed course work with other students had a higher sense of belonging at the institution, including interactions with faculty. Finally social integration, a composite variable that includes participation in clubs, sports and fine art activities, is a significant positive predictor of student engagement with institutional agents, and the second strongest variable to predict engagement ($\beta = .146$). Social integration
into the institution, as a predictor of retention has been documented in the literature. Perhaps unsurprisingly, student engagement in social and academic activities with peers predicts subsequent engagement with institutional agents.

**Discussion and Implications**

The findings of this study underscore the importance of undergraduate experiences as predictors of interaction with institutional agents, suggesting that “who students are when they start college – their background characteristics and pre-college behavior—is associated to a non-trivial degree with what they do in the first college year” (Kuh et al., 2008, p. 546, emphasis in original). In this study, undergraduate experiences, including enrolling in school full-time during the first year of enrollment, declaring a major, taking remedial courses, participation in study groups and social integration were all significant positive predictors of student engagement with institutional agents outside of the class or office hours to discuss academic matters.

It is also important to note that one environmental pull-factor; master’s degree aspiration or above, is a positive predictor of engagement between students and institutional agents. Students who aspire to obtain a master’s degree or above during their first year of enrollment into post-secondary education report higher frequencies of interaction with institutional agents than their peers with lower degree aspirations. Bensimon and Dowd (2009) highlight the importance of institutional agents in facilitating students’ success: “Students have aspirations and hopes, but without the guidance, support, and active involvement of … [institutional] agents, they may not have access to the resources they need to be successful” (p. 651). Kim (2010) also found a strong and positive relationship between students’ degree aspirations and subsequent interaction with faculty. At the same time, Kim (2010) found that for Students of Color, interaction with faculty did not influence students’ increased degree aspirations. Practitioners
who are invested in increasing student contact with faculty should create intentional opportunities for students to explore and develop their degree aspirations early in their academic career. For instance, first-year seminars could include visits from faculty from varied disciplines, sharing how faculty arrived at their own careers. Alternatively, institutions could create formal mentorship programs between faculty and students so that students have an assigned mentor with whom they share similar career interests. In this way, students who may be beginning to explore potential degrees, can have someone within their chosen field to provide guidance and support. Researchers, in addition to continue exploring the connections between degree aspirations and subsequent engagement, need to explore the factors which limit faculty’s ability to influence students’ degree aspirations.

In addition to degree aspirations during the first year of enrollment, enrolling full-time, declaring a major and taking remedial courses are positive predictors of student engagement with institutional agents. Unsurprisingly, attending exclusively full-time and declaring a major during the first year of enrollment are positive predictors of engagement. Full-time students and those who declare a major also show higher frequencies of interaction with institutional agents in comparison to their peers who did not enroll full time or declared a major. B. Jacoby (2014) underscored the relationship between enrolling in school part-time and greater risk of students not attaining their educational goals. Furthermore, Southerland (2010), in congruence with the results of this study, found that part-time students tend to have lower engagement patterns than students who enroll full-time. Given the low levels of engagement for part-time students with institutional agents outside of the classroom, practitioners need to ensure that students have meaningful engagement connections within the classroom setting, since that is where they have most of their engagement with faculty (Barnett, 2011; Chang, 2005).
Participation in remedial courses has compensatory effects for first generation, non-traditional students and Students of Color on subsequent success (Glaser, 2011). In the present study, and supported by Wood and Ireland (2014), students who enrolled in remedial education had higher frequencies of interaction with institutional agents in comparison to their peers who did not enroll in remedial education. Enrollment in remedial courses was also a positive predictor of engagement with institutional agents. Given that more than two thirds (68%) of all community college students participate in remedial education (Center for Community College Student Engagement, 2016), it is important to understand precisely why enrollment in remedial education is associated with higher engagement patterns. Future research should investigate the relationship between remedial education and student engagement with institutional agents.

Tinto and Pusser (2006) posited that the more students are socially and academically integrated into the institution, the more likely they are to persist toward graduation. Furthermore, Stanton-Salazar’s (2001) articulates the importance of students’ sense of connectedness to the institution as an important factor in creating increased effort and academic achievement. This study underscores the positive relationship between participation in study groups, students’ social integration and engagement with institutional agents. It is important to note, however, that for Latino/a students, undergraduate experiences do not predict increased engagement with institutional agents. Hurtado and Carter (1997) emphasize the importance of a supportive campus climate to impact students’ sense of integration into the college community, particularly for Latino/a students. In the present study, social integration and participation in study groups were the strongest predictors of engagement with faculty to discuss academic matters outside of the class or office hours, and as such, warrant additional consideration.
Numerous researchers have highlighted the relationship between supportive campus climates and aggregate student success. Bank, Slavings and Biddle (1990) found a strong relationship between aggregate peer experiences and individual student success. Similarly, Oseguera and Rhee (2009) and Titus (2004) examined the relationship between peer climate and subsequent student success. Oseguera and Rhee (2009) concluded, “peer climates have the potential to impact educational outcomes independent of one’s own attitudes and expectations” (p. 563). As such, to impact the success of Latino/a students, it is important to begin addressing the aggregate campus environment and assess whether it is conducive to the overall success of Latino/a students.

