LEARNING THE RULES OF ENGAGEMENT: EXPLORING FIRST-GENERATION STUDENTS' ACADEMIC EXPERIENCES THROUGH ACADEMIC RESEARCH ASSIGNMENTS

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University of Pittsburgh, 2018

Despite efforts to improve retention and degree completion rates, American higher education suffers from a persistent social-class achievement gap (Stephens, Hamedani, and Destin, 2014). This gap is often explored quantitatively through the examination of academic outcomes of first-generation college students (i.e. students who parents have not completed a college degree) in comparison to their continuing-generation peers. This approach has resulted in a deficit approach to first-generation college students, focusing on ways in which they need to be remediated, rather than an interrogation of the ways in which academic, disciplinary, and institutional cultures may present barriers to success for this student population.

The purpose of this hermeneutic phenomenological (van Manen, 1990, 2014) study was to explore the ways in which first-generation students navigate collegiate academic culture through the lens of a specific and ubiquitous academic experience—the research assignment. Thirty first-generation students, who were in at least their third year of study at two regional campuses of a large research university, were selected to participate in semi-structured interviews using maximum variation sampling (Patton, 1990). A unique combination of the

community of practice concept (Lave & Wenger, 1991), social capital (Bourdieu, 1986), academic literacy, and information literacy formed the study's conceptual framework.

Four key themes emerged from the data. First, students perceived their initial positionality within the community differently based on their success in applying the skills and strategies they had developed in high school to their new college environment. Second, students' perceptions of their initial positionality within the community were related to the nature and frequency of early interactions with faculty and the development of an academic support network. Third, when given the opportunity to do so, students used their prior knowledge, lived experiences, interests, and identities to select topics for their research assignments. Finally, many students seemed to employ the same checklist approach to evaluating and using information in research assignments they learned in high school throughout their college career, rather than demonstrating the development of critical thinking related to information use.

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DEDICATION

To all of my loved ones who are or were insatiable learners but did not have access to the educational opportunities that were afforded to me.

1.0 BACKGROUND, PURPOSE, AND OVERVIEW OF THE STUDY

All students must learn how to *do* college and to perform as college students (Collier & Morgan, 2008; Demetriou, Meece, Eaker-Rich, & Powell, 2017; Graff, 2003; Tapp, 2015; Walker, 2006). Learning how to *do* college includes interpreting how the collegiate environment operates and determining what the expectations are for performance as a college student. In college, professors expect that students will identify and develop the skills and dispositions—such as critical thinking, problem solving, curiosity, and reflexivity—that the academy values and then demonstrate those skills and dispositions in their academic work (Elmborg, 2006a). Even students who have been exposed to a rigorous, college-preparatory curriculum in high school might not be prepared to decipher the implicit values and expectations of college-level academic work as first-year students (Conley, 2005; Graff, 2003), particularly if their secondary education focused on memorizing facts or formulas in preparation for high-stakes standardized testing. Upon entering college many students will be transitioning from a banking model of education to an educational model that moves toward the development of critical consciousness (Freire, 1970), in which students are expected to think critically, routinely ask questions, and problematize what they believe to be true. This shift in educational models may be a liminal space for many undergraduate students, in that the structure they once knew may be gone but they may not have yet figured out how to navigate the new educational environment and develop strategies for successful performance as a college student.

Meeting admission requirements and gaining entry to college does not result in equity among students; undergraduate students are not entering the collegiate academic environment on a level playing field. Some students come to college better prepared to transition from the role of high-school student to that of college student based on their academic preparation and their social network (Bowen, Chingos, & McPherson, 2009; DeAngelo & Franke, 2011; Lareau, 2011; Warburton, Burgarin, Nuñez , & Carroll, 2001; Yee, 2016). Students from families with a higher socioeconomic status (SES) typically have had access to rigorous, college-preparatory curricula in high school, as well as social networks that aid them in decoding collegiate academic culture (Delpit, 1988; Lareau, 2011). On the other hand, lower-SES students, including some first-generation students, are less likely to have had access to these resources, which could make it more difficult for them to transition into the role of college student (DeAngelo & Franke, 2011; Warburton et al., 2001). These differences contribute to a social-class achievement gap (Stephens, Hamedani, & Destin, 2014), in which lower-SES students typically have lower grades and lower degree completion rates than students who come from higher-SES families (Bowen et al., 2009; DeAngelo & Franke, 2011). Admission to college does not always prevent the cycle of social reproduction for lower-SES students, including first-generation students, even though they may have had to overcome more obstacles than many of their continuing-generation peers. Rather, this academic achievement gap enables social reproduction and stratification, in that the haves continue to do well and achieve more and the have-nots are often left with debt and no degree.

In this study, I explored the academic experiences of first-generation college students in order to understand what informs or influences their undergraduate academic outcomes. Using Lave and Wenger's (1991) community of practice heuristic, I viewed undergraduate students as

being in a continual state of transition as they progress through their coursework and interact with their peers and institutional agents. As students gain entry into their major field(s) of study they move from the periphery of the community toward the center, demonstrating the necessary level of learning to complete a degree in their major field(s) of study. I focused on first-generation students' experiences with one common practice within the undergraduate academic community of practice—the academic research assignment. Academic research assignments, including term papers or capstone projects, are ubiquitous (Head & Eisenberg, 2009), and, as a reification of the academic community' values and expectations for participation, professors expect students to consume and synthesize scholarship and apply concepts and vocabulary from a discipline to which they are just gaining entry.

1.1 FIRST-GENERATION COLLEGE STUDENTS

1.1.1 Defining first-generation college students

A first-generation college student is typically defined as a student whose parents have attained a high school diploma or less (Nunez & Cuccaro-Alamin, 1998). However, in research and in practice, the first-generation college student category may be defined in different ways and parental education levels of first-generation students can vary, including parents who never finished high school, have a diploma or General Equivalency Diploma (GED), have completed some higher education, have completed a certificate program, or have attained an associate's degree. When the existing literature is pulled together, the operationalization of first-generation college student category consists of a spectrum of parental experiences with higher education

(Jehangir, Stebleton, & Deenanath, 2015). Holding student background characteristics constant, Bowen et al. (2009) found that there is little difference in outcomes for students whose parents have never attended college and students whose parents have some college education. In this study, first-generation college students are defined as students whose parents have not completed a four-year college degree.

The first-generation college student population is diverse, and many of these students have complex identities that extend beyond their categorization as first-generation (Jehangir et al., 2015). First-generation college students are more likely to be students of color, be nontraditional in terms of age, have family obligations, be foreign-born, have financial concerns, work full-time, go to school part-time, live off campus, have unmet financial need, and start in two-year or for-profit colleges (Engle & Tinto, 2008; Jehangir, 2010; Terenzini, Cabrera, & Bernal, 2001). However, these complexities are not always recognized by scholars and practitioners, and first-generation college students "often find themselves labeled or identified in ways that undermine their complexity" (Jehangir, 2010, p. 148). Wildhagen (2015) critiques the categorization of first-generation college students, arguing that institutions have constructed this category within the past couple of decades in order to create a discourse that seeks to advance institutional interests. In addition, Wildhagen found that not all first-generation college students identify with this categorization, nor do they necessarily find it to be meaningful to their collegiate experiences.

The prevalence of first-generation students enrolled in colleges and universities has ebbed and flowed over the past several decades. According to longitudinal data collected by the Cooperative Institutional Research Program's (CIRP) The Freshman Survey (TFS), almost 39 percent of incoming first-year students in 1972 were first-generation students, which dropped to

16 percent in 2005 (Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007). Greenwald (2012) reports an increase in the percentage of first-generation students in the past decade. First-generation students accounted for about 17 percent of incoming students in 2007 and almost a third of incoming students in 2012. According to 2014 data from CIRP, fully 24 percent of first-year students reported that their mothers had a high school diploma or less and 28.5 percent had fathers with a high school diploma or less. Despite the differences in these numbers over the years, the number of first-generation students in colleges and universities is not trivial.

1.1.2 First-generation college students and academic outcomes

The social-class achievement gap (Stephens et al., 2014) is quite real for first-generation students. Previous research using National Center for Education Statistics (NCES) datasets has found that first-generation college students are less likely to persist after their first (Engle & Tinto, 2008) and second years of college (Ishitani, 2006). Even if first-generation students persist beyond their first and second years of college, they are less likely than their continuing-generation peers to complete their degrees in four years (DeAngelo, Franke, Hurtado, Pryor, & Tran, 2011; Ishitani, 2006), and this completion gap remains when examining six-year completion rates (DeAngelo et al., 2011). The difference in overall completion rates between first- and continuing-generation students is striking, especially when family income is taken into account. Engle and Tinto (2008) found that only 11% of low-income, first-generation students attained a bachelor's degree, whereas 55% of non-low-income, continuing-generation students attained the same degree. However, even when first-generation students complete their degrees, their academic performance, in general, is lower than their continuing-generation peers' performance (Chen & Carroll, 2005).

These statistics suggest that many first-generation students must overcome obstacles that their continuing-generation peers may not face in order to complete a college degree. Longitudinal data collected from the CIRP surveys indicate that first-generation students report spending less time studying in high school and having lower high school GPAs and SAT scores. In addition, Saenz et al. (2007) found that first-generation students have "lower expectations for their college GPAs, and rate themselves lower on intellectual self-confidence, math ability, and writing ability" (p. 32). Previous research indicates that first-generation students are less likely to have taken rigorous high school courses (DeAngelo & Franke, 2011; Lohfink & Paulsen, 2005; Warburton et al, 2001), which is an indicator of collegiate academic success (DeAngelo & Franke, 2011). Furthermore, first-generation students are more likely to take remedial courses in college (Engle & Tinto, 2008; Warburton et al., 2001). Academic preparation and the number of remedial courses a student takes during his or her first year of college are inversely related, thus affecting the student's ability to academically succeed in college (An, 2013; Warburton et al., 2001). Despite these concerning statistics, scholars have recognized that there is a paucity of research about first-generation students' academic experiences (Soria & Stebleton, 2012).

Two seminal quantitative studies provide some evidence for understanding first-generation students and collegiate academic experiences (Pascarella, Pierson, Wolniak, & Terenzini, 2004; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). Using data from the National Study of Student Learning (NSSL), Terenzini et al. (1996) investigated whether or not first-generation college students have different precollege characteristics and first-year experiences than their continuing-generation peers, and if these differences have ramifications in terms of cognitive development. In terms of academic skills, the results indicated that first-generation students had lower reading, math, and critical thinking skills than continuing-

generation students, although their gains in math and critical thinking were not different. In addition, first-generation students reported lower degree aspirations, spending less time speaking with teachers in high school, expecting to need more time to complete a degree, spending less time studying, completing fewer credit hours, and were "less likely to participate in an honors program" (p. 10). Pascarella et al. (2004) extended this initial study by exploring outcomes for first-generation students through their second and third years of college using NSSL data. The results showed that first-generation students continued to have lower grades through the third year of college, completed fewer credit hours, worked more hours per week, and were more likely to live off-campus.

1.2 ACADEMIC RESEARCH ASSIGNMENTS

In this dissertation, I investigated one potential contributor to the social-class achievement gap for first-generation college students—academic research assignments. For the purposes of this study, academic research is defined as the process of selecting and defining a topic of inquiry and searching for, retrieving, evaluating, and using information for a course assignment. It does not mean, though could be related to, conducting an experiment or other kinds of empirical research. Project Information Literacy (PIL) indicates that research assignments are quite common in higher education; 67 percent of college students surveyed by PIL report that they had to complete an argumentative paper requiring them to find, evaluate, and use information in the previous academic year (Head & Eisenberg, 2009). More than 35 percent of the surveyed students reported completing an interpretive reading, a historical analysis, or a literature review

in the previous academic year, all of which required them to find, evaluate, and use outside information sources.

The ubiquity of academic research assignments suggests that knowing how to find, evaluate, and use information for college-level coursework not only influences students' academic performance, but can also serve as a demonstration of their understanding of academic culture, including its expectations for consuming and synthesizing information to support an argument or answer a question. Head (2013) found that many of the 35 undergraduate students interviewed in her study reported using and then modifying the research strategies they developed in high school, meaning that students' pre-college academic preparation likely plays a role in how they approach research assignments in college. In general, students reported four ways that college-level research differs from high school-level research, including both the vast amount and diversity of information sources and expectation of independent, intellectual exploration. Although many students reported being excited about college-level research, they also described it as "nerve wracking," "foreign," "intimidating," and "terrifying" (Head, 2013, p. 12).

Even though information consumption has shifted from a print-focused to a digital-focused environment and students are consistently inundated with information, many of their information-seeking and information-use strategies have not changed. Fister (1992) found that one of the most difficult and time-consuming parts of research was defining and narrowing a topic, and many students reported experiencing frustration at this stage. A recent PIL study found that students still find topic definition to be one of the most difficult and frustrating parts of research assignments (Head & Eisenberg, 2010b). In a different report, Head and Eisenberg (2010a) noted that the majority of the 191 research assignment handouts they analyzed did not

convey information related to defining and focusing a research strategy (p. 2). If teaching faculty assume that students are learning how to do this in another course or before they enter college, the expectations related to these two critical tasks may remain tacit for many students.

While information is more accessible now than when Fister's (1992) study was conducted, contemporary students report using some of the same strategies to evaluate information for inclusion in their assignments. Undergraduates report using timeliness, authority, scholarly appearance, and relevance as evaluation criteria (Head & Eisenberg, 2010b; Logan & Pickard, 2012). Despite students' acknowledgment of the importance of using quality information and their ability to provide appropriate evaluation criteria, some students report using information that is convenient to access and easy to read (Connaway, Lanclos, & Hood, 2013; Logan & Pickard, 2012). In other words, students sometimes sacrifice using the most appropriate and relevant sources for their assignments for those that are easy to retrieve and understand.

Given first-generation students' differences in academic preparation and academic outcomes, I explored the possibility that academic research assignments contribute to the social class achievement gap for first-generation students. Academic research assignments, including term papers or capstone projects, are a reification of the academic community's values and expectations, as students must develop appropriate lines of inquiry, synthesize scholarship, and apply concepts and vocabulary from a discipline into which they are just gaining entry. First-year college students often start with strategies that worked for them in high school and then modify them based on their new collegiate environment (Head, 2013), which may be problematic for student populations who tend to be less academically prepared for college-level academic work. In addition, faculty may develop expectations for these assignments that are rooted in years of

disciplinary training and may take for granted what undergraduate students do or do not understand in terms of these expectations (Leckie, 1996). Therefore, expectations for developing and refining a topic or line of inquiry and then evaluating, synthesizing, and using information to support an argument may remain tacit for some students.

1.3 PURPOSE OF THE STUDY

In order to explore the potential contribution of academic research assignments to the social-class achievement gap, I combined two lines of inquiry that have historically remained separate—research about first-generation students' academic experiences and outcomes, primarily rooted in the field of education, and research about undergraduate students' experiences with academic research assignments, primarily rooted in the field of library and information science (LIS). Although a handful of studies in LIS have made initial attempts at combining these lines of inquiry (Logan & Pickard, 2012; Pickard & Logan, 2013; Soria, Nackerud, & Peterson, 2015), they have not combined theoretical and conceptual frames in a way that intentionally solidifies the relationship between the two. In this dissertation, I used the dominant conceptual frame in the LIS literature—information literacy—and joined it with theoretical and conceptual frames that are frequently used in educational research—communities of practice and social capital. Academic literacy, a concept that has emerged from writing studies, was used to connect information literacy with the community of practice heuristic and social capital. This combination of theoretical and conceptual frames provides a new way of thinking about the role academic research assignments play in first-generation students' academic experiences and outcomes.