One important item to consider when assessing overall campus climate is the potential for Students of Color, particularly Latino/a students to experience racial tension or discriminations, since these experiences diminish Latino/a students’ sense of belonging (Hurtado & Carter, 1997). One way to mediate the effects of a negative campus climate is to create opportunities for students to develop interpersonal relationships with faculty (Cress, 2008). As educational leaders, we must take an active role in creating an institutional environment where faculty and student relationships are not only valued but expected of the faculty and students. These types of interactions should be cemented early on in the students’ academic career, since early experiences have the potential to predict a sense of belonging in the later years of college (Hurtado & Carter, 1997).

As we seek to create an environment where Students of Color feel integrated into the institution, we must consider who our students are and how they join our institutions and build educational structures that value the whole student. Kuh (2001) explains that institutions that value and celebrate community have higher student integration. Furthermore, Hurtado and Carter
(1997) underscore the importance of students’ initial interactions with the institution by stating, “the easier the transition to college, the less likely students are to perceive a hostile climate” (p. 337). Coupled together, the above researchers pinpoint for the need of community colleges to be keenly aware of not only the experiences of students as they seek to join their institutions, but also the campus environment and overall experiences as students’ progress through the institution.

Conclusion

The focus of this study was to understand the factors which influence student engagement with institutional agents outside of the class or office hours to discuss academic matters. Utilizing publicly available data from the Beginning Post-Secondary Survey (BPS) collected during the 2003-2004 academic year, descriptive statistics and multiple regression analysis were conducted. Findings from this study underscore the importance of undergraduate experiences in predicting student engagement with faculty. However, even after controlling for undergraduate experiences, identification as Latino/a was a negative predictor of engagement. As such, understanding the effects of campus climate on student engagement patterns must be of the upmost importance for educational leaders. From a public policy perspective, understanding the factors which influence student engagement with institutional programs is important to close the achievement gap, particularly for students enrolled at two-year public institutions. Finally, understanding the factors which influence engagement for Students of Color with institutional agents in the community college allows educators to understand the student populations they serve and create evidence-based programs that address potential challenges and concerns (Cox & Orehovec, 2007). One institutional policy to increase student engagement with faculty could be to encourage students to enroll full-time, declare a major early on, and create opportunities for
students to participate in study groups and social activities. However, practitioners must simultaneously remove barriers to student engagement, including the overreliance on part-time faculty and exploring the effects of their institutional climate on students’ engagement patterns.
Chapter V: General Conclusion

The purpose of this study was to understand the factors which contribute to engagement with institutional agents for Students of Color enrolled in community college across the United States. The investigation into the factors which influence engagement for Students of Color began with a systematic review of the literature related to engagement with institutional agents. The second manuscript focused on the informal engagement of Students of Color with institutional agents, whereas the third manuscript concentrated on academic engagement outside of the classroom or office hours during the first year of enrollment. This chapter first introduces findings each of the manuscripts and presents findings across manuscripts II and III. Finally, a discussion of the research findings is offered with special emphasis on implications for policy and practice.

Findings

This section presents the findings of each of the research objectives. First, it describes the findings of Manuscript I. Next, it highlights the findings of Manuscript II and III individually. Finally, it makes connections between the findings of Manuscripts II and III.

Manuscript I. Manuscript I focused on a systematic review of the literature related to student engagement in community colleges, and exclusively on the engagement patterns of Students of Color. The review of the literature underscored the importance of engagement on personal (Komarraju et al., 2010; Sax et al., 2005) and academic (Kim, 2010; Kuh et al., 2007; Tinto et al., 1993) gains leading to graduation (Price & Tovar, 2014) for Students of Color. The review of the literature highlighted three areas of special interest to the engagement patterns of Students of Color: (a) why engagement with faculty matters; (b) the effects of community college enrollment on the success of Students of Color; and (c) the differential engagement
patterns of Students of Color. Additionally, utilizing the Student Engagement Model as the foundation, an exploration of the factors which have the potential to influence engagement was undertaken.

**Why engagement with faculty matters.** Student engagement with faculty increases student persistence and impacts the likelihood of graduation (Cole, 2010). For community college students, who often are older, attend part-time, from low-income (Bastedo & Jaquette, 2011; Mullin, 2012) and first generation backgrounds (American Association of Community Colleges, 2016), engagement with faculty is a powerful influence on the overall success of students (Glaser, 2011). Faculty members, as institutional agents, have the capacity to act on behalf of the student and transmit social capital. Social capital, defined as “privilege knowledge, resources, and information” (Soria & Stebleton, 2012), is maintained and reproduced through the transmission of information channels within social networks (Coleman, 1990). Social networks serve as lifelines (Stanton-Salazar, 2011) for students, providing resources and opportunities to “overcome social structural barriers and experience school success and social mobility” (Carrasco-Nungaray, 2011, p. 11). Specifically, faculty, in their capacity as institutional agents, (a) possess the capacity to transmit knowledge, (b) serve as bridges to resources, (c) advocate on behalf of the student, (d) model institutional values, (e) provide emotional and moral support, (f) offer feedback, advice and guidance to students and (g) serve as empowerment agents (Stanton-Salazar, 2011).

**Community college and student success.** Community colleges enroll students who are older, attend part-time, and are from low-income (Bastedo & Jaquette, 2011; Mullin, 2012) and first generation backgrounds (American Association of Community Colleges, 2016). Community college students also tend to be less academically prepared (Bailey et al., 2010; Price & Tovar,
2014) and tend to have lower engagement patterns than students who enroll in four-year institutions (Flowers, 2006). Student engagement with faculty at community colleges is further complicated when the composition of the faculty is considered. Community colleges, in addition to enrolling students from diverse backgrounds, have higher proportions of part-time faculty in comparison to four-year colleges, accounting for almost two thirds at community colleges. (J. S. Levin & Hernandez, 2014). High proportions of part-time faculty are associated with lower levels of student engagement (Porter, 2006), as part-time faculty report interacting with students at lower frequencies than tenured and tenure-track faculty (Umbach, 2007).

**Students of Color and engagement.** Students of Color have different patterns of faculty/student engagement (Kim, 2010), and the outcomes of such engagement is different than their White counterparts (Greene et al., 2008). Greene, Marti and McClenny (2008) demonstrated that although African American students were more engaged than their White peers, they demonstrated lower academic outcomes than their White counterparts. Consistent with Greene et al. (2008), Kim (2010) found African American students were more likely than Asian American, Hispanic or White students or any other student groups to have a personal interaction with faculty. Although African American students interacted with faculty at higher rates, the outcomes of such interaction were insignificant. Kim also found that Asian American students were less likely to interact with faculty than their counterparts but increased interactions with faculty lead to increased student GPAs and increased educational aspirations. Chang (2005), focusing on students enrolled in community colleges also found differential engagement patterns for Students of Color, highlighting that African American students are more likely than any other racial group (White, Latino, Asian American/Pacific Islanders) to interact with faculty.
Nora, Barlow and Crisp’s (2006) Student Engagement Model. Utilizing Nora et al.’s (2006) Student Engagement Model as the foundation, this study explored factors which have the potential to impact student engagement with institutional agents. Three focus areas emerged: (a) pre-college factors; (b) environmental pull factors, and; (c) undergraduate experiences.

Pre-college factors. Students join institutions of higher education with lived experiences and diverse backgrounds. These experiences have the potential to influence students’ ability to leverage the support of institutional agents and achieve their academic goals. For example, students’ gender is a strong predictor of engagement with faculty for females (Nora et al., 1996). However, gains associated with engagement are different for male and female students (Sax et al., 2005). Two other pre-college factors, status as a first generation college student and being from a low-income household, influence engagement with institutional agents. Status as a first-generation college student, neither parent obtained a bachelor’s degree (Ishitani, 2003), is a negative predictor of student engagement with faculty (Lundberg et al., 2007) inside and outside the classroom (Soria & Stebleton, 2012). Similarly, low income students tend to interact with faculty more cautiously, often feeling disconnected to their peers and faculty or afraid to share their ideas (Arzy et al., 2006).

Environmental pull factors. Students’ full-time employment and delayed enrollment have the potential to impact engagement with intuitional agents. Southerland (2010) and Pike, Kuh, and Massa-McKinley (2008) argue that the more hours a student works outside of class, the less likely they are to be engaged with faculty. While the association between full-time employment and its negative effect on student engagement with faculty is clear-cut, the effects of students’ status as a non-traditional student are not easily defined. Non-traditional students, defined as students older than 25 years of age with delayed or interrupted enrollment into the higher education system.
education pipeline (Bailey, Calcagno, Jenkins, Kienzl, & Leinbach, 2005), show similar patterns of engagement compared to traditional students (Rosenthal et al., 2000). The key difference between the two groups, traditional and non-traditional students, is where the engagement takes place. Wyatt (2011) found that non-traditional students tend to engage with faculty primarily within the classroom setting whereas traditional students engage with faculty both inside and outside the classroom.