Existing research indicates that there is an academic achievement gap between first-generation students and their peers; however, relatively little is known about the academic experiences that contribute to this gap (Soria & Stebleton, 2012). Critical social theories that allow for the examination and identification of how educational institutions and institutional agents contribute to social reproduction have not played a role in LIS research examining students' information literacy (Elmborg, 2006a) and their approaches to and experiences with research assignments. Despite an established and growing body of research that explores students' approaches to research assignments and the application of information literacy skills to these assignments, first-generation students' experiences with research assignments have remained largely unexamined. The use of critical social theories to explore first-generation students' experiences with academic research assignments will expand what is known about first-generation students' academic experiences, in order to better understand what contributes to the reproduction of the social-class achievement gap.

An established yet growing body of research that explores various facets of how students approach academic research assignments and develop their information literacy already exists. The use of the community of practice heuristic, which allows undergraduate students to be viewed in a continual state of transition, provides a new dimension to this body of research. Existing research has provided descriptions of the processes or approaches students take to completing a particular task or assignment. While useful, this research has only delivered a snapshot of students' experiences with research assignments at a single point in time. In this study, I asked first-generation students to not only describe their experiences, but also to reflect on their transition from being first-year students to becoming novice members of a discipline as upper-level students and how they figured out what they were expected to do in these

assignments as they became more established members within the undergraduate academic community of practice. In other words, I sought to understand how first-generation students' approaches to academic research assignments evolve as they move through their coursework and interact with peers and institutional agents, rather than simply capturing their experience with or approach to a specific assignment.

Finally, I employed an equity cognitive frame (Bensimon, 2005), which posits institutional responsibility for students' outcomes and is critical of the ways in which institutions alienate or marginalize student populations based on background characteristics such as race and SES. Participants were asked to reflect on their journey within the undergraduate academic community of practice, including how expectations for participation were communicated to them, which has helped in understanding how institutional agents (i.e. faculty, administrators, librarians, and other academic support staff) may reinforce structural barriers to success for all students. As established members of the undergraduate academic community of practice, institutional agents hold a lot of power in providing access to information about expectations for successful participation and performance within the community, and, in some cases, determining what those expectations are and evaluating student performance against them. An equity approach is diametrically opposed to viewing first-generation students as deficient or in need of remediation. Rather, the use of an equity cognitive frame provides the foundation for exploring the ways in which institutional agents can meet students where they are in order to mobilize institutional resources to help them succeed, while simultaneously being aware of the ways in which institutions promote systemic marginalization of particular student populations.

1.4 OVERVIEW OF THE STUDY

In this dissertation, I explored first-generation students' progression toward full participation in the undergraduate academic community of practice through their experiences with academic research assignments and how first-generation students make sense of what is expected of them in terms of selecting a topic and finding, evaluating, and using information in these assignments. The following research questions guided this exploration:

- How do first-generation students describe the process of figuring out expectations for performance within the academic domain at the undergraduate level?
    - How do first-generation students describe making sense of what is expected of them in terms of selecting a topic and satisfactorily finding, evaluating, and using information for academic research assignments?
    - How do their strategies for making sense of what is expected of them change as they progress through their coursework?
- How do first-generation students describe the purpose of academic research assignments in their undergraduate academic experience?

In this dissertation, a research assignment is defined as any assignment that requires students to form an argument or develop a question about a topic and use at least three information sources to support their argument or to answer their question. Students were asked to reflect on assignments that they completed individually when possible. The phrase "doing research" includes finding, selecting, and using information sources for a research assignment.

I used hermeneutic phenomenology as the research methodology (van Manen, 1990, 2014), which is appropriate for examining what it is like for an individual to experience a common phenomenon. Hermeneutic phenomenological studies seek to fully describe, to the

extent that it is possible, the reflections of lived experience. I conducted one-on-one, semi-structured interviews with 30 first-generation students in order to learn more about what is was like for them to transition within the undergraduate academic domain by reflecting on their experiences with academic research assignments as first-year students and as upper-level students, as well as learning more about the meanings they make of those experiences. I conducted this study at two four-year regional campuses of a public research university located in the Mid-Atlantic, each of which has a student enrollment of less than 2,000. Study participants were traditionally aged (i.e. 18 to 24 years old), full-time (i.e. at least 12 credit hours) first-generation students who are in at least their third year of study at these two campuses.

In the next chapter, I explore the theoretical and conceptual foundations that I use in this dissertation, as well as reviewing relevant research to support this investigation.

2.0 THEORETICAL FOUNDATIONS AND LITERATURE

In this dissertation, I combine theoretical and conceptual frames from the fields of education, writing studies, and library and information science (LIS) to examine what it is like for first-generation students to navigate and participate in the undergraduate academic domain. I use the dominant conceptual frame in the LIS literature—information literacy—and situate it within and connect it to theoretical and conceptual frames that are often used in educational research—communities of practice and social capital. Academic literacy, a concept that has emerged from writing studies research and literature, is used to solidify the relationship among the other theoretical and conceptual frames. In this chapter, I introduce the theories and concepts that frame this study and describe their relationship with each other. Next, I review relevant literature related to expectations for academic performance in college, and how those expectations are communicated to and received by students. Finally, I review literature related to educationally and economically challenged (EEC) students' (Walpole, 2007) feelings of legitimacy in the undergraduate academic domain.

2.1 THEORETICAL FOUNDATIONS

2.1.1 Communities of practice

This study uses Lave and Wenger's (1991) concept of community of practice as a heuristic for exploring the experience of participating in collegiate academic culture and how first-generation students develop academically based on their experiences. The community of practice concept views learning as both a social and individual process, in which a new member, or legitimate peripheral participant, learns the sociocultural practices of the community and develops her identity to become a full participant within that community. In the community of practice, new members are considered legitimate for two reasons—they have made the decision to enter that community, and established members, or full participants, have recognized them as a novice member of their community. They are peripheral because as new members they are still outsiders in terms of the community's culture, values, and practices. Lave and Wenger acknowledge that there may be several paths to becoming a full participant in a community and some new members will move toward full participation more quickly than others. The progression from legitimate peripheral participant to full participant is tied to situated learning theory, in which peripheral participants learn relevant skills or acquire knowledge about acceptable ways of communicating and behaving through participation in the community. In situated learning, peripheral participants move towards full participation through acculturation, or the adoption of the community's sociocultural traits and patterns, through active participation in the community (Contu & Willmott, 2003).

There are two ways in which Lave and Wenger's (1991) community of practice concept has been applied to teaching and learning contexts in higher education—as a heuristic and as an

educational model (Lea, 2005). Lea notes that recent literature, especially literature related to online education, treats the community of practice concept as an educational model that is used to "build or foster what is designed as a community of practice, a learning community" (p. 188). This approach relies primarily on Wenger's (1998) follow-up work, which focuses on applying the community of practice concept to educational design and generally disregards issues of power related to situated learning in communities of practice. However, the heuristic approach, which is used in the present study, "enables exploration of the ways in which learning does or does not take place and foregrounds not just success but constraints on learning and full participation in a community's practices" (Lea, 2005, p. 188). In other words, the heuristic approach allows one to maintain a critical stance toward the structure, values, expectations, and discourse(s) of the community and how those elements can serve to marginalize or alienate some legitimate peripheral participants as they attempt to move towards full participation.

In this dissertation, I examine the undergraduate academic community of practice and how first-generation students move toward full participation in this community by reflecting on their experiences with a common reification of the community's values—academic research assignments. In this study, legitimate peripheral participation in the undergraduate academic community begins with college enrollment and continues through the completion of a culminating research experience such as a capstone or senior research project. In these culminating research experiences, students must build on the foundations formed in general education courses and introductory courses in their major(s) to develop relevant lines of inquiry and apply the appropriate theories, vocabularies, research methods, and citation standards for their discipline (Keup, 2013). The capstone experience is an opportunity for the institution to

ensure that students have been socialized and acculturated into their discipline and the undergraduate academic community.

The use of the community of practice heuristic adds a new dimension to existing research related to undergraduate students' experiences with academic research assignments in two ways. First, existing research provides a snapshot of students' information-seeking and use behaviors, including decision-making, problem-solving, and critical thinking, for academic research assignments (Fister, 1992; Head, 2013; Head & Eisenberg, 2009, 2010a, 2010b; Logan & Pickard, 2012; Pickard & Logan, 2013). The community of practice heuristic, however, permits the exploration of students' transformations related to these behaviors as they spend more time in the undergraduate academic domain. Because of that, students can also be asked to reflect upon the culmination of their experiences and what role these assignments have played in their undergraduate educational experience. Second, as will be discussed in the following sections, the community of practice heuristic encourages a critical stance toward power dynamics within the community, and how those power dynamics can serve to engage or alienate legitimate peripheral participants aspiring to become full participants.

Although I use college enrollment as the beginning of legitimate peripheral participation in the undergraduate academic community, I believe that first-generation students' academic preparation and high-school experiences with academic research assignments play a role in moving towards full participation in the undergraduate academic domain. Lave and Wenger (1991) write, "the key to legitimate peripheral participation is access by newcomers to the community of practice and all that membership entails" (p. 100). Because the community of practice concept as a heuristic allows one to critically examine the structural elements of the community, including issues of power, exclusion, and alienation, I argue that information

acquired through social capital accumulated prior to enrolling in college, combined with academic preparation, is one way the first-year students begin to access the accepted values, expectations, and discourse(s) of the undergraduate academic community of practice. Social capital accumulated in college may also serve to create differential experiences with the academic domain and its practices.

2.1.2 Social capital

Social capital provides students with information about how to act within or navigate an educational institution. Bourdieu (1986) defines social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition—or, in other words, to membership in a group" (p. 248). Social capital is both productive and induces action; however, it is less tangible than other forms of capital, because it exists in social relationships (Coleman, 1988). Bourdieu's (1986) conceptualization of social capital is critical of underlying structural and social barriers rooted in status competition that encourage inequality between different social classes. Social capital can reinforce social reproduction and stratification as the dominant class uses the accumulation of social capital to remain dominant. As such, social capital and cultural capital, a complementary theory, have been used to explore how educational institutions and experiences with them contribute to social stratification and social reproduction (Beasley, 2011; Stuber, 2011; Walpole, 2003), although the literature investigating social stratification in higher education is not as abundant as the research investigating social capital in K-12 educational settings (Stuber, 2006). Social capital helps to explain how and why social class is reproduced

across generations, because it illuminates how information about acting or participating in the dominant social class's culture is or is not disseminated.

Social capital has been used as a theoretical foundation for examining the educational experiences and outcomes of student populations who tend to be marginalized based on race, ethnicity, or socioeconomic status in an attempt to understand why these student populations' experiences and outcomes are often different than white, middle-class students' experiences and outcomes. Stanton-Salazar and Dornbusch (1995) connect social capital to status attainment theory, which has been used to predict occupational attainment based on a variety of factors, including educational attainment. While status attainment models have accounted for individuals' social networks, they typically have taken a "role modeling" or "cheerleading" approach (p. 116). Stanton-Salazar and Dornbusch problematize these approaches arguing that access to information and opportunities are critical, particularly for students of color and EEC student populations like first-generation students. The development of relationships with institutional agents—"those individuals who have the capacity and commitment to transmit directly or to negotiate the transmission of institutional resources and opportunities" (p. 117)—is critical for first-generation students' educational success, since, for them, "supportive ties are mainly found outside the family" (p. 117). In terms of first-generation students, the role that institutional agents play in helping to accumulate social capital can be approached in a compensatory manner—the assumption that first-generation students are somehow deficient by virtue of their family backgrounds. I do not argue for a compensatory approach; rather, I acknowledge that the role institutional agents play in helping students to accumulate social capital in the academic domain is important for exploring institutional-level barriers to academic success, particularly for first-generation students.

Social capital informs behavior because it provides individuals with information about how to act within a particular community, and so the accumulation of social capital is powerful for membership within that community. In terms of social stratification and reproduction, one way that dominant classes maintain their position of power is through their *habitus*. *Habitus* is the "set of socialized dispositions, which unconsciously incline people (agents) to 'act or react' in certain ways in particular social spaces" (Burke, 2012, p. 40). The *habitus* of the community includes its cultural values, expectations, discourses, and preferences for communication and behavior, and it is internalized by the community's participants as they move from the periphery toward full participation. The values and preferences embedded in the community's *habitus* often remain tacit to outsiders, and the ways in which participants behave can signal who belongs to that community and who does not.

Lave and Wenger (1991) acknowledge that power dynamics affect membership within a community of practice, because full participants can control what information they share and with whom they share it. The academic community is not immune to these dynamics since educational institutions are not neutral spaces. Delpit (1988) expands on power relations within educational settings, particularly for students who tend to be marginalized based on their race or their families' economic circumstances. Delpit outlines five aspects of what she calls "the culture of power" within education. These aspects include the recognition that power issues are inherent in classrooms, that there are "codes or rules for participating" in the classroom, which are a reflection of the dominant culture (p. 282). In addition, for students who are not a part of the dominant culture, being told what the rules are can help them to succeed, but those who are in power are not always aware of—or are the "least willing to acknowledge"—the cultural power differential (p. 282). Education reproduces existing social stratification, because it "reflects

liberal, middle-class values and aspirations" (p. 285), which often remain tacit for students who are not part of that social class. Therefore, students who are part of middle- or upper-class cultures already know or embody the cultural expectations and understand the rules of the game.

Delpit (1988) argues that middle- and upper-class students are more comfortable, and ultimately more successful, in an educational system that privileges their culture, because they have "internalized its codes" (p. 285). In other words, they have cultivated the accepted *habitus* of their class and of the educational system through the accumulation of privileged social capital (Lareau, 2011). In an educational culture of power that does not recognize the need to make the rules of the culture explicit to all participants, students who are not from the dominant social class are accountable for meeting expectations that might not have been communicated to them (Delpit, 1988). Despite the desire to actively and fully participate in the educational community, some students might be kept from full participation by virtue of power structures inherent to the community.

Social capital relates to this study in two ways. First, situated learning requires legitimate peripheral participants to interact with established full participants in order to learn relevant skills and appropriate ways of participating in the community (Lave & Wenger, 1991). In other words, social capital accumulated through participation in the community provides legitimate peripheral participants with access to information about the community's *habitus*—its culture, values, expectations, and discourse(s)—on their journey toward full participation. First-generation students might have a more difficult time accumulating social capital, because they likely have not been taught the tacit expectations for participation in the undergraduate community of practice that established full participants tend to privilege (Delpit, 1988; Lareau, 2011; Stanton-Salazar & Dornbusch, 1995). Full participants may take these expectations for

granted, since they have already internalized the community's *habitus* through years of participation within the community. Likewise, some continuing-generation students will also take these expectations for granted, as they have been raised in such a way that they have been prepared to participate in the culture of educational institutions (Delpit, 1988; Lareau, 2011).

Second, completing an academic research assignment is an inherently social process, since it is a reification of the undergraduate academic community of practice's values and discourse(s). Faculty develop and communicate the requirements and expectations for successful completion of the assignment they have created, and students interact with information that was produced and disseminated by others, such as academics or journalists, in order to complete the assignment. At some point along the way, students must learn how to locate, evaluate, and use information in a way that is acceptable to the academic or disciplinary context for which they are completing the assignment (Leckie, 1996; Valentine, 2001). Moreover, a student's social interactions during the learning process influences how she looks for, evaluates, and selects information for use in academic research assignments (Connaway, Lanclos, & Hood, 2013). First-generation students might not have immediate access to information sources related to expectations for academic assignments (Collier & Morgan, 2008), and faculty might not be explicit or transparent about their expectations (Leckie, 1996; Raven, 2012; Valentine, 2001; Winklemes, 2013). This creates potential for a situation in which a common practice within the undergraduate academic community of practice could frustrate or, even worse, alienate particular student populations.