*Undergraduate experiences.* Undergraduate experiences speak to the activities in which students engage within the educational setting. Similar to students’ background characteristics and environmental pull-factors, undergraduate experiences have the potential to influence the students’ engagement with institutional agents. Enrollment intensity – whether students enroll as part- or full-time students – affects student engagement with institutional agents (Southerland, 2010), and part time enrollment puts students at greater risk for not completing their degree (B. Jacoby, 2014). Similarly, students’ grade point average (GPA) is impacted by engagement with faculty (DeFreitas & Bravo, 2012; Kuh et al., 2008), especially for Students of Color (Cole, 2010). While declaring a major is a strong predictor of continued persistence (Titus, 2006b) and degree completion (Titus, 2006a), its effects on student interaction have been absent from the literature. Lastly, students’ sense of social integration is a key component in facilitating student retention into the second year (Hausmann et al., 2009) and subsequent engagement with institutional agents (Stanton-Salazar, 2001).

Manuscript I centers the engagement experiences of Students of Color within the community college context, highlighting the differential engagement patterns of Students of Color, and underlines the variables which have the potential to influence student engagement with institutional agents. Manuscript I focuses heavily on the engagement experiences of
students enrolled at four year schools. While researchers have emphasized variables which have the potential to influence Students of Color engagement, the effect of being a community college Student of Color has not yet been fully explored. The few studies which focus on the experiences of Students of Color are either not nationally representative or have a granular focus within a specific population (i.e. Black males). Chang (2005) focuses on understanding the predictors of engagement for Students of Color enrolled in two-year public institutions. However, Chang’s study analyzed data only within Los Angeles Community College District. Students who participated in the study may not be representative of all students enrolled in community colleges across the United States, thereby limiting the ability of the author to generalize the results outside of the Los Angeles area. Flowers (2006) and Wood and Ireland (2014) focused their respective studies solely on Black male students, thus limiting the generalizability of their studies to Black female students, and students of other ethnicities. The present study addresses the above gaps by utilizing a nationally representative sample of Students of Color who began community college in 2003/04 across the United States.

**Manuscript II.** The purpose of Manuscript II was to understand the factors which contribute to the frequency of students’ informal engagement within the first year of enrollment with institutional agents in community colleges across the United States. A combination of cross tabulations and Blocked hierarchical ordinary least squares (OLS) multiple regression analyses were used to answer the following research question:

- What student demographics, pre-college experiences, environmental pull factors, and undergraduate experiences influence frequency of informal or social interaction with institutional agents outside of the classrooms and office hours during the first year, among Students of Color at community colleges?
Mentoring relationships between Students of Color and institutional agents have the potential to mediate obstacles students face as a result of their enrollment in higher education (Pope, 2002). Engagement with faculty during the first year of enrollment is crucial as it impacts a sense of belonging in later years of college (Hurtado & Carter, 1997) and serves as a positive predictor of student retention to the second year (Upcraft et al., 2004). Unfortunately, the findings in this study underscore high levels of disengagement with institutional agents for Students of Color since more than two thirds of Students of Color never met with faculty informally or socially outside of the classroom or office hours. In this study, there were three significant predictors of engagement, identification as Latino/a (a pre-college experience), studying with groups and social integration (both undergraduate experiences).

**Latino/a.** The findings of this study underscore the low rates of Latino/a engagement with faculty in informal or social interactions as only 27.4% of Latino/s met with faculty at least sometimes. Identification as Latino/a is also a statistically significant negative predictor of students’ informal or social contacts with faculty members outside of classrooms and office hours in Model 1 and remained statistically significant after controlling for undergraduate experiences. After controlling for all other variables in the final model, Latinos interact with faculty outside class/office hours at lower frequencies than Black students, who were the largest sample in the study (47%) and thus served as the reference group.

**Study groups.** Students with higher frequency of participation in study groups have higher frequencies of interaction with faculty informally than students who do not participate in study groups. After controlling for all other variables, it is expected that students who participate in study groups, compared to students who do not, will have higher frequencies of interaction with faculty informally or socially outside of class. Participation in study groups is a strong
predictor of student interaction with faculty ($\beta=.174$). The association between participation in study groups and subsequent interaction with faculty has been documented in prior literature (Chang, 2005). Increasing students’ participation in study groups is crucial, especially for community college students, and Students of Color. For students enrolled in two-year colleges, study groups create a sense of comfort and belonging (Deil-Amen, 2011). Furthermore, for Students of Color, participation in study groups positively influences academic performance and social integration (Kincye, 2007).

**Social integration.** Social integration, which measures students’ participation in fine arts activities, sports, and school clubs during the first year of enrollment is a positive predictor of student interaction with faculty informally outside of class or office hours to discuss academic matters. After controlling for all other variables, it is expected that students who identified as being socially integrated into the institution will have .003 points higher in their frequency of interaction in comparison to students who did not identify as being socially integrated. Social integration is the strongest predictor of social or informal interaction with faculty ($\beta=.200$). The relationship between students’ social integration and interaction with faculty has been documented by numerous researchers. In a qualitative study of student integration factors, Karp, Hughes, & O’Gara (2010) found that students who interacted with faculty reported feeling more integrated into the institution. Additionally, students who demonstrated higher levels of integration persisted to the next academic year. Consistent with the findings of this study, and Karp et al., (2010) Hausmann, Ye, Schofield, & Woods (2009) found that social integration plays a crucial factor on African American’s student engagement. The importance of undergraduate experiences on student informal engagement with faculty, including participation in study groups and social integration, were also highlighted in manuscript III.
Manuscript III. Manuscript III sought to answer the following research question, employing a combination of cross tabulations and Blocked hierarchical ordinary least squares (OLS) multiple regression analyses:

- What pre-college student factors, academic and social experiences and cognitive factors influence frequency of interaction with institutional agents outside of the classroom and office hours to discuss academic matters during the first year, among Students of Color at community colleges?

The findings of this study stress the importance of undergraduate experiences as predictors of interaction with institutional agents, suggesting that “who students are when they start college – their background characteristics and pre-college behavior—is associated to a non-trivial degree with what they do in the first college year” (Kuh et al., 2008, p. 546, emphasis in original). In addition to undergraduate experiences, there were three other predictors of engagement with institutional agents: being female and identification as Latino/a (both pre-college factors) and aspirations to a master’s degree or above (an environmental pull-factor).

Precollege experiences. There are two statistically significant demographic variables after controlling for undergraduate experiences: gender and identification as Latino/a. Congruent with prior literature, (Nora et al., 1996; Saenz et al., 2011; Sax et al., 2005), female students engaged with faculty outside of the class or office hours to discuss academic matters at higher frequencies than their male counterparts. For students in the sample, identification as Latino/a, compared to Black students, was a negative predictor of academic interaction with institutional agents. After controlling for all other variables in the model, Latinos/as interacted less frequently with faculty outside class/office hours to discuss academics than African American students, the
reference group. This finding is supported by Kim (2010) and Greene et al. (2008) who found that Black students tend to engage with faculty at higher frequencies than their peers.

**Environmental pull factors.** Students’ aspirations to obtain a Master’s degree or above was the only environmental pull factor that was a statistically significant predictor of engagement. It is expected that students who aspired to obtain a Master’s degree or above at the beginning of their educational journey at a community college will engage with institutional agents more frequently than those students who did not aspire to obtain a Master’s degree. Bensimon and Dowd (2009) highlight the interconnectedness of students degree aspirations and student/faculty engagement. The authors explain that faculty, as institutional agents, play a crucial role in influencing students degree aspirations: “Students have aspirations and hopes, but without the guidance, support, and active involvement of … [institutional] agents, they may not have access to the resources they need to be successful” (2009, p. 651).

**Undergraduate experiences.** Five undergraduate experiences significantly predicted students’ frequency of interaction with faculty outside of the classroom to discuss academic matters: Enrolling full-time in post-secondary, declaring a major in the first academic year of enrollment, taking remedial courses, participating in study groups and feeling socially integrated. Consistent with Southerland (2010), it is expected that full-time students will have a more recurrent interaction with faculty in comparison to students who enroll part-time. Declaring a major during the first year of enrollment in post-secondary education is also a positive predictor of continued persistence (Titus, 2006b) and degree completion (Titus, 2006a), and as demonstrated in the findings of this study, declaring a major is predictive of student engagement with institutional agents on academic matters. Controlling for all other variables, it is expected that students who declared a major will have a .080 higher frequencies of interaction with faculty
in comparison to students who do not declare a major. Students who participate in remedial
courses, in comparison to their peers who do not, are expected to have higher frequencies of
interaction with faculty. The positive relationship between remedial courses and interaction with
faculty is also supported by Wood and Ireland (2014) who found that participation in reading
remediation and study skills courses were significant predictors of engagement with faculty.
Similarly, students who participate in study groups have more frequent interaction with faculty in
comparison to students who did not participate in study groups. Across all other variables,
participation in study groups was the strongest predictor of students’ engagement with
institutional agents on academics ($\beta = .238$). This finding is consistent with Hurtado and Carter
(1997) who found that students who frequently discussed course work with other students had a
higher sense of belonging at the institution, including interactions with faculty. Finally social
integration, a composite variable that includes participation in clubs, sports and fine art activities,
is a significant positive predictor of student academic engagement with institutional agents, and
the second strongest variable to predict engagement ($\beta = .146$). Social integration into the
institution, as a predictor of retention has been documented in the literature. Perhaps
unsurprisingly, student engagement in social and academic activities with peers predicts
subsequent engagement with institutional agents.