2.1.3 The undergraduate academic community of practice

In order to help explain the relationship between Lave and Wenger's (1991) community of practice heuristic and social capital as they relate to this study, I have diagrammed their relationship

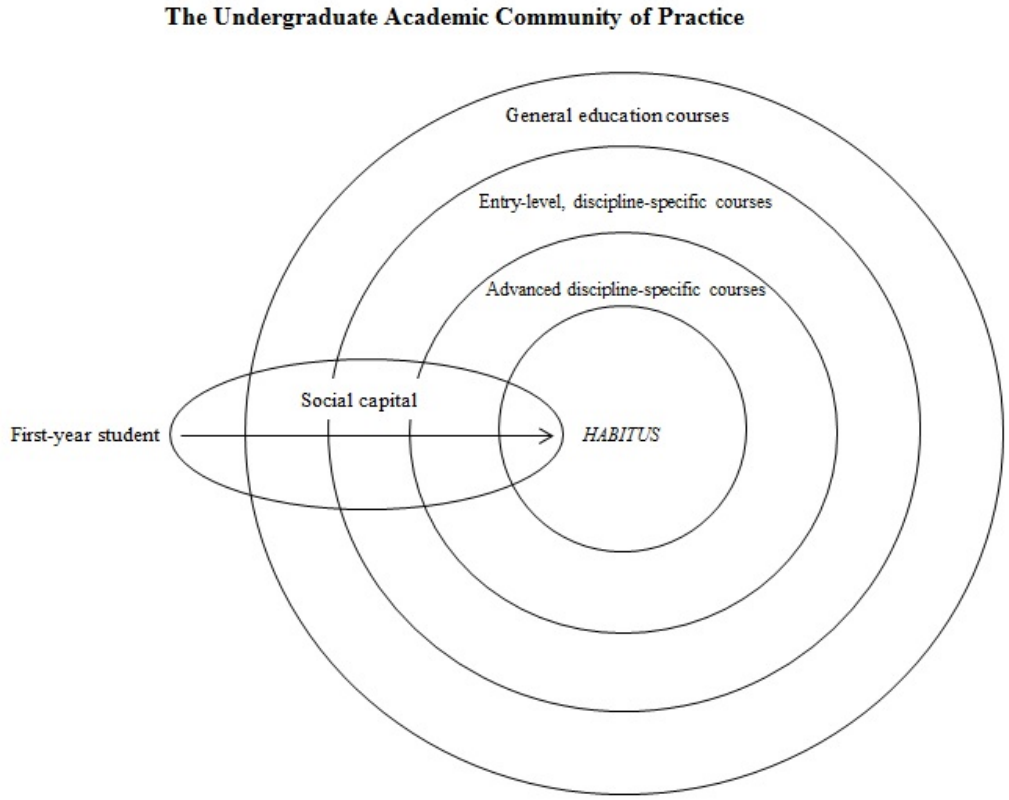

Figure 1. Diagram of Theoretical Frames

In this diagram, first-year students are positioned at the periphery of the undergraduate academic community of practice. At the core of this community of practice is its *habitus*—the fundamental values that determine acceptable ways of participating in the community—which are enacted by full participants in the community. There are two related factors that contribute to the students' movement from the periphery toward the *habitus*—the academic curriculum and accumulated

social capital. Social capital accumulated through social interactions, both inside and outside the classroom, with faculty, other institutional agents, peers, and family before and during college help students to access information about expectations for academic performance in college and in their major field(s) of study.

In terms of the academic curriculum, first-year students begin with general education and introductory courses that expose them to college-level academic expectations and provide them with broad exposure to a variety of disciplines. As they move through their general education requirements, students begin to enter their major field(s) of study and are introduced to specific expectations for participation within a discipline. As students take advanced courses in their major(s), they are expected to apply the discipline's vocabulary, theories, methodologies, and methods of communication to their academic work at a level that is appropriate for a novice member of the discipline. Prior to graduation, students may need to demonstrate their ability to participate in the community as a full participant through the completion of a culminating research experience (i.e. capstone or senior research project), in which the student reflects their understanding of the community's core values, its *habitus*.

2.2 CONCEPTUAL FOUNDATIONS

2.2.1 Academic literacy

The concept of academic literacy provides the foundation for understanding the *habitus* of the undergraduate academic domain, which students access through both their academic preparation and social capital accumulated through interactions with peers, family members, faculty, and

other institutional agents. Academic literacy includes the academic skills, attitudes, and practices (Stierer, 2000) that students are expected to demonstrate as they progress from being a first-year student to becoming an upper-level student. Tapp (2015) writes that academic literacy is "embedded in specific academic contexts that include particular ways of constructing meaning, making judgments, and determining what counts as valuable knowledge reflecting tacit beliefs and values" (p. 712). Because academic literacy validates certain forms of knowledge, critical analysis, and knowledge practices, students who have not been exposed to the skills, attitudes, and competencies that are valued in the undergraduate academic community, through no fault of their own, are sometimes viewed as "intellectually inferior" or "lacking ability" (Burke, 2012, p. 193).

Graff (2003) argues that one of the primary facets of academic literacy in the United States is "Arguespeak" or argument literacy, which includes developing an argument and synthesizing existing research to support that argument. However, Graff believes that faculty make the skills, attitudes, and competencies related to argument literacy more dense than they need to be, which leads to academic cluelessness or befuddlement on the part of undergraduate students. Graff (2003) and Conley (2005) argue that high schools do not adequately prepare students for college, so they must be socialized into academic culture, in which students are required to constantly problematize and analyze topics or issues. Some students resist these academic expectations, because they feel like they are asked to overanalyze everything they read, watch, hear, or discuss. Because faculty have internalized argument literacy through their socialization and acculturation in the academy, they might not realize that these expectations might feel foreign to many undergraduate students (Brown. Collins, & Deguid, 1989; Tobias, 1992-1993).

The use of academic literacy as the *habitus* for the undergraduate academic community allows for the examination of how learning is situated, by exploring the social and cultural contexts in which institutions and their agents privilege certain kinds of knowledge (Lea, 2005). Lea notes that the academic community's practices have a gatekeeping effect that determines who is able to become a full participant in the community and who is alienated or marginalized in the process of becoming a full participant. As a reification of the academic community's values, academic research assignments require students to reflect academic literacy competencies, including Graff's (2003) "Arguespeak," and may signal who belongs to the community and who does not.

Mann (2001) offers a theoretical exploration of how the concepts of alienation and engagement might help us to understand students' internalization of academic literacy (i.e. the community's *habitus*). Mann uses the *Oxford English Dictionary*'s definition of alienation—"the state or experience of being isolated from a group or an activity to which one should belong or in which one should be involved" (p. 8). Two of Mann's seven theoretical explorations directly relate to academic literacy. First, Mann notes that students are joining an academic discourse that, in many cases, has been in existence for decades, which can be particularly disempowering and alienating for new students. Second, Mann argues that many students, particularly those who are not part of the dominant social class, come to higher education as outsiders and feel that they must somehow transform their identities in order to fully immerse themselves into their new community. When the theoretical constructs Mann (2001) discusses and the definition of alienation she employs are taken together, one can begin to see how students who have a more difficult time decoding the values and expectations embedded in academic literacy might experience alienation from or marginalization within the community. Both Mann (2001) and Lea

(2005) note that some students choose to remain on the periphery of the community and resist fully participating in the community's practices to preserve their identity and to "retain power…in the learning process" (Lea, 2005, p. 190).

Institutions create or reinforce barriers that prevent access to the competencies and expectations embedded in academic literacy, particularly when these competencies and expectations are not interrogated or critically examined. In an essay about her experience teaching a basic writing course, Marinara (1997) discusses the ways in which academic literacy marginalizes working-class students. Although colleges and universities report that they have done a lot to make higher education more accessible for EEC student populations, they have not changed "the ways of thinking that the academy sees as culturally valuable" (p. 6). Despite the fact that many EEC students bring a long list of skills and experiences with them, they are often labeled as remedial. Marinara argues that colleges and universities should recognize the experiences and skills that students who are not part of the middle- or upper-classes bring to their postsecondary education.

Both Graff (2003) and Lea (2005) critique the structure (or the lack of structure) of the curriculum and its role in academic alienation. Graff (2003) argues that "curricular pluralism" often provides students with an incoherent, disconnected series of courses, rather than promoting critical thinking and exposure to diverse perspectives. He writes that "the student becomes a kind of volleyball, batted back and forth in an intellectual game whose rules change without notice from course to course" (p. 66). Lea (2005) refers to this problem as "course switching," which she connects explicitly to the intersection of academic literacy and writing practice. She argues that students have a difficult time truly understanding the expectations for writing in higher education, because they are exposed to different disciplines with different instructors who each

have their own preferences and requirements. In other words, a lack of interconnectedness or coordination within the curriculum and differences in instructors' expectations can prevent students from gaining a holistic understanding of what is expected in terms of their academic performance.

To successfully participate in the undergraduate academic community, students must be able to locate, evaluate, and use various forms of information that are considered appropriate for the academic or disciplinary context (Elmborg, 2006a; Nicholson, 2014). In this dissertation, I focus on one facet of academic literacy that is related to the information-seeking and use behaviors required to complete academic research assignments—information literacy. Because I argue that information literacy is embedded in the undergraduate academic community of practice's *habitus* (i.e. academic literacy), the community of practice heuristic and social capital will permit the examination of how students make sense of expectations related to developing a line of inquiry and using information for these assignments as they move from the periphery of the undergraduate academic community of practice toward full participation.

2.2.2 Information literacy

The *Framework for Information Literacy in Higher Education* defines information literacy as "the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning" (Association of College & Research Libraries, 2015, p. 3). In order to facilitate the integration of information literacy into the curriculum, the *Framework* outlines six information literacy threshold concepts (see Table 1), each with related knowledge practices and dispositions. According to the *Framework*,

"threshold concepts are core or foundational concepts that, once grasped by the learner, create new perspectives and ways of understanding a discipline or challenging knowledge domain" (p. 3). Threshold concepts recognize that learning is transformative; how students make sense of the world or particular phenomena changes after they have passed through a conceptual portal (Meyer & Land, 2005). The six information literacy threshold concepts outlined in the *Framework* identify key concepts that students should begin to grasp as they participate in the undergraduate academic community of practice, regardless of their chosen major field(s) of study. The dispositions and knowledge practices associated with each threshold concept in the *Framework* intend to help make these abstract, intangible ways of thinking more concrete.

Table 1. Information Literacy Threshold Concepts

Information Literacy Threshold Concepts (Association of College & Research Libraries, 2015)
Authority Is Constructed and Contextual
Information Creation as a Process
Information Has Value
Research as Inquiry
Scholarship as Conversation
Searching as Strategic Exploration

However, naming or identifying the privileged knowledge practices and disciplines does not automatically result in more transparency for students. Pawley (1998) offers some perspective on how the conceptualization of information literacy historically has contributed to social reproduction and stratification. On the one hand, information literacy as a concept can be empowering (i.e. teaching students to become 'good' information consumers). On the other hand, information literacy can also reinforce the existing *habitus* of the academy by favoring the use of certain kinds of information (empirical research data, scholarly articles) over other kinds of information (blogs, self-published materials). Not only might this favoritism seem irrational to

some undergraduate students, academic discourse is difficult for undergraduate students to consume given the use of technical or disciplinary jargon and the assumption of prior knowledge of a scholarly topic. Indeed, others have referred to the process of understanding and participating as a process of reacculturation (Bruffee, 1993; Elmborg, 2006a).

In this study, I explore how first-generation students develop academically through their experiences in determining how they are expected to develop a topic or line of inquiry and then locate and evaluate information to support their argument. Only a handful of studies have examined first-generation students and information literacy (Logan & Pickard, 2012; Pickard & Logan, 2013; Soria, Nackerud & Peterson, 2015). In addition, to my knowledge, there are no empirical examinations of the transformative aspects of information literacy; that is, empirical examinations have not focused on how students perceive the development of their information literacy throughout their undergraduate educational experience. This study examines how first-generation students make sense of what they are expected to do in terms of research (i.e. developing a line of inquiry and information seeking, evaluation, and use) for these assignments, using information literacy as defined in the *Framework* as a conceptual frame and how that changes as they move further into the community of practice. As a reification of the undergraduate academic community's *habitus*, these assignments require students to become members of the scholarly conversation by reading and synthesizing what other scholars, experts, or professionals have written in order to make their own argument about a topic. Given the ubiquity of academic research assignments in the undergraduate community of practice (Head & Eisenberg, 2009) the tacit expectations for interacting with and using information in these assignments could be a potential site of alienation that contributes to the lower academic outcomes of first-generation students.

2.2.3 Summary of theoretical and conceptual frames

When combined, the theoretical and conceptual frames provide a unique way to explore first-generation students' academic experiences as they transition from first-year students at the periphery to becoming full participants within the undergraduate academic community. In the diagram (see Figure 2), academic literacy is the *habitus*—the core set of values embedded into the undergraduate academic community of practice—and is accessed as one progresses through the academic curriculum and accumulates social capital. Information literacy, a facet of academic literacy, is situated within this core.

As a reification of the community's core values, academic research assignments require students to demonstrate the accepted dispositions and knowledge practices embodied in the concept of information literacy. The community of practice heuristic helps to frame the expectation that students will develop more sophisticated ways of interacting with and using information within academic research assignments as they move from general education and introductory course work, such as a college composition course, to more advanced, discipline-specific courses and culminating research experiences in their major field(s) of study. Situated learning and social capital indicate that students must interact with other members of the community of practice, faculty in particular, to demonstrate competencies related to academic literacy, including information literacy, in their academic research assignments. In addition, faculty serve as gatekeepers to the community through the evaluation of performance on these assignments based on both explicit requirements and implicit expectations. These performance evaluations are indicators of who they believe legitimately belongs to the community and who does not.