**Connections between Manuscript II and III.** Approximately 2,400 students of color
began post-secondary education at two-year public institutions in the 2003/2004 academic year
and were included for analyses in both studies. Forty-seven percent of participants in the study
were Black, 40.1% identified as Latino/a and 12.9% were Asian American or Pacific Islander.
Black females and Latina students were the majority of participants in the final sample (61.9%
and 60.7% respectively). For Asian American or Pacific Islander, however, males were the majority (55.1%).

Less than one third of community college students who began post-secondary enrollment in the 2003-2004 academic year met with their faculty informally or socially outside of the class at least sometimes. In comparison, on average 67.6% met with faculty outside of class or office hours to discuss academic matters. Across both manuscripts, Latino/a students showed the lowest engagement patterns with institutional agents. Asian/Pacific Islander students met with faculty informally at higher rates whereas Black students met with faculty more frequently to discuss academic matters outside of class. This finding is contrary to Kim (2010) who found African American students were more likely than any other student groups to have a personal interaction with faculty.

Female students met with institutional agents informally and outside of class to discuss with academic matters more often than did male students. Whereas 5.9% of male students who met often informally with faculty, 6.9% of female students met often. Similarly, 12.9% of male students, and 16% of female students met often with faculty outside of class to discuss academic matters. Sax et al. (2005) found similar engagement patterns for male and female students. Nora, Cabrera, Hagedorn, & Pascarella's (1996) suggests one of the most significant predictors of persistence for female students was the interaction they had with their professors outside the classroom.

For Students of Color enrolled in community college, participation in study groups and social integration are positive predictors of engagement with institutional agents informally and to discuss academic matters outside of the class or office hours. Tinto and Pusser (2006) posited that the more students are socially and academically integrated into the institution, the more
likely they are than their peers to persist toward graduation. Furthermore, Stanton-Salazar (2001) articulates the importance of students’ sense of connectedness to the institution as an important factor in creating increased effort and academic achievement. This study underscores the positive relationship between participation in study groups, students’ social integration and engagement with institutional agents.

Simultaneously, identification as Latino/a is a negative predictor of engagement, both informally and to discuss academic matters. Kim (2010) and Lundberg and Schreiner (2004) found parallel engagement patterns for Latino/a students. Similarly, Anaya and Cole (2001) found that while more than 50% of Latino/a students reported interacting with faculty members regarding academic matters, less than 20% reported interpersonal (informal) contact with faculty members. In addition to low frequencies of interaction, in the present study, students’ identification as Latino/a was the only variable that negatively predicted informal engagement with faculty, even after controlling for undergraduate experiences. Latino/a students, through informal interaction with faculty, tend to experience increases in college self-efficacy, better defined academic goals, and overall adjustment to college (Santos & Reigadas, 2002). Unfortunately, as this study demonstrates, Latino/a students are missing on the benefits of frequent and informal interaction with faculty.

**Implications for Policy and Practice**

Holistically, these manuscripts examine the factors which influence engagement with institutional agents for Students of Color. The first manuscript underscores the importance of engagement with institutional agents for Students of Color, and frames the factors with have the potential to influence engagement within the context of the Community Colleges. Manuscript I stresses the limited focus on the predictors of engagement for Students of Color enrolled in
community colleges while simultaneously bringing to the forefront the variables which have the potential to impact engagement, and which are later addressed in Manuscripts II and III.

The second manuscript demonstrates low informal engagement between Students of Color enrolled in two-year public institutions and institutional agents. Low informal engagement with institutional agents for Students of Color means they miss mentoring opportunities which have the potential to mediate obstacles students face as a result of their enrollment in higher education (Pope, 2002). Community colleges should create opportunities for faculty to purposefully and intentionally interact with students. This approach shifts the onus of accountability from the student to the faculty, and ultimately to the institution. Faculty members, as institutional agents, are situated within the organization in a position of power (Stanton-Salazar, 2011) and can utilize said power to impact the educational experiences of students who have been historically left out of the conversation, thus serving as empowerment agents (Stanton-Salazar, 2011) – connecting students with resources and removing institutional barriers. In doing so, faculty can impact not only the success of Students of Color, but the culture of the community college.