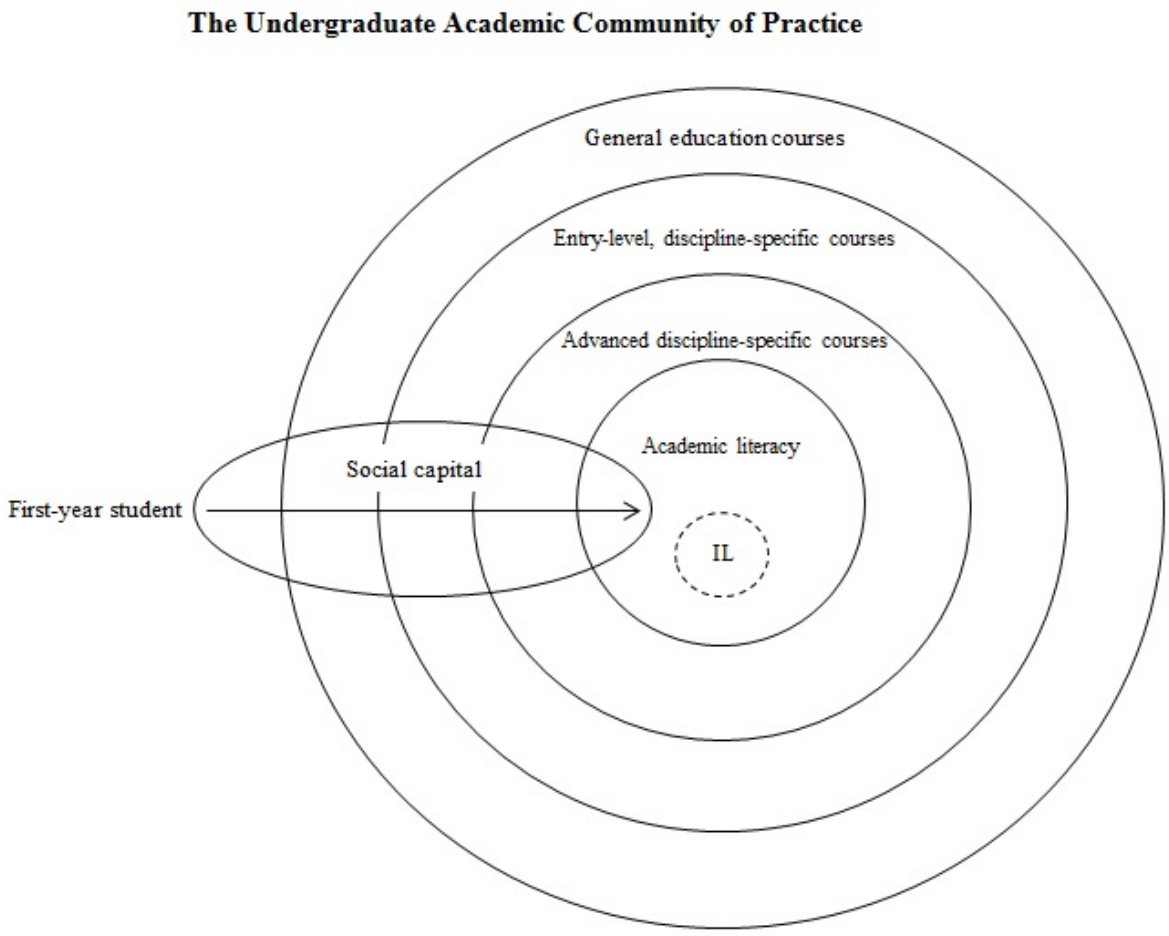

Figure 2. Diagram of Theoretical and Conceptual Frames

Previous research examining the academic research experiences of undergraduate students has only provided a snapshot of their experiences in developing a line of inquiry and finding, evaluating, and using information for academic assignments. As mentioned in chapter one, the findings of this research have been useful in gaining a general understanding of students' research practices, but they have not demonstrated how students develop their information literacy as they move from being first-year students to joining their major field(s) of study as upper-level students. This is a significant gap in the empirical literature, because threshold concepts frame the development of information literacy as being transformative, in that

grasping a threshold concept creates a shift in the students' perspective in which they start to think like a novice member of their discipline (Meyer & Land, 2005). Through the use of these theoretical and conceptual frames, I will provide a new perspective of how first-generation students negotiate collegiate academic culture and what is like for them becoming full participants in academic disciplines at the undergraduate level, in order to provide a foundation for understanding if and how academic research assignments and information literacy contribute to first-generation students' lower academic outcomes.

This unique conceptual framework is a reflection of both my personal and professional experience. Having been a professional librarian working primarily with undergraduate students for more than a decade, I have witnessed students' attempting to make sense of the feedback that they have received from their professors or attempting to determine their professors' expectations for performance. Many students are aware that they can bring their pre-college experiences and prior knowledge to bear in their collegiate academic work; however, many also realize that the expectations are somewhat different. In addition, I personally witnessed my domestic partner, a non-traditionally aged, low-income, first-generation student, attempting to navigate academic culture as I was learning about critical social theories in my doctoral coursework, including Bourdieusian theories. The intersection of this personal experience with my scholarly endeavors helped me to reflect upon the ways in which academic culture can enable or constrain success for students whose identities have been traditionally been marginalized in higher education. The use of communities of practice (Lave & Wenger, 1991) and social capital provided an opportunity to explore power dynamics related to participation in academic culture, and academic literacy and information literacy provided me with the

conceptual foundation to articulate some of the privileged modes of thinking in academic culture that may remain tacit for many students.

2.3 REVIEW OF RELEVANT LITERATURE

In this section, I review two different strands of literature that, when combined, are important for understanding how first-generation students participate in the undergraduate academic community practice. The first strand focuses on how expectations for participation and performance in the undergraduate academic community are communicated to and received by students. The second strand focuses on empirical findings related to first-generation students' academic experiences, including their experiences with academic research assignments. The final section will combine these two strands of literature to discuss how information about expectations for participation and performance accumulated through interactions with faculty is important for first-generation students' perceptions of legitimacy as a participant in the undergraduate academic community of practice.

2.3.1 Expectations for academic performance

Social capital accumulated through interactions with peers, family, faculty, and other institutional agents helps students to move from the periphery of the undergraduate academic community of practice toward full participation. However, this is only true if these interactions help to make tacit expectations for participation more transparent for students and help students to feel like they are engaging with the community. Faculty hold a lot of power in the

undergraduate academic community of practice, because they are charged with determining the expectations for participation and evaluating performance against those expectations. Not surprisingly then, research has demonstrated that students' interactions with faculty can yield positive academic results (e.g. DeAngelo, 2014; Fuentes, Alvarado, Berdan, & DeAngelo, 2014; Kuh & Hu, 2001; Lamport, 1993; Pascarella & Terenzini, 2005; Woodside, Wong, & Wiest, 1999) including for first-generation students (McKay & Estrella, 2008; Posselt & Black, 2012). However, the existing literature has shown that students and faculty do not always share the same expectations for participation and performance, because they approach the academic domain from different points of view.

Based on her experience as a librarian who works with undergraduate students, Leckie (1996) argues that the development of research assignments is often approached from an expert researcher perspective. Characteristics of the expert researcher perspective, include "in-depth knowledge of the discipline, awareness of important scholars working in particular areas, participation in a system of informal scholarly communication, and a view of research as a non-sequential, non-linear process with a large degree of ambiguity and serendipity" (p. 202). The expert researcher approach to developing a research assignment then includes many assumptions about what students have been prepared to do in terms of developing appropriate lines of inquiry for a topic that is new to them, being able to select the best sources for background information, understanding the role of scholarly literature within the discipline, and analyzing various scholarly works to identify and critique different arguments made about a topic. For Leckie, it is not that the students intellectually are not capable of performing these tasks, but they have not received the years of training that their professors have received. What seems natural to the faculty is quite foreign to the students.

Empirical research has provided evidence of a gap between what faculty expect students to be capable of and what they are actually prepared to do, particularly in terms of information literacy and academic research assignments. Through interviews with undergraduate students, Valentine (2001) found that students put forth "legitimate effort" in completing their academic assignments while balancing other demands. In order to determine what a legitimate effort might look like for a given assignment, students attempted to determine what the professor's expectations and requirements were for the assignment or, as Valentine phrases it, "what the professor wants (WPW)." Valentine found a gap between what the professor actually wants and students' interpretation of those expectations. Interviews with faculty revealed that many of their expectations were implicit or "intangible" (p. 110). Faculty wanted to give students the opportunity to practice writing within the discipline, as well as "thinking for themselves, finding things for themselves, collating information, and, even more so, beginning to do analysis in the research paper, [by asking themselves]: 'What can I conclude from the research? How do scholars work?'" (p. 110). However, students were more concerned with understanding the explicit or tangible requirements of the assignment, such as page length, citation style, number of sources, and types of sources. In some cases, this led to disappointment for both the faculty and the students. The faculty expected more from the final product, and students were disappointed in the grade they received if they believed that they were marked down for subjective or tacit reasons.

Students sometimes have inflated perceptions of their preparation and information literacy when compared with their professors' perceptions. Raven (2012) investigated the differences in perceptions of preparation between faculty and first-year students. The majority of first-year students (about 59%, n=317) indicated that they were somewhat prepared to do

college-level research; whereas, 87% of faculty (n=75) believed that incoming students were not very prepared. Just under half of the first-year students believed that it was the professors' responsibility to teach them the research skills they needed to be successful, but less than a quarter of the faculty believed that they were responsible for teaching these skills to the students. In addition, students underestimated the time that it would take for them to do research (i.e. searching for, evaluating, and selecting information) for their assignments (Raven, 2012; Valentine, 2001). Raven (2012) found that more than half of the first-year students thought it would take them less than five hours, but almost half of the faculty thought it would take students 10 or more hours to do research for an assignment.

2.3.1.1 Communicating expectations

Research about how expectations are both communicated and received can be divided into two categories—methods of communicating expectations for or requirements of academic work (i.e. syllabi, assignment handouts) and direct responses to students' success in meeting expectations (i.e. written feedback).

Communicating course and assignment requirements

The course syllabus is one method that faculty use to communicate expectations for performance based on academic culture (Danielson, 1995). In a descriptive study of the purpose(s) that faculty assign to syllabi, the top-rated purpose was as a mechanism for communication (Fink, 2011). However, faculty do not always place much emphasis on the role that syllabi can play in helping students to better understand the academic environment or tacit expectations for performance. Doolittle and Siudzinski's (2010) analysis of 1,000 syllabi confirms this. These authors found that the most common syllabi components are basic course information, including the professor's

contact information, course name and number, required reading, and a schedule of assignments. Doolittle and Siudzinski combine the findings of previous research (Becker & Calhoon, 1999; Garavalia, Hummel, Wiley, & Huitt, 1999) to highlight the differences in how faculty and students view the information included in syllabi. From the faculty perspective, students should focus on the descriptive information about the course's goals and objectives and assignment descriptions, when included. Students, however, look for the production information, such as the schedule of assignments and assessments (i.e. tests and quizzes) and the attendance policy. Even if faculty are including more in-depth description about expectations for performance, students may overlook these descriptions if the faculty do not take care to emphasize their importance.

The requirements and expectations for academic research assignments can be communicated formally in a variety of ways, including in syllabi, in assignment handouts, and through verbal communication in the classroom. Head and Eisenberg (2010a) conducted content analysis on almost 200 assignment handouts from almost 30 colleges and universities in the United States in order to learn more about how faculty communicate requirements and expectations for research assignments to students. Head and Eisenberg found, in general, that assignment handouts focused more on the "mechanics of preparing a research assignment" than on selecting a topic, developing a research statement or question that is of an appropriate scope, finding background information to gain a better understanding of the topic, and evaluating information sources. Although the majority of the handouts suggested that students should consult the library, only 14 percent of the handouts provided guidance related to identifying specific information tools (e.g. online databases with scholarly articles) in order to locate relevant information.

Responding to students' performance

In addition to assigning grades, written feedback is another way that faculty provide students with information about how they are performing in relation to expectations, particularly on written assignments. Written feedback serves as a direct response to a student's success in meeting academic expectations and can be viewed as an indication of their legitimacy within the undergraduate community of practice. Indeed, Murphy (2000) argues that written feedback should be understood as a sociocultural practice and uses Lave and Wenger's (1991) community of practice concept to support this argument.

Several studies have investigated the content of written feedback that instructors provide to students, since "students may not share membership in the discourse communities we expect" (Murphy, 2000, p. 86). Research on written feedback has found that the correction or highlighting of spelling and grammar errors are the most common form of feedback given (Connors & Lunsford, 1988; Stern & Solomon, 2006), rather than substantive feedback that helps students to develop as participants in the undergraduate academic community. Connors and Lunsford (1993) examined 3,000 papers to explore instructors' global comments—"general evaluative comments found at the end or the beginning of papers" (p. 206). Almost two-thirds of the papers included global comments, and, of these, almost half began with positive comments and ended with negative comments. Almost a quarter included only negative comments and less than 10% included only positive comments. In general, global comments were used to support the grade assigned to the assignment, rather than focusing on the development of the students as legitimate participants within the undergraduate academic community or as novice members of a discipline.

Related to helping students refine their understanding of academic discourse and culture, 14 percent (n=598) of the papers that Stern and Solomon (2006) examined "contained comments that addressed the sufficiency or quality of the evidence, supporting ideas, or thought that were used to back up a claim" (p. 35). In addition, 6 percent of the papers examined included comments related to scholarly advice, including "references to additional sources of information" and "advice on how to continue on with a line of research" or inquiry (p. 36). Written feedback that directly responds to students' academic work is an opportunity to help the students learn more about expectations for participating in undergraduate academic culture; however, much of the feedback analyzed in research studies indicates that students are not using written feedback in this way.

Receiving responses to academic performance

Writing almost 20 years apart, Knoblauch and Brannon (1981) and Murphy (2000) both argue that more research is needed examining the ways in which students understand or respond to the feedback that they are given. Existing research suggests that students value written feedback on their work, especially if it is explicit, specific, and explanatory (Hayes & Daiker, 1984; Land & Evans, 1987; Lynch & Kleman, 1978; Straub, 1997; Weaver, 2006; Ziv, 1984). In other words, students want faculty to explain why something in the student's writing is considered good or problematic. Although some studies have found students like praise and positive feedback (Hayes & Daiker, 1984 Straub, 1997), other studies have found that students do not find generic praise to be helpful in developing their writing skills (Land & Evans, 1987).

Hayes and Daiker (1984) videotaped and subsequently analyzed students' verbal reactions to written feedback they received on papers for a freshman composition course in order to better understand "what goes through their [students'] minds when they received graded

essays" (p. 1). Interestingly, 15 of the 17 students reviewed the written feedback prior to looking at the grade their work had been assigned, which indicates that many students might find the written feedback even more important than the grade assigned to their work. However, most of the students in the sample had a difficult time understanding the written feedback they had been given, even comments that were seemingly clear such as "you need to include analysis of the text" and "fragment, but it works stylistically quite well in fact" (p. 3). The student who received these comments interpreted the former comment to mean that he needed to provide more summary and the latter comment to mean that his content was relevant but misplaced within the text. Hayes and Daiker indicated that these interpretations exemplified the other students' reactions, writing "students often spend considerable time and effort trying to understand it [an unclear comment]—and frequently fail" (p. 3). Even though students seem to want to learn from their professors' feedback and professors intend to help students learn and develop through feedback, differences in acculturation and socialization can lead to misinterpretations or frustration for students.

Using a questionnaire illustrating different categories of written feedback on a writing assignment, Straub (1997) investigated first-year students' perceptions of and preferences for different styles of providing written feedback. Confirming the findings of previous studies, Straub found that students preferred and "enthusiastically expressed their appreciation for" feedback that was both specific and elaborate, particularly if that feedback was framed as advice, as an explanation, or as an open question. Students were not opposed to receiving criticism; however, they had negative responses to comments that they interpreted as judgmental and harsh or made them feel like the professor was attempting to take control of their writing or their arguments. Straub's study indicates that students might be sensitive to the feedback that they are

receiving and that particular kinds of feedback might not encourage students to engage in the community's discourse and practices. Just like Collier and Morgan's (2008) finding that both first-generation and continuing-generation students found it most helpful when faculty were explicit and specific in communicating course and assignment expectations, so too do students find specific and elaborate responses to their performance to be most helpful in developing as members of the community.

2.3.2 First-generation students and the academic domain

Much of what we know about first-generation students and the undergraduate academic domain focuses on particular outcomes (i.e. GPA, persistence, time to completion), and most of these studies use quantitative methods to provide higher education practitioners and scholars with basic information about which factors likely influence these outcomes. Several studies seek to complement these quantitative studies, exploring the behaviors, motivations, and experiences that inform these outcomes from the first-generation students' perspectives (e.g. Collier & Morgan, 2008; Jehangir, 2010; McLoughlin, 2012; White & Ali-Khan, 2013; Yee, 2016). These studies use qualitative methods in order to develop detailed descriptions of students' experiences and the meanings they make of those experiences.

Although all students must decipher faculty expectations for academic performance, research has found that first-generation students might struggle more than their peers in understanding faculty expectations. Collier and Morgan (2008) investigated the differences in first-generation and continuing-generation students' understanding of faculty expectations, and they found several challenges that were unique to first-generation students. Both groups of students wanted faculty to be upfront about expectations, but first-generation students wanted

faculty members to be explicit about expectations, particularly in terms of assignment description and formatting expectations. In addition, first-generation students did not understand the purpose of the syllabus and often relied on "information they acquired from hearing, observing, and interpreting the actions of professors" rather than consulting the syllabus (p. 437). First-generation students underestimated how much time they would need to spend on schoolwork outside of the classroom and tended to overcommit themselves to other activities. White and Ali-Khan (2013) also found that first-generation students often struggled to decode faculty expectations and took test directions literally, which often resulted in diminished academic outcomes. Yee (2016) explored the academic engagement strategies of first-generation and continuing-generation students, finding that continuing-generation students were more likely to interact with their professors and felt more entitled to use academic support resources to help them to succeed academically. First-generation students, on the other hand, preferred an independent strategy and believed that in college they were "on their own to succeed" (p. 845).

Differences in academic preparation could influence students' understanding of expectations and performance in their academic work. White and Ali-Khan (2013) conducted case studies of four first-generation minority students at a predominantly White public university who were struggling academically in college. Although the four students in this study performed relatively well in high school, their high school experiences did not provide them with adequate study skills, note-taking skills, or the ability to read an academic text as something different from a popular text. Even though the students felt they were different from their peers, they could not articulate which skills or knowledge they needed to acquire.

2.3.2.1 First-generation students and academic research assignments

Despite evidence that first-generation students differ in terms of academic performance and outcomes, there is little research related to the academic information-seeking and information-use habits of this student population. Eighteen years ago, Tyckoson (2000) wrote an introduction for academic librarians to the challenges that first-generation college students face regarding their social and academic integration and what that means for their research and library skills, most of which is speculative and based on his own experience working with first-generation students. Although Tyckoson does not provide a rigorous exploration of first-generation college students, the library, and the research process, he does provide an early account of academic librarians' realization that first-generation college students' relationships with the library might be different than their continuing-generation peers.

Soria, Nackerud, and Peterson (2015) combined CIRP data collected from first-year students at a large public university with institutional data related to library usage to examine the relationship between SES and library use, which included first-generation students. First-generation students were less likely to have checked out a print book and/or to have used academic journals. First-generation students were more likely to use online reference services and peer consultations. These findings seem somewhat contradictory, because the use of reference services and peer consultations should result in increased usage of traditional scholarly information sources like print books and academic journals.

Logan and Pickard (2012) produced one of the first empirical studies to focus on first-generation students and their approach to research for academic research assignments. Logan and Pickard interviewed 18 self-identified, first-year, first-generation students at the University of Illinois-Chicago about their research habits. For their college assignments, all of the students

reported searching for information online because it was the easiest way to find information, but they were not able to distinguish between the tools they used to find information (e.g. databases) and the information source itself (e.g. scholarly journal article). The authors were also interested in how the students selected sources to include in their course research projects and found that there were three criteria: relevance, scholarly appearance, and if the student could understand the information (p. 118). In order to determine how many sources to use in their assignments, these students reported using instructors' explicit requirements, or in the absence of those requirements, the belief that they had enough sources to support their argument. When these students needed help with their research, they most frequently turned to instructors/teaching assistants and friends.

Pickard and Logan (2013) conducted a follow-up study, which explored the academic research habits of first-generation seniors at the University of Illinois-Chicago. The authors found that the seniors did all of the searching online, like the freshman sample, but the seniors seemed "more informed" (p. 412) in that they could name specific library databases that they used. The seniors acknowledged that research is an iterative process and seemed to understand the value of manipulating search terms to get the appropriate information. The authors found that seniors used mostly the same methods to determine how many sources to use, but were a bit more exhaustive in their approach. The seniors had a "more complex and specific understanding of source evaluation" (p. 404), reporting that relevance and authority were the primary factors. These seniors sought help less frequently than the freshman sample, but when they did seek research help they consulted with instructors, peers, and librarians.

2.3.3 First-generation students' perceptions of legitimacy

Evaluative feedback from faculty that directly responds to a student's performance on an assignment can be powerful in helping students to see themselves as legitimate participants within the community. Kaufman (2014) argues that the perceptions other members of the community have of a participant are important for feeling as if one is a legitimate member of that community, writing that "one's personal identity will not stick unless it is certified by having others reflect that identity back to the individual" (p. 38). The process of learning how to *do* college and become a full participant within the undergraduate academic community of practice can be different for various student populations, because power and identity issues are inherent to the sociocultural learning process related to participation in a community (Lave and Wenger, 1991). Lave and Wenger write, "Learning thus implies becoming a different person with respect to the possibilities enabled by these systems of relations. To ignore this aspect of learning is to overlook the fact that learning involves the construction of identities" (p. 53). Kaufman (2014) suggests that low-SES students must undergo an identity transformation in order to be academically successful in college, and Posselt and Black (2012) make the same argument for first-generation students.

This identity transformation can be more difficult for first-generation students, because they may not have been raised with the white, middle-class values reflected or promoted in education (Delpit, 1988; Lareau, 2011). Jehangir (2010) notes that for many first-generation students "there is a sense of being an impostor in one world and a traitor to the other" (p. 42). London (1989) found that some first-generation students had family members who were supportive of their college enrollment, but others felt or were made to feel like they were forsaking their role in the family or their family's culture. Students who feel like they are forced

to assume a new identity sometimes choose to remain at the periphery of the community in order to preserve their pre-college identity (Lea, 2005; Mann, 2001).

Moreover, some first-generation students feel like they are imposters within higher education (Demetriou et al., 2017). Stebleton and Soria (2012) define imposter syndrome as a state in which some "students may never feel confident, grounded, or socially connected to their academic experiences on campus" (p. 15). Hellman and Harbeck (1997) use academic self-efficacy to frame imposter syndrome as the fear that others will perceive one as being academically incapable. In addition to entering a culture with a value system that may be different from the one in which they were raised, Mann (2001) points out the difficulties of jumping into academic discourse as an undergraduate and how that can be a marginalizing or alienating experience for many students.

The qualitative studies of first generation students' academic experiences provide evidence of these feelings. White and Ali-Khan (2013) found that "fears of appearing 'stupid' or 'ignorant'" kept students from actively participating in the classroom (p. 30). Students reported that they believed the perceived differences in vocabulary, discourse, and even regional accent would make them appear stupid to their peers (McLoughlin, 2012; White & Ali-Khan, 2013). Other low-income, first-generation students were aware of the differences in academic preparation and felt that they had catching up to do in the classroom, both in terms of skills and cultural awareness. One student noted that others would make literary jokes that they just did not understand, and another student reported that she was always lagging behind academically (McLoughlin, 2012). However, some students are able to successfully overcome these feelings. Another student in McLoughlin's study noted that they had gained more confidence by the end of their freshman year.

Participation in the classroom, including participation in class discussion, is important for academic outcomes and feelings of illegitimacy may prevent students from engaging in these discussions. Filkins and Doyle (2002) found that low-income, first-generation students benefit from classroom and educational practices that require students to present in class or collaborate with their classmates. These students also benefited from interactions with faculty, which can be difficult for first-generation students who may feel like imposters in the undergraduate academic community of practice. Not all first-generation students experience these feelings, and some who do are able to overcome them (McLoughlin, 2012; Stuber, 2011). However, there are nontrivial consequences related to academic performance, persistence, and degree completion for those students who feel like they are imposters and are not able to overcome those feelings to actively engage with the community as a legitimate participant.

2.4 CONCLUSION

In this dissertation, I combine theoretical and conceptual frames from three different disciplines in order to provide a new way to think about how students make sense of undergraduate academic culture and its expectations for performance as they move from the periphery of the community as first-year students to becoming upper-level students and moving toward full participation. The use of Lave and Wenger's (1991) community of practice heuristic permits the exploration of power issues inherent in learning how to become a full participant within a community, and social capital provides a frame for exploring the potential power dynamics inherent in the student-faculty dynamic. Academic literacy forms the core of the community's values and expectations for participation, which often remain tacit for many students.

I focus on examining academic research assignments as a particular practice that could contribute to the social class achievement gap for first-generation students (Stephens, Hamedani, & Destin, 2014). Research assignments are ubiquitous in the undergraduate academic experience, and, as a reification of the undergraduate academic community's values, require students to demonstrate their understanding of the community's expectations for participation. Research assignments often require students to develop a line of inquiry or argument about a particular topic, and then find, evaluate, and use appropriate sources of information to support their line of inquiry or argument. Information literacy, a particular though not exclusive set of skills, knowledge practices, and dispositions related to academic literacy, permits the examination of expectations for performance on research assignments and how students make sense of those expectations.

The combination of these theoretical and conceptual frames permits exploration of first-generation students' experiences with engaging and performing in the undergraduate academic community of practice from an equity perspective (Bensimon, 2005), in which institutional barriers to success for first-generation students will be investigated and challenged. An equity perspective toward information literacy is also important, as discourse related to information literacy and undergraduate students often takes a deficit tone (Foster, 1993; Owusu-Ansah, 2005). In this dissertation, I seek to understand obstacles that first-generation students encounter in figuring out the expectations for participation in the undergraduate academic community of practice, specifically in terms of completing academic research assignments. My purpose is not to identify ways in which the students can be fixed; rather, I intend to identify ways in which institutional agents can change their practices to empower first-generation students.

3.0 RESEARCH METHODS

The purpose of this study was to explore first-generation students' progression toward full participation in the undergraduate academic community of practice through their experiences with academic research assignments and how these students make sense of what is expected of them in terms of selecting a topic and finding, evaluating, and using information in these assignments. In this dissertation, I neither assessed students' information literacy skills nor simply asked them to describe their research processes; rather, I asked students to think about what it was like for them to transition from being a first-year student to becoming an upper-level student in terms of academic expectations for performance. Using hermeneutic phenomenology, I explored the following research questions:

- How do first-generation students describe the process of figuring out expectations for performance within the academic domain at the undergraduate level?
    - How do first-generation students describe making sense of what is expected of them in terms of selecting a topic and satisfactorily finding, evaluating, and using information for academic research assignments?
    - How do their strategies for making sense of what is expected of them change as they progress through their coursework?
- How do first-generation students describe the purpose of academic research assignments in their undergraduate academic experience?

For the purposes of this dissertation, a research assignment is defined as any assignment that requires students to form an argument or develop a question about a topic and use at least three information sources to support their argument or to answer their question. Students were asked to limit their reflections to assignments that they completed individually when possible, rather than assignments they completed with a partner or a small group. The phrase "doing research" includes finding, selecting, and using information sources for a research assignment.

3.1 EPISTEMOLOGICAL AND ONTOLOGICAL FOUNDATIONS

A researcher's ontological and epistemological views influence the questions that she asks, which, in turn, influences the research methodology selected to frame her inquiry. My personal ontological stance in terms of social phenomena is that there can be several interpretations of or ways of experiencing reality that can be either individual or shared. However, I do not believe that reality is simply an ephemeral social construct; reality exists independently of our shared or diverging interpretations of it. My epistemological stance regarding social phenomena is that the meanings people make of their experiences can never be fully known and that these meanings can change over time with new experiences. Despite this, I do find value in learning about how people make meaning of their experiences, even if their reflections and interpretations of their experiences are only partially accessible because these imperfect reflections and interpretations help us to make sense of how individuals experience the world around them.

Critical realism is the philosophical perspective that best fits my ontological and epistemological views as they relate to social science research. According to Maxwell (2012), critical realists

> retain an ontological realism (there is a real world that exists independently of our perceptions, theories, and constructions) while accepting a form of epistemological constructivism and relativism (our *understanding* of this world is inevitably a construction from our own perspectives and standpoints). (p. 5)

Critical realism acknowledges that the researcher "is socially constructed, shaped by historically specific discourses of culture and science" (Sprague, 2016, p. 46), and that the researcher shapes what is known through the use of interpretive frameworks.

A critical realist perspective is compatible with the use of Lave and Wenger's (1991) community of practice heuristic for examining the undergraduate academic experience. The argument framing this study is that the undergraduate academic domain has particular sociocultural values and expectations that students decode to be successful and move from peripheral participation to full participation within the community. Maxwell (2012) notes that critical realists believe that "a culture is a system of individuals' conceptual/meaningful structures (minds) found in a given social system, and is not intrinsically shared, but participated in; although sharing is one possible form of participation, it is not the only one" (p. 28). This means that students do not necessarily have to feel at home within undergraduate academic culture, but they do have to participate in the culture to be considered members in that community. Therefore, I am not arguing that students must change their own cultural values to be successful, but they are expected to at least demonstrate an understanding of the undergraduate academic community's values through certain practices, such as academic research assignments, in order to successfully participate in that community.

3.2 HERMENEUTIC PHENOMENOLOGY

Hermeneutic phenomenology is a research methodology that allows the researcher to study and interpret reflections of lived experiences and the meanings made of those experiences, in order "to construct a possible interpretation of the nature of a certain human experience" (van Manen, 1990, p. 41). The primary purpose of phenomenology is to understand the experience of a phenomenon, not the individuals who are experiencing that phenomenon. Hermeneutic phenomenology combines the philosophical concept of phenomenology—understanding the essence of phenomena or experiences—with the theory of hermeneutics—the interpretation of texts; therefore, hermeneutic phenomenology is both descriptive and interpretative (van Manen, 1990). Hermeneutic phenomenology is descriptive, because "it wants to let things speak for themselves" (p. 180). In other words, it seeks to fully describe, to the extent that it is possible, the reflections of lived experience. It is interpretive, because the researcher, the participants, and the readers of the study are all interpreting the reflective meaning made of the experience. With this in mind, van Manen writes that the phenomenological question asks what it is like to experience a particular phenomenon. The broad phenomenological question driving this study asks what it is like to transition into and within the undergraduate academic domain, which is reflected in the research questions.

Hermeneutic phenomenology requires a process of reflecting on the descriptions, reflections, and meanings of the lived experiences of a phenomenon (i.e. the data) in order to make "explicit the structure of meaning of the lived experience" (van Manen, 1990, p. 77) using the epoché and the reduction. The epoché, which is sometimes referred to as bracketing, requires the researcher to identify her assumptions, biases, and presuppositions of the phenomenon, in order to put them aside. This suspension opens the researcher to the participants' meanings of the

phenomenon, so that she may fully describe them. According to Moustakas (1994), the epoché is a process that allows the researcher to experience a phenomenon "as if for the first time" (p. 85). The reduction requires the researcher to draw on her own experiences with the phenomenon to help make sense of and ultimately interpret the data and reduce it to themes (Moustakas, 1994). The reduction and epoché are both complementary and opposing, since they simultaneously require the researcher to both remove and insert herself into the analytic process (van Manen, 2014). The balance between these two processes allows the researcher to accomplish the phenomenological reduction, which is to "get to the meaning structures of our experiences" of everyday, taken-for-granted phenomena" (van Manen, 2014, p. 215).

3.3 RESEARCH SITES

Data collection for this study was conducted at two regional campuses of a public research university located in the Mid-Atlantic. Throughout this study the campuses are referred to by their pseudonyms—Springfield and Manchester.

3.3.1 Springfield campus

The Springfield campus is located in a former industrial city, and it recently celebrated its fiftieth anniversary. The Springfield campus' Carnegie Classification is Baccalaureate College: Arts & Science Focus (Carnegie Classification of Institutions of Higher Education, 2015), and the campus offers 26 majors, 19 minors, and several relocation programs (i.e. students begin their studies at this campus and transfer to the main campus to complete their degrees). According to

2013-14 IPEDS data, the campus enrolled almost 1,500 full-time undergraduate students and 100 part-time undergraduate students. The campus is exclusively undergraduate and just under half of its students reside on campus. Almost 80% of enrolled students identify as white and fully 90% were age 24 and younger. Sixty-eight percent of students receive financial aid, and half of students receive Pell grants. The campus' six-year graduation rate is just over 50%, with three-quarters of students being retained from the first to the second year.