The third manuscript underscores the importance of undergraduate experiences for Students of Color as predictors of interaction with institutional agents, therefore highlighting that students background characteristics and environmental pull factors are less important than the experiences Students of Color have once enrolled within the educational setting (Kuh et al., 2008). It is important to note, however, that for Latino/a students, undergraduate experiences are not sufficient to facilitate engagement with institutional agents, thus suggesting the need to further understand the educational experiences of Latino/a students within the community college setting. Hurtado and Carter (1997) emphasize the importance of a supportive campus
climate to impact students’ sense of integration into the college community, particularly for Latino/a students.

Manuscripts II and III highlight the importance of undergraduate experiences on mediating background characteristics and pull-factors. Simultaneously, both manuscripts highlight that for Latino/a students, undergraduate experiences do not sufficiently predict engagement with faculty, thus emphasizing the need to understand other factors which may influence engagement. Students of Color tend to experience racial tension or discriminations within the college campus, and these experiences diminish students’ sense of belonging (Hurtado & Carter, 1997). One way to mediate the effects of a negative campus climate is to create opportunities for students to develop interpersonal relationships with faculty (Cress, 2008). Educational leaders must take an active role in creating an institutional environment where faculty and student relationships are not only valued but expected of the faculty and the students. These types of interactions should be cemented early on in the students’ academic career, since early experiences have the potential to predict a sense of belonging in the later years of college (Hurtado & Carter, 1997).

Students’ social integration, defined as participation in clubs, sports and fine arts activities and participation in study groups, were the strongest predictor of informal and academic engagement with institutional agents for Students of Color. Additionally, enrolling full-time, declaring a major and participation in remedial courses were positive predictors of student engagement with institutional agents to discuss academic matters. Community colleges should leverage these types of activities to foster engagement between students and faculty, thus fostering mentoring relationships between students’ and institutional agents that are multi-faceted and focus on the whole student (Pope, 2002). Specifically, community colleges should
focus on developing students’ career goals and selecting a major within the first year of school as well as encouraging students to enroll full-time. First, to ensure that Students of Color know the importance of declaring a major and enrolling full-time, community colleges must require all students to participate in mandatory orientations to the college. Chang (2005) found that African American students who attend orientation tend to engage more often with faculty. Mandatory orientations are an opportunity for community colleges not only to communicate important resources to students, but also to foster early relationships with faculty. For example, community colleges could offer orientation sessions that are geared towards specific career interests (i.e. Health). Within the orientation, the college could invite faculty to discuss what students will learn within the classroom setting, what makes a successful student in the specific field, and how faculty support students who enroll in said program. Through this approach, Students of Color not only gain an understanding of the college and their major, but also begin to foster early informal and academic relationships with faculty.

Second, faculty members must be required to engage with students in educationally purposeful activities, including academic advising. Community colleges must create an environment where faculty advising of students is an important component of their professional responsibilities (O’Meara & Braskamp, 2005). Through formal advising relationships with students, faculty can impact students’ degree aspirations, sense of belonging and course taking patterns (i.e. understanding the importance of enrolling full-time). Enhancing students’ advising experiences not only promotes overall student satisfaction with their education, but also fosters subsequent interaction with faculty (Eimers, 2001).

Finally, in addition to expanding faculty’s role to include involvement in orientation and advising services, community colleges should foster faculty involvement in educational activities
outside of formal classroom settings. In this study, student participation in study groups was a positive predictor of students’ engagement with institutional agents. Community colleges could leverage these types of interaction to continue fostering engagement between faculty and students. As a point of illustration, community colleges could provide, as part of faculty’s contract, service units to faculty who lead study groups outside of the class. Additionally, tutoring services could be expanded to include embedded tutors within the classroom setting. In this sense, faculty would work directly with campus tutors to facilitate study groups and students’ involvement in educational activities.

At the same time, however, community college leadership should consider the employment conditions of faculty members. Part time faculty are a growing presence in higher education, accounting for almost half of faculty in higher education in general and more than two thirds at community colleges (J. S. Levin & Hernandez, 2014) and provide nearly half of all instruction at community colleges (D. Jacoby, 2006). High proportions of part-time faculty are associated with lower levels of student engagement (Porter, 2006), as part-time faculty report interacting with students at lower frequencies than tenured and tenure-track faculty (Umbach, 2007). The impact of part-time faculty on engagement is particularly troublesome for Students of Color.

A high proportion of part-time faculty is not only correlated to lower engagement rates for Students of Color, but also lower retention (Jaeger & Hinz, 2008), graduation (Bailey et al., 2005; Calcagno et al., 2008; Ehrenberg & Zhang, 2005) and transfer rates (Eagan & Jaeger, 2009). Similar to students who may be disconnected from the institution, part-time faculty have limited agency and resources to act on behalf of students (Umbach, 2007). If community colleges
are to make meaningful strides towards increasing student engagement with faculty, the conditions of employment and training for part-time faculty must also be addressed.