3.3.2 Manchester campus

The Manchester campus is fairly remote, located a couple of hours away from a metropolitan area. Like the Springfield campus, it also recently celebrated its fiftieth anniversary. The Manchester campus' Carnegie Classification is Baccalaureate Colleges: Diverse Fields (Carnegie Classification of Institutions of Higher Education, 2015), and the campus offers 40 majors and 50 minors and pre-professional programs, as well as four professional master's programs through partnerships with the main campus. According to 2013-14 IPEDS data, the Manchester campus enrolled almost 1,400 full-time undergraduate students and just over 100 part-time undergraduate students, which includes students seeking both associate's and baccalaureate degrees. Almost three-quarters of the students identify as white, and almost 90% were age 24 or younger. Almost 90% of students received financial aid, and just under half received Pell grants. The campus' six-year graduation rate is just over 50%, with almost three-quarters of students being retained from the first to the second year.

Table 2. Campus Characteristics

	Springfield	Manchester
Undergraduate academic programs	26 majors, 19 minors	40 majors, 50 minors
Undergraduate enrollment	1,477 full-time 101 part-time	1,385 full-time 114 part-time
% of non-white students	21%	27%
% of students 24 year of age or younger	92%	89%
% of Pell Grant recipients	52%	44%
% of students retained from first to second year	76%	72%
Six-year completion rate	53%	52%

3.3.3 Academic requirements

The Springfield and Manchester campuses share two academic requirements that are relevant to the application of the community of practice heuristic for the exploration of first-generation students' experiences with academic research assignments. The first requirement is that students must pass an intermediate-level college composition course that focuses on how to research, write, and present a term paper (Manchester campus website). The Springfield campus' website offers a bit more description about the composition course, indicating that students will learn how select a topic of appropriate scope; find, evaluate, and use different kinds of information sources; synthesize those sources in such a way that the student can make an original argument; appropriately use direct quotations, paraphrasing and summarizing; and properly use MLA documentation to cite the information sources used in the paper. The purpose of these intermediate-level composition courses is to introduce all students to the expectations of college-level academic research assignments, so they have a foundation for completing more advanced

academic research assignments within their major field(s) of study. Based on their high school preparation and their abilities, students can place into the required course or they may first need to a take a basic-level course that develops their writing and grammar skills.

The second requirement is the completion of a capstone experience or culminating research experience. Although the requirements of the capstone experience vary from discipline to discipline, these courses are designed such that students demonstrate their ability to develop and complete a scholarly research project within their major field(s) of study at the undergraduate level. The American Association of Colleges & Universities (AAC&U; n.d.) designates the capstone experience as a high-impact educational practice that requires students to demonstrate what they have learned. In other words, students must build on the foundation provided in the intermediate-level college composition course to develop relevant lines of inquiry and to apply the appropriate theories and vocabularies, research methods, and citation standards for their discipline. In terms of moving toward full participation in the academic community of practice, Keup (2013) notes that the capstone experience is "the last chance [for faculty] to instill the competencies that the institution hopes they [the students] achieve." That is to say that the capstone experience is the last point at which the institution can ensure that students have been socialized into their discipline and the undergraduate academic community.

3.3.4 Prevalence of academic research assignments

According to institutional reports publicly available, both the Manchester and Springfield campuses have used a proprietary information literacy assessment instrument, the HEDS Research Practices Survey, with first-year students and seniors. This tool not only assesses students' information literacy skills, but it also gathers information related to students' research

experiences and behaviors. Based on data gathered through this instrument, academic research assignments are quite common for students at these campuses both at the end of high school and at the end of college. Both incoming first-year students and seniors were asked how many assignments they had completed within the past year that required them to cite at least three sources. In Fall 2014, 49 percent of incoming first-year students (n=601) at these two campuses reported that they had completed four or more of these assignments within the past year, and another 39 percent reported that they had to complete one to three of these assignments. In spring 2015, almost 35 percent of seniors (n=82) reported that they had to complete 10 or more of these assignments within the past year, with an additional 41 percent reporting that they had to complete four to nine of these assignments.

3.4 PARTICIPANT RECRUITMENT AND SELECTION

Hermeneutic phenomenology does not provide much guidance in terms of participant selection, except that participants must be willing to discuss their experiences with the phenomenon under exploration and that there should be some diversity among the participants in order to understand the phenomenon from multiple perspectives (van Manen, 2002). Participants in this study included 30 traditionally aged (i.e. 18 to 24 years old), full-time (i.e. at least 12 credit hours) first-generation juniors and seniors[1] at the Manchester and Springfield campuses, including 18 students from the Springfield campus and 12 students from the Manchester campus.

[1] Each of the campuses used the terms juniors and seniors to categorize students based on the number of credits hours they have accumulated in the institutional data I was able to obtain, so I have chosen to retain use of these terms in this section despite their patriarchal connotations.

3.4.1 Sample recruitment

I used institutional data from both campuses to identify potential participants. I negotiated permission to access and use this data with the President and the Vice President of Academic Affairs at the Springfield campus and with the Dean and the Associate Dean of Academic Affairs at the Manchester campus. However, because the two campuses are structured slightly differently, I worked with different departments at each campus to obtain the data—TRIO Student Support Services at the Manchester campus and Institutional Research at the Springfield campus. In addition to the names and email addresses of all juniors and seniors who are first-generation students, I received their date of birth, major field(s) of study, sex, and race/ethnicity. After receiving the data, I removed students who were not of a traditional college-going age (i.e. 18 to 24 years old) and students who were not enrolled full-time.

In total, 278 students were identified as potential participants in the study—156 students at the Manchester campus and 122 students at the Springfield campus. Using these lists, I emailed potential participants to explain the research study, solicit interest in participation, and inform them of the participation incentive—$25 for a completed 60-75 minute interview. Students who expressed interest in participating were asked to answer a brief, pre-interview questionnaire that confirmed their eligibility (i.e. first-generation status, at least 18 years of age) and their demographic information (i.e. race, sex, major field(s) of study).

I used maximum variation sampling (Patton, 1990) to recruit the participants in service of identifying common themes or patterns across the academic experiences of a small but heterogeneous group of participants. According to Seidman (2009), maximum variation sampling “should allow the widest possibility for readers of the study to connect to what they are reading” (p. 56), because it attempts to gather a variety of perspectives related to experiencing

the phenomenon being studied. Three characteristics were used to recruit a heterogeneous sample—major field(s) of study, sex, and race/ethnicity—with priority given to major field(s) of study. For sample selection, I categorized major field(s) of study broadly as behavioral and social sciences, biological and health sciences, communication and the arts, management and education, and physical and computational sciences. Given the demographics of each campus, I intended to recruit at least two non-white students from each campus, since first-generation students, in general, are more likely to be students of color.

It is important to note that maximum variation sampling is not intended to assemble a representative sample so that inferences or generalizations can be made about the population of first-generation college students who are completing academic research assignments. Maximum variation sampling enables the researcher to gather data related to a variety of experiences and perspectives in order to craft a better interpretation and description of the phenomenon of interest so that readers make naturalistic generalizations (Stake, 1995), in which they read the findings of the study through the lens of their individual experiences to determine if the findings are congruent with those experiences. In other words, maximum variation sampling helped me to get a more complete description of how first-generation students experience the phenomenon.

In order to assemble a varied sample, I divided students into groups of 30 for email solicitation at each campus. Each group contained six students from each of the five major field(s) of study categories. Both males and students of color were oversampled in the initial groups, with four of the six students in each major field of study being male, a student of color, or both. White, female students were sorted initially by their major field(s) of study and placed into a solicitation group using a random number generator. Students received a maximum of two emails soliciting participation which were sent approximately one week apart. Due to a low

response rate among males and students of color, some Springfield students received a third follow-up email. I sent an individual Doodle poll to each student who expressed interest in participating in order to schedule the 60 to 75-minute interview.

3.5 PARTICIPANTS

The sample for this study includes 18 students from the Springfield campus and 12 students from the Manchester campus. Of the 30 participants, seven students (23%) were in the Behavioral and Social Sciences, eight (27%) were in the Biological and Health Sciences, five (17%) were in Communication and the Arts, six (20%) were in Management and Education, two (7%) were in Physical and Computational Sciences, and two (7%) had cross-divisional majors. Twenty of the students identified as female and 10 identified as male. Two-thirds of the sample (20 students) identified as white, six (20%) identified as Black/African-American, two (7%) identified as Asian/Asian-American, one (3%) identified as Hispanic/Latina/o/x, and one (3%) identified as Pacific Islander. The majority of the students (18 students; 60%) identified as seniors, although one had graduated approximately one month prior to the interview.

3.6 DATA COLLECTION

Semi-structured, in-depth, one-on-one interviews are commonly used to collect data in hermeneutic phenomenology. I used a modification of Seidman's (2009) phenomenological interviewing to collect data for this study. Seidman (2009) offers a three-interview approach to

phenomenological interviewing, which addresses the participants' background in light of the phenomenon being explored, their "present lived experience" (p. 21) with the phenomenon, and then asks the participants to reflect on the meaning of their experiences with the phenomenon. According to Seidman, the focus on describing past and present experiences helps the participants to reflect on the meaning of those experiences.

Rather than conducting three separate interviews with each participant, I used Seidman's (2009) three-interview approach to structure an open-ended, semi-structured interview protocol for a single 60 to 75-minute interview with each participant (see Appendix A). In addition to asking participants to describe their experiences in transitioning from high-school to college-level coursework, I also asked each participant to describe their first experiences with completing a college-level research assignment, including what they remembered about figuring out what they were expected to do, what strategies they used to develop their topics and to find and evaluate information to use in the assignment, and what feedback they received on the assignment. Using similar questions, each participant was then asked to describe their most recent experience with a research assignment within their major field(s) of study. Participants were asked to describe their understanding of what it takes to be a successful college student; how their confidence in completing academic research assignments had changed, if at all; how their strategies for figuring out what the expectations for performance had changed; and what role they believe academic research assignments played in their undergraduate education.

To understand the participants and their college experiences, I asked them to fill out a brief questionnaire at the end of the interview (see Appendix B). In addition to questions about demographic information, they were asked if they transferred to that campus from a different school; if they lived or had lived on campus; and if they worked, including how many hours a

week. First-generation students are more likely to start their collegiate careers at two-year colleges (Choy, 2001; Horn & Nunez, 2000; Nunez & Cuccaro-Alamin, 1998). Transferring from another institution could influence the introduction to college-level research and writing that students received. Twenty-seven percent of the participants in the study transferred into the Manchester or Springfield campus. The number of hours that students work is negatively related to students' GPAs (Astin, 1993) and could influence how much time students spend engaging in academic activities. Eighty-three percent of the participants reported working; almost 50% of the sample reported working between five and 20 hours a week and 33% of the sample reported working more than 20 hours a week. DeAngelo (2014) found that living on campus had significant implications for academic engagement outside of the classroom, such as discussing coursework and content with peers, which had a relationship with persistence from the first year to the second. Fifty percent of the sample reported that they had always lived on campus. Only 10% of the sample reported that they never lived on campus.

I recorded each interview using my laptop and saved each audio recording to an external hard drive for long-term storage. A professional transcription service was used to transcribe the interview recordings for analysis.

3.7 DATA ANALYSIS

In hermeneutic phenomenology, the reduction and epoché are critical components of analyzing and interpreting the data in order to develop phenomenological descriptions (van Manen, 1990, 2014). The epoché and reduction were addressed in two ways, one of which is journaling. I kept a journal throughout the study, particularly during data collection and the initial phases of data

analysis, in which the first entry identified my own experiences with research assignments as a student and as a practitioner in order to bracket them as I began identifying potential themes and coding the data. I also used the journal to record my reflections and reactions to the students' interviews in order to keep them separate from the data collected but to keep these reflections and reactions available as I analyzed and interpreted the data. Journaling served both the epoché and the reduction, since it allowed me to keep my own beliefs separate from those of the participants' but also made them available for data analysis and interpretation.

Memo writing is the second way in which I addressed the epoché and reduction. van Manen (2014) offers several genres of memo-writing appropriate for phenomenological studies, of which I used the experiential and thematic genres. In the experiential memos, I constructed a narrative of each of the participants' experiences transitioning into and within the undergraduate academic community based on the audio recording of the interview. The purpose of these experiential memos was to transform the interview data into a coherent narrative describing each of the participants' reflections on their experiences. These memos helped me to be open to the participants' lived experiences and aided in the process of identifying themes that cut across multiple interviews that could be used for the first phase of coding.

Thematic memos complement experiential memos, in that they are meant to identify and expand on themes that the researcher detects in the experiential narrative (van Manen, 2014). The content of the thematic memos helped me to address the overall phenomenological reduction—interpreting the participants' experiences with the phenomenon and making meaning structures of their experiences—and were the initial intersection of the epoché and reduction. Thematic memos were used to explore patterns, themes, or categories that emerge from the data and how these patterns, themes, or categories intersect with my own experiences and beliefs, as

well as what is known about first-generation students, the undergraduate academic domain, and academic research assignments from existing research. These thematic memos served as the foundation for the final interpretive analysis that is presented in this dissertation.

3.7.1 Analytic process

The analytic process began during the data collection phase, in which I recorded my observations and reactions immediately following each interview, so these thoughts could be bracketed as I returned to the data to write experiential memos and code interview transcripts. Before receiving the interview transcripts, I listened to each interview and wrote an experiential memo for each participant. In these memos, I constructed a coherent narrative of each student's experience transitioning into and within the undergraduate academic domain. Although my construction of narrative is inherently interpretative, I attempted for this to reflect the students' experiences as conveyed in the interviews without inserting my own interpretive observations. After writing all 30 experiential memos, I sent each student the narrative that I had constructed for feedback.

As I constructed the experiential memos, I began to record themes that were emerging to be used for an initial round of coding. In total, I identified 18 codes, including themes related to the study's research questions and conceptual framework and themes that emerged from the interviews, for the initial round of coding. Using Microsoft Word and Excel, I read through each interview transcript and applied these preliminary codes to the transcripts and copying and pasting portions of the transcripts into an Excel spreadsheet. After coding each transcript, I returned to the Excel spreadsheet and read the passages for each of the 18 codes. At this point, I identified salient themes to create a more detailed coding schema for a second round of analysis. At this point, I identified 171 codes. I used Dedoose, a web-based application, to facilitate the

second round of coding. In addition, I created several descriptors that were applied to each transcript, such as campus, academic standing, mother education, and capstone status, to facilitate analysis by participants' individual demographic information and characteriscs with specific codes.

For the second round of coding, I uploaded each of the transcripts into the Dedoose and applied the codes to each of the 30 transcripts. Similar to the first round of coding, I did this passage by passage, rather than line by line, so I would have the full context of a participants' statement readily available when conducting a more fine-grained analysis. To best facilitate the second round of coding, I grouped the transcripts into six groups—Black/African-American students, non-black students of color, white male students, white female Manchester students, and white female Springfield students. During the second round of coding, I continued to write thematic memos, and when I completed the second round of coding for each group identified above, I wrote memos for that group of students based on the study's research questions. After writing these thematic memos, I began to map the relationship(s) between the emergent themes and connected these themes to the study's conceptual framework, which provided the foundation for the findings presented in the next chapter. To facilitate this, I examined passages with specific codes to explore potential patterns or categories that emerged across several participants' descriptions and reflections. I also used the "analyze" feature in Dedoose to identify interesting code co-occurrences, such as "topic selection" and "prior knowledge," or codes that were applied to participants with a specific characteristic, such as "prior knowledge" [code] and "self-reported race/ethnicity" [descriptor]. I used Dedoose to help identify representative participant quotations to provide examples of the emergent themes.

3.8 TRUSTWORTHINESS

I used member checks to ensure the trustworthiness of this study. Conducting member checks, or respondent validation, is a common method used to solicit feedback on initial findings or interpretations from participants (Merriam, 2009). In terms of hermeneutic phenomenology and data analysis, member checks are related to the epoché, in that they help to ensure that I am suspending judgement based on my own experiences and biases. Each participant was asked to review the experiential memo for their individual interview and invited to comment on my understanding of their experience. In addition to providing verification that I did not misunderstand or misinterpret their experiences, this was also an opportunity to provide more detail about their experiences, if necessary. Eight participants (27%) responded to my email invitation to provide feedback, each affirming that the experiential memo I had constructed was representative of their experience.

As mentioned previously, I kept a journal throughout data collection and initial analysis, in particular, in which I described my reactions and thoughts to the research process. I also reflected on how my own experiences and assumptions might influence how I made sense of the descriptions and interpretations of the participants. Reflexivity on the part of the researcher is particularly important in qualitative research, since the researcher is the primary instrument for collecting, analyzing, and interpreting data. This journal was helpful for maintaining the balance between the epoché and reduction required in hermeneutic phenomenology.

3.8.1 Confidentiality

I assigned a pseudonym to each of the participants and was careful to select quotations that likely would not reveal the identity of a particular student, as participants might not feel comfortable speaking freely or honestly about their experiences if they believe they could be identified. Participants' honesty was critical to exploring their experiences with academic research assignments. Data and documentation that contains the names of the participants has been maintained in secure locations—print materials are locked in a cabinet in my office and electronic materials are password-protected and saved in Box, a secure, online file storage product provided through the University.

3.9 REFLEXIVITY

One hallmark of qualitative research is that the researcher is often the primary data-collection and data-analysis instrument, which can be both a strength and a weakness of qualitative studies. Critical realism recognizes that the researcher is shaped by sociocultural discourses, which means that she likely brings her individual experiences and prejudices into the design of the study as well as the collection, analysis, and interpretation of data. Hermeneutic phenomenology requires the researcher to put aside her experiences and prejudices, as much as is possible, as well as incorporate them into the phenomenological description.

I attended a highly respected, private, four-year liberal arts college as a traditionally aged, full-time, middle-class, continuing-generation student. Although my mother never attended college and my father completed college in his late thirties, I was raised in such a way that

attaining a college degree was never questioned. At that time, I took for granted the socialization that I had received from my parents and from my peers at a wealthier, predominantly white high school with a high college-going rate. However, within the past several years, I witnessed my significant other enroll and complete a degree at the local community college as non-traditionally aged, part-time, low-SES, first-generation college student. Growing up in a low-SES and working class family, he was encouraged to learn a trade and attended the local vocational high school to study auto body repair. Going to college was not encouraged, as it was not viewed as an opportunity for a prosperous career, and was not really thought of as a realistic option. During this time, it became abundantly clear to me that family background affects students' collegiate experiences. My partner did not have access to information that I took for granted as a college student, such as information about applying for financial aid, completing general education requirements, and selecting a major field of study. Witnessing the differences in our experiences is what provided the inspiration for this research study.

I have been an academic librarian who serves primarily undergraduate students for a decade, which means that my work regularly involves thinking about how to help undergraduate students develop in terms of information literacy. I do believe there are specific skills and attitudes related to information consumption and use that students need to cultivate for their academic endeavors, for their personal life (e.g. researching health information), and for participating in the nation's democracy as a citizen. As an academic librarian, I value curiosity and inquisitiveness that is coupled with a critical and contemplative disposition and seek to help students cultivate these characteristics. However, I also believe that academic research assignments can be alienating for many students, since I often witness a gap between what the faculty think students should be able to do and students' understanding of the expectations of

academic culture (e.g. Leckie, 1996; Valentine, 2001). Therefore, I strive in my work with undergraduate students to help make academic culture more transparent, so that students can feel more comfortable operating in a world that might seem foreign to them.

3.10 RECIPROCITY

Administrators at both the Manchester and Springfield campuses remarked that the findings of this study should be useful to their campuses in learning more about the academic experiences of students who could be marginalized based on their parents' educational attainment and economic situation. I intend to write up an executive summary of the findings for each of the campuses and offer to meet with interested stakeholders about the findings of this study. In addition, I will provide them with recommendations for practice based on the findings.

3.11 LIMITATIONS

Although this study did not seek to recruit a sample that was representative of the entire first-generation student population, the demographics of the Manchester and Springfield campuses present a limitation. Nationally first-generation students tend to be more diverse in terms of race/ethnicity; however, the Manchester and Springfield student bodies are predominantly white (73% and 79%, respectively). Despite this, the sampling strategy I employed resulted in overrepresentation for students of color. Students of color made up 24% of the eligible

participant pool. Of the participants in the study, 33% identified as students of color, which is aligned more with national trends.

My former professional role at one of the two campuses included in this study might also present a limitation. I was a librarian at one of the two campuses for six years, including during the data collection phase for this study, and helped many students with their research assignments through formal or informal teaching activities. While my teaching role diminished over time, the participants located at that campus may have worked with me as first- and second-year students. This means that they might have chosen to participate in the study based on previous interactions with me or they may not have felt they could be entirely honest during the interview (i.e. the assumption that there is a correct way to answer the questions). The fact that I took a job with different responsibilities at a new institution during the data analysis phase meant that I was no longer immersed in the daily life and culture of that campus. These new responsibilities in a new environment may have shaped the ways in which I interpreted and made meaning of the data.

4.0 FINDINGS

In this chapter, I report the findings that emerged from the data collected in the participants' interviews and relate them to the conceptual framework previously described. Themes emerged from the data related to four key areas. First, students perceived their initial positionality within the community differently based on their success in applying the skills and strategies they had developed in high school to their new college environment. Second, students' perceptions of their initial positionality within the community were related to the nature and frequency of early interactions with faculty and the development of an academic support network. Third, when given the opportunity to do so, students used their prior knowledge, lived experiences, interests, and identities to select topics for their research assignments. Finally, many students seemed to employ the same checklist approach to evaluating and using information in research assignments they learned in high school throughout their college career; only a few students demonstrated the development of the more critical, reflective, and analytical modes of thinking related to information literacy. In the sections below, I report the themes related to each of the four key areas.

4.1 ENTERING THE COMMUNITY

The participants in this study, all of whom were in at least their third year of college at the time of the interviews, described and reflected on their experiences transitioning into the undergraduate academic community as first-year students. Two themes emerged related to how these first-generation students positioned themselves within their new community, and their success in applying the skills and strategies they had developed in high school to their new environment shaped their perceptions of this process. Just over one-third of the participants shared that they did not believe their high school experiences had prepared them for college-level academic work; the remaining students reported either feeling fully or mostly prepared for college. Students who felt prepared described perceiving themselves as insiders within the new community, even in their first year, while students who felt underprepared seemed more aware of their peripheral status in the community. The conceptual framework positions first-year students as legitimate peripheral participants in the undergraduate community of practice. Although most of the participants viewed themselves as legitimate within the new community, some students' transition experiences were characterized more by their perceived legitimacy in the community and other students' transition experiences were characterized more by their perceived peripherality in the new community.

4.1.1 Feelings of peripherality

As they reflected upon their transition into college, the reflections of students who felt they were underprepared for college were characterized by feelings of peripherality. In chapter two, peripherality is defined as being an outsider in terms of the new community's cultural values and

practices, meaning that expectations for participation in the community may be tacit to new participants. With one exception, students who perceived their peripherality within the community felt they were legitimate members of the new community, but as they reflected on these experiences, they shared that they did not have the knowledge they needed to meet their professors' expectations when they first arrived at college, despite having been successful academically in high school. Emily's experience with her first college-level chemistry course is representative of this. She reflected,

> I did have some issues with classes. They were a lot more difficult than high school. I went to [local school district], which is one of the better high schools academic-wise. I took AP [Advanced Placement] chemistry. I failed my first chemistry class.

Sydney also reported failing a class when she first arrived at college, sharing, "Failing a test, you just can't do, especially whenever you're graded on three tests as semester. Failing a class and realization you have to change your ways helped myself." As Sydney's reflection indicates, learning how to successfully participate in the community was a trial-and-error process. Despite having been academically successful in high school, the students who perceived their peripherality felt unprepared to meet the expectations of college-level academic work. This generated a feeling of being outsiders, or peripheral participants, in their new community.

Research assignments were particularly a source of anxiety. All but one of the participants had completed research assignments in high school; however, students who felt peripheral described college-level research assignments as "daunting," "tedious," "intimidating," "a big struggle," and "overwhelming." They applied the skills and strategies that they successfully used in high school, but reported struggling to meet their professors' expectations. For example, Emily had been accused of plagiarism on the scientific paper she wrote for her

introductory biology laboratory course. She reflected, “It’s just it was new and hard, and apparently, I didn’t know what I was doing.” She said,

> I think it was just in high school, we were taught if you wanna take a sentence exactly, you just use the quotations and cite it behind it. Well, they didn’t want that. They want you to put it in your own words, but you still have to cite it.

Similar to other students who positioned themselves at the periphery, Emily applied the skills and strategies she had successfully used to complete high school research assignments when she first arrived at college. She felt this paper was the best paper she had ever written and was “proud” of herself, so she was “heartbroken” to learn that she had plagiarized. Other students described similar experiences. They had worked hard to meet their professors’ expectations for performance but fell short.

Victoria also encountered a shift in expectations related to acceptable conventions for writing papers, though her professor was explicit about her expectations. She said,

> [My composition professor] did tell us, “Don’t say words verbatim.” When you write your conclusion, and your intro paragraphs, you’re not supposed to pull sentences directly out of your body paragraphs, and put them in a conclusion, and just be like, “I’m done.” That’s what’s taught in high school, so that was a lot different.

Similarly, Kimberly shared, “We didn’t have to do index citations in high school…. I mean, I guess I would have but you didn’t have to, back then.” Even though she may have been exposed to citation styles in high school, Kimberly was able to be successful without having practiced or mastering this skill, one that would be necessary in college.

Students who initially perceived their peripherality in the community could upon reflection articulate the ways in which their high school experiences did not provide them with

the knowledge of the undergraduate academic community's expectations for participation, which they learned through a process of trial and error.

4.1.2 Feeling like an insider

Whereas students who reported that they were underprepared for college felt peripheral in the course of their transition experiences, those who reported feeling prepared described relatively smooth transitions into the academic community. They felt like insiders despite being new members of the community. These students effectively leveraged the strategies and skills they developed in high school for success in their college-level academic work. They considered the college environment to be similar to their high school environment. For example, James explained,

> My high school, they tried to make it like college…. I had exams, all that stuff. I knew what I was expecting, what college was like. I thought it was pretty similar to what they tried to make me do in high school. High school was a smaller scale of it, but it wasn't really difficult for me at all.

At the same time, for students who felt prepared, differences were welcome. Alexis valued the independence she had in college. She reflected,

> Whereas in high school, they kind of would take you every step of the way, which, for me, was super annoying…it's just too slow for me to go step-by-step and do research in the library this class period and the next class period. That's not how I work.

Alexis appreciated that she could learn at a pace that was comfortable for her. Jade agreed. As she said,

> I think the classroom environment's different [in college], just cuz a lot of the times it's more student-led. There's not as much structure. I think that's nice.… I think the fact that you don't necessarily have to raise your hand to contribute in class. You don't have [to] get permission to go to the bathroom.

Students like Alexis and Jade appreciated the opportunity to take an agentic role in their learning. The sense of being prepared gave them confidence to see independence more as an opportunity than as a challenge.

Research assignments completed early in college did not induce anxiety in students who felt like insiders. They reported that college-level research assignments were of a different "magnitude," but the skills and the strategies they had developed in high school enabled them to meet their professors' expectations for performance on these assignments. For example, Michelle shared, "My high school did go over thoroughly how you cite the works cited page, and do everything correctly as far as that. It wasn't much different, in my opinion, when I came here." Because their experiences with research assignments when they first got to college validated their preparation for college, the descriptions that students who positioned themselves as insiders shared about their feelings towards these assignments were relatively neutral. James said, "It [research assignments] wasn't really difficult for me at all," and Malik said that it "wasn't anything too difficult for me or too out of the ordinary of my comfort zone." Josh described both assignments and the process as "familiar," saying he knew he just had to "keep going and push through to get it done." For students who positioned themselves as insiders, early college research assignments seemed like a continuation of what they were expected to do in high school, which made their experiences with early college-level research assignments fairly unremarkable.

Students who felt like insiders emphasized that they felt prepared to find trustworthy and reliable information through library resources. Almost all of the students who explicitly reported using article databases in high school were students who positioned themselves as insiders. While the quantity and sophistication of the databases that students had access to increased in college, the experience of using databases in high school helped them to acclimate to this new environment. For example, based on his experience using article databases in high school, Matthew reported using science databases to find articles when he was working on an honors biology project in his first year of college. Even though he only had access to four databases in high school, he knew that he could translate his high school experience with databases to finding appropriate information sources in the expanded offering of databases for this research project. Laila shared that when she was working on an honors sociology project in her first year of college, she went to the library website and thought, "Databases. Oh, this helps. Oh, I remember what I did [in high school]." She found that the college library had a database she had used extensively in high school and she was able to use it again. These students recognized that their information environment was different, but they felt confident because of their experiences in high school.

Whether students could apply the strategies they used in high school was related to how they retrospectively described their academic transition experiences and their positionality within the new college community. Research assignments in particular separated those who felt prepared from those who felt they were missing critical pieces of information about their professors' expectations for academic participation. Students who felt peripheral gained this knowledge through a trial and error process. As the next section outlines, feeling peripheral also

made it difficult to build social capital at college in the way that students who felt like insiders did not experience.

4.2 BUILDING SOCIAL CAPITAL IN THE COMMUNITY

This section will discuss two aspects of study participants' social capital building: connecting with professors and the role of the college major in providing a context for social capital building with both faculty and peers. A student's perceived positionality seemed to be related to their approach to interacting with faculty. Students who positioned themselves as insiders reported reaching out to their professors to help fill knowledge gaps and to begin acquiring social capital when they first arrived at college. However, students who perceived their peripherality were less likely to reach out to their faculty early in their college careers, sharing that they were unaware that this was available to them or being too intimidated by the status of their professors to initiate an interaction. Regardless of how they perceived their initial position within the community, students indicated that their college major(s) provided them a home within the undergraduate academic community in which they began to develop, and in some cases deepen, relationships with their professors. Although students who perceived their peripherality in the new community demonstrated the benefits of these relationships, only students who positioned themselves as insiders described the development of mentoring relationships that provided opportunities for higher levels of achievement.

4.2.1 Early interactions with faculty

The analysis of the data suggests that the way in which students perceived their position in the new community was related to the frequency and nature of early interactions with faculty. Feelings of intimidation were reported by students who felt peripheral and students who felt like insiders. However, students who felt like insiders were able to overcome those feelings, which was not evident in most of the experiences of students who perceived their peripherality within the new community. Students who positioned themselves as insiders reported reaching out to their professors for help more frequently and met with professors face to face, whereas students who felt peripheral were more likely to use email if they contacted their professors at all. Students who perceived their peripherality became more comfortable interacting with faculty through required interactions in lower-level general education courses, such as college composition courses.

4.2.1.1 Students who positioned themselves as insiders

Students who positioned themselves as insiders in the new community, for the most part, reported reaching out to and interacting with faculty early in their college careers. Although they may not have felt entirely comfortable interacting with their professors, these students seemed to know that making an effort to interact with their professors would help them to be successful in their new community. For example, Alexis thought that some of her professors “were a lot scarier than her [high school] honors teachers,” but she reached out to them and met with them in office hours nonetheless. She and other students who felt like insiders recounted cues given on campus tours, in the classroom, or on syllabi that indicated that professors were willing to

interact with them. They saw such interactions as a key way to address knowledge gaps and to establish their reputations as good students.