Institutions of higher education are less likely to be invested in the training and support of part-time faculty members (Ronco & Cahill, 2004). As a result, part-time faculty are likely to receive less training, support and general orientation to the community colleges they serve than are full-time faculty. Community colleges must provide sufficient resources for part-time faculty to engage with students, since part-time faculty are likely to mirror the support they receive in how they interact with students (Umbach, 2007). Consequently, community colleges must intentionally create practices that support the professional development and sense of belonging of part-time faculty. Two initiatives to support part-time faculty are creating partnerships between student services personnel and other faculty. To begin with, intentional pairings of part-time faculty with student services personnel allow faculty the opportunity to learn about campus resources, connect with other members of the institution, and begin increasing their social networks. Relatedly, institutions should create mentoring relationships between full- and part-time faculty to foster the transmission of institutional knowledge and practices of which part-time faculty may be unfamiliar. Both strategies allow part-time faculty to develop their capacity to act as institutional agents on behalf of students. Similarly, community colleges must create an intentional plan to employ and train part-time faculty. Part-time faculty use active and collaborative learning techniques, spend time preparing for class and interact with students on class related issues less frequently than full-time faculty (Umbach, 2007). As such, community colleges must have a detailed and substantial plan to train and evaluate part-time faculty to ensure their success within and outside the classroom setting.
Formal trainings and partnerships, however, are not enough. Community colleges must also provide sufficient resources for part-time faculty, including financial incentives to engage with students (Eagan & Jaeger, 2009). Part-time faculty tend to be more unavailable to meet with students than are full-time faculty, partly because they piece together multiple teaching contracts at varied institutions (Ronco & Cahill, 2004). As such, community colleges must consider the impact this has on students’ success and think creatively as to increase part-time faculty’s commitment to the institution and increase interaction with students. For example, in this study, participation in study groups for Students of Color was a positive predictor of interaction, both formally and for academic matters. Institutions could create faculty-led study groups and offer those contracts to adjunct faculty. Through this approach, community colleges can leverage the expertise of part-time faculty, increase their engagement with students, and minimize part-time faculty’s disengagement. Congruently, students’ social integration, as operationalized through their participation in clubs, sports and the arts, was a positive predictor of engagement. Community colleges could leverage part-time faculty to serve as club advisors or coaches, thus increasing their informal contact with students outside of the classroom.

Together, the three manuscripts emphasize the need for continued understanding of the factors which influence student engagement, including a further understanding of the impact of part-time faculty on student engagement and the effects of the aggregate campus culture in influencing student engagement. Understanding the importance of undergraduate experiences in predicting both informal and academic engagement for Students of Color allows educators to create institutional practices that have the potential to influence student engagement. For practitioners, knowing which practices have the biggest impact on engagement with faculty for Students of Color is important, as it allows resources to be allocated towards increasing
engagement. Congruently, increased understanding of the barriers students face in their interaction with institutional agents allows practitioners the opportunity to work towards the removal of said barriers.

To conclude, this study sought to understand the factors which influence engagement with institutional agents for Students of Color who begin enrollment in higher education for the first time in community colleges across the United States. Nora et al.’s (2006) Student Engagement Model and Stanton-Salazar’s (1997; 2011) concept of institutional agents served as the conceptual model in the selection of the dependent variables (frequency of interaction with institutional agents for informal or academic matters) and independent variables. Manuscript I is a systematic review of the literature highlighting the importance of student engagement with institutional agents, particularly for community college students. The second manuscript and third manuscripts underscore the importance of participation in study groups and social integration as predictors of engagement with faculty for Students of Color. Furthermore, in the third manuscript, enrolling full-time, declaring a major and participating in remedial courses are additional positive predictors of engagement. In manuscripts II and III, identification as Latino/a is a negative predictor of engagement with institutional agents. The results of this study underscore the importance of undergraduate experiences on engagement with institutional agents for Students of Color and highlight several implications for policy, research and practice, including: (a) addressing the effects of campus climate on Students of Color engagement with institutional agents, (b) creating institutional practices that support students’ selection of a major within the first year of enrollment, (c) requiring students to participate in orientation and advising services with faculty, also within the first year of enrollment, (d) supporting part-time
faculty in the development of their own information networks, (e) providing financial incentives for part-time faculty to engage with students.
References


Center for Community College Student Engagement. (2016). *Expectations meet reality: The underprepared student and community colleges*. Austin, Texas: The University of Texas at Austin.


DeFreitas, S. C., & Bravo, A. J. (2012). The influence of involvement with faculty and mentoring on the self-efficacy and academic achievement of African American and