Some of the students who positioned themselves as insiders shared how they knew that they could and should reach out to their professors. In addition to statements in syllabi about how to reach out for help, Matthew said that this was covered in his campus tour. He shared, "Then when you take a tour of the school, they show you how they have the office hours pinned to [the professor's] door. That helped a lot. That really helped." Despite this, Matthew still felt like he was bothering his professors in seeking their help when he first got to college. Yet when he expressed this, "[My professors] were like, 'This is my job. I love doin' this. This is what I studied for.' After that, then that reaffirmed everything. I was okay with doin' it." Similarly, Brooke shared, "For chemistry, as long as—any time during his office hours, he said that we could go in and [get] help—and he would help me with five or six problems. He didn't mind, I don't think." Alexis said that her professors created an environment that suggested the faculty wanted students to reach out to them. She said, "They made it open that you can come talk to them. You can ask questions…I kind of felt like okay, if you're telling me to do it, then I'm gonna do it." Both outright statements of willingness to help and positive responses confirmed that these kinds of interactions were both normal and encouraged.

When students who felt prepared for college encountered knowledge gaps, they sought help from their professors. For example, Laila said that she had minimal experience with microscope slides in high school and that she found it challenging. "I kept going to [my biology professor's] office to try to figure out ways that I could do better," she explained. Garrett saw visiting office hours as an easier alternative than continuing to try and decipher his biology textbook. He shared,

> It's harder to read about that particular topic than it would be to just ask the professor and be, like, hey, this is what I'm doing, but it doesn't seem to be working. [The professor] can tweak a little thing in your steps and, my God, I got it fixed.

Students who positioned themselves as insiders seemed to understand that they may need help as they encountered new or more complex content in their courses and they should reach out for help when they needed it.

While all of the students who interacted with faculty were building social capital, some who felt like insiders did so strategically. For example, Alexis explained, "If I didn't understand something. I would just go ask. Obviously, professors like their students that actually cared about their grades. That's what helped me establish a little bit of myself." Laila shared a similar sentiment: "I think [my professors] were happy that I did ask and not just…be concerned about it but tried to do better. It showed that I cared." Both Alexis and Laila reached out to their professors to address a knowledge gap, but they were aware of the goodwill they were generating with their professors. Matthew was even more systematic about it:

> The biggest thing I did was go to college professors' office hours. I would just sit with each one for an hour. Just every class. I think I was taking five classes in my first semester. I [would] go to each office hour for an hour every time they had one.

Although he reported getting help during these interactions, filling knowledge gaps seemed to be secondary to relationship building. In these ways, some of the students who positioned themselves as insiders in the new community used interactions with faculty early in their college careers to build their academic support network and establish their reputations as good students.

4.2.1.2 Students who felt peripheral

Like students who felt like insiders, students who felt peripheral were intimidated by professors; however, they were more hesitant to reach out to or interact with their professors when they first got to college. For example, Emily said, "Sometimes it's actually a little scary. I don't know why it was scary to go and talk to your professor, versus my high school teachers…. They were professors, like doctors. That was very intimidating." A couple of these students indicated that they did reach out to their professors for help, but they reported using email as the method of communication, rather than the face-to-face interactions that students who positioned themselves as insiders seemed to prefer. For example, Sydney reflected, "In high school…I was able to ask questions face to face. College is definitely all emails." For the rest of the students who perceived their peripherality, some of them did not know that their professors were there to help them outside of the classroom and expected students to reach out to them. Others were simply uncomfortable interacting with professors because of professors' educational attainment and professional status, as demonstrated in Emily's quote.

A few of the other students who perceived their peripherality reported avoiding interactions with professors due to their position as peripheral participants in the community. These students were intimidated by the fact that they were new to the community or by professors' educational attainment and professional status. Marissa spoke explicitly about the signals of her professors' attainment and status:

> My roommates and I always made a joke that if anyone of this campus is called doctor, you feel twice [as] intimated by that, because they correct you. With good reason. You worked for it. You want to be called by that.

Emily, on the other hand, pointed specifically to her professors' professional attainment as it related to her own status in the community. She shared,

> I wasn't used to being around people who had—like my one professor, he worked for NASA and stuff like that. You were afraid to ask a stupid question, because they seemed so much more set in their life. You're still tryin' to figure things out.

In these examples, students perceived the difference in status between them, as peripheral members of the community, and their professors.

A few of the students who perceived their peripherality were not aware that they could and should reach out to their professors for help or to ask questions; they were not aware that students' success mattered to professors. Cheyenne, who transferred to Springfield, interpreted the behavior of her professors at the local community college to mean that they did not want their students to ask for help. She said, "I felt like the teachers there didn't really care. You were just another face in their classroom, and they were just trying to get by." Cheyenne brought this interpretation with her when she transferred to the Springfield campus and continued to avoid interacting with professors. Dylan, however, was an exception. He noted, office hours are key in college…. I didn't know that when I first came, but as the semester went on, I really utilized that if I really needed anything." After learning from his peers that he could reach out to his professors, he became aware that his professors wanted to support him. He continued, "They're here to help us. They're not here to fail us, just wanna watch us burn. They're here to help. They're here to teach you, so they will answer anything." Both of these examples demonstrate how some students who felt peripheral were unaware that they could and should reach out to their professors when they first arrived at college.

Required interactions, particularly in general education courses, were important for teaching peripheral students that they were expected to reach out to and interact with their professors. It was common for lower-level courses in college composition and public speaking to require students to meet with their professors or other learning support staff as they developed their projects, whether they were comfortable doing so or not. For example, the Manchester campus requires students enrolled in composition courses to visit the campus writing center at least once during the research process. Madison initially thought this requirement was to benefit her professor, "so she wasn't reading completely botched essays and everything from everybody." However, she soon realized the benefits she received from this support. She explained, "It helped a lot in my English 1 class, so I figured it would still help in English 2." Once Madison had experienced the support of professors and tutors in the writing center through her course requirement, she sought out this help again. Gabrielle also shared that the requirement to go to the writing center helped her to develop supportive relationships with professors. She shared, "That was the biggest thing, go to the Writing Center, because that's my biggest help…. I met my next professor [a professor from which she subsequently took a class] in there because I went in there so many times." For students who felt peripheral, these kinds of required interactions, either with faculty or academic support staff, demonstrated that they could and should build an academic support network to help them be successful in their new community.

4.2.2 The role of the college major

More than half the students in both groups mentioned without prompting that selecting a major had given them access to a smaller community. Students who felt peripheral in the college community felt a sense of belonging in this community. Whereas early experiences with

interacting with professors—or avoiding interactions with professors—sharply distinguished students who felt peripheral from those who felt like insiders, students' comments about the community they built around their major did not show these distinctions. For example, Lauren, who felt like an insider, shared,

> Manchester [is] very good at—because it's so small, we all have our own little community, especially once you get into your classes and the major. You know everybody…You know each other, and we kind of—you build your own family that way, too, I guess.

Jesse, who felt peripheral, said that in his major, performing arts,

> We're just very small, so we can be personal on that level. We go to Dr. Jones' house every year and have a performing arts gathering to talk about what's going on in the performing arts area. We've just all grew very close together just through experiences like that.

While Lauren felt like an insider and Jesse felt peripheral, they had similar feelings about the roles of their college major in helping them establish a major.

In their major(s), students felt that professors wanted to get to know them as a person, not simply as a student enrolled in a course. Lauren describes this duality, sharing,

> It's not like a, "I'm on this side of the desk. You're on this side." It's more of a let's learn together type thing… We'll go sit in their offices and just talk to them. It has nothing to do with class or school or grad school or anything else. You go just go like, "Hey, how's life. What you doin'?" You know them more as just like, "Oh, that's the guy that talks to me for 50 minutes every day."

Similarly Dylan shared, “My advisor for my major, ‘cause I’m a broadcast major. He’s a pretty open person. We joke around with him all the time.” Alexis said that her faculty advisor:

> knows everything that goes on in my life, just because I’ve had him since my freshman year. Like I just got a dog in August. He’ll be like, “Oh, how’s [Bingo]? I’m like, “Oh, he’s great.” It’s just like I finally built up to that.

Alexis valued the trusting relationship she was able to establish over time. While Jasmine, who felt peripheral, had not known the professors she built a relationship with quite as long as Alexis, majoring gave her the opportunity to take multiple classes with the same professors: “I start[ed] having the same three professors. Those are the professors that I'm actually close with, and we have a type of relationship outside.” Gabrielle, who felt herself peripheral, only discovered that faculty were invested in her success after she declared her major. She shared, “It was like, …. ‘You’re gonna go to grad school, right?’ It’s not like you’re asking me. It’s like you’re telling me, ‘You’re gonna go to grad school.’” Regardless of their initial positionality, being part of this smaller community helped students to move from supportive interactions to building relationships with their professors.

4.2.3 Benefitting from accumulated social capital

In general, students accrued benefits from the social capital they accumulated through interactions with faculty. However, the two groups benefited differently. Students who initially felt peripheral experienced feelings of increased confidence and a shift to feeling more like insiders within the community. Some of the students who initially positioned themselves as insiders benefited from the development of mentoring relationships and additional opportunities for achievement.

4.2.3.1 Students who felt peripheral

Students who had felt peripheral reported turning to their professors more often for support after they learned through their major that they could and should. For example, Elizabeth said that she "didn't wanna be like that kid that the teacher bothered all the time," when she first got to college. However, as she developed a relationship with her faculty advisor her feelings changed and she reported reaching out to him to better understand his expectations. Elizabeth shared,

> I remember I stayed after class a lot to talk to [my professor]…and I was like, "Okay. Hate crimes is my topic, but there's so much on it. Can I just focus on this and this?" Then, we talked about if I limited my research, the pros and cons, basically, and how comprehensive my paper and my presentation would be. I think that helped out a lot as far as knowing his expectations. Then, I could go off of, okay, well, [my professor] said I could do these two topics and just make sure I covered this, this, and this within each.

Jasmine demonstrated a similar shift as she became comfortable with the faculty in her major and felt more like an insider in the community. Similar to Elizabeth, Jasmine reported that she initially avoided interactions with faculty. As she was working on her capstone project, Jasmine reached out to her professor for help preparing for interviews for her capstone project and her professor's support made the difference: "I felt real professional [doing the interviews]," she explained. This suggests that Jasmine felt differently in a positive way about the work that she was producing, because the supportive interactions with her professor helped her to understand how to behave as a professional within the field. Indeed, Jasmine shared that after completing the capstone experience, "you just feel like a real adult." These examples demonstrate the shift that students who initially positioned themselves at the periphery of the community experience in terms of their academic work and their identities as they began to feel

more like insiders within the community. These supportive interactions with faculty resulted in increased confidence, as is evident in quotes from Elizabeth and Jasmine, because students had a better understanding of how to productively channel their effort so their work would lead them to success.

The negative feelings students had toward research assignments when they first arrived at college had begun to shift for students who felt peripheral. Not only did this mean that their feelings were more similar to those students who felt like insiders had from the beginning; it also made them feel more like insiders themselves. Cheyenne, for example, had gone from considering research assignments a "big struggle" to feeling "like a breeze" at the end of her capstone experience. She attributed this shift to her interactions with her professor:

> The meetings that I had with [a professor in her major] really did help me at least get a grasp of public policy and my topic. She really did break it down and talk it out and everything…. She took the time out of her day to discuss the different topics with us.

The investment of her professor's time was meaningful to Cheyenne as a signal that the professor was invested in Cheyenne's success on the assignment. This experience, which a few other students who felt peripheral shared, suggests that negative experiences with research assignments early in a student's college career do not have to tarnish their experiences with future research assignments. Seeing their professors as supportive partners in the learning process made all the difference.

4.2.3.2 Students who felt like insiders

About half of the students who initially positioned themselves as insiders had either completed or were working on their capstone projects at the time of their interview. Half of those students were able to leverage the social capital they had accumulated into opportunities for mentoring

and higher levels of achievement. The other students who had initially felt like insiders and had completed or were working on their capstone experience did not seem to have access to these opportunities for mentoring or higher levels of achievement, either because of the absence of a relationship with their capstone professor or the perception that the capstone experience was not as relevant to their future careers.

Laila, Alexis, and Brooke were able to leverage the social capital they had accumulated with faculty in their major to access opportunities for mentoring and higher levels of achievement. In Laila's case, this meant that she got to work on her capstone professor's research project for her capstone experience. Laila had not known much about the focus of her professor's research but her capstone professor invited her to work on inhibitors, describing Laila as one of her "best students." Laila was happy to agree, and she explained "If you ever wanna publish a paper or even in graduate school, that looks good on your resume." Alexis had developed a close relationship with her faculty advisor, which resulted in a personal investment in helping her to develop a capstone topic that she would find both interesting and useful. She said, "Just because if this does work, I have a possible chance of being published as an undergrad. Yeah, so that was something that he had to put on the table." Similarly, Brooke's advisor pushed her to present her capstone work at a professional conference, because it would be a good experience for her. "He told me and my friend that he doesn't care if we win, he just wants us to go to get the experience of presenting in front of people." She said that giving the presentation made her feel like an expert in her capstone topic, because the other conference attendees, including other professors, "know a lot of the microbiology techniques and stuff, but they didn't know about the specific topic that I've been working on." Students who had felt themselves peripheral did not gain such opportunities through the capstone project. Thus

although they gained confidence from the process they were behind those who had felt themselves to be insiders in the community from the start.

Jade, James, and Josh were also working on their capstone projects at the time of the interview, but had not reaped the same potential benefits as Laila, Alexis, and Brooke. Although Jade reported being keenly interested in her capstone project's topic, she did not feel that she had developed a relationship, a connection, or even rapport, with her capstone professor. Jade reported feeling "frustrated" with her capstone experience, because her professor did not provide the students in her class with a lot of structure, including regular milestone assignments and check-ins. She shared, "We can always go ask for help, but we're self-guided… I feel like it's not very helpful. I think different deadlines throughout this semester would help keep everybody on track. I wish the class was more structured." Jade seemed to interpret this lack of structure as the professor's disinvestment with the students and their success. James and Josh both described good relationships with their capstone professors, but they both did not seem to perceive the usefulness of the capstone experience for their intention to go into law enforcement and they saw their capstone projects as basically irrelevant. Josh believed the writing skills that he was practicing would be important as a law enforcement officer, but he offered a fairly weak explanation of the connection with the research process. He said, "Definitely just try to maybe map out what kinda crimes happen in what areas and things like that." James said he did not enjoy doing research assignments and felt that a hands-on experience would have been better for him and his career goals. He shared,

> I'd rather do hands-on things rather than research, cuz I want be a law enforcement officer. I want to do hands on and learn more about cops and stuff, rather than research,

but I get it…. I can get why you do papers and stuff, to get a better understanding of certain topics and ideas. It's just not what I like to do.

Thus the benefits of feeling themselves to be insiders with respect to making the capstone project into an opportunity did not accrue in the same measure to all students.

4.3 PARTICIPATING IN THE COMMUNITY THROUGH RESEARCH ASSIGNMENTS

As discussed in chapter two, situated learning is critical for progressing from legitimate peripheral participation to full participation within a community of practice. Situated learning requires new members to participate actively in their community to learn relevant skills or acquire knowledge about acceptable ways of communicating and behaving in their community. In this study, I argue that research assignments are opportunities for situated learning within the undergraduate academic community of practice.

All of the participants had to complete research assignments as undergraduates, though some majors emphasize research less than others, with profession-based majors such as accounting, education, and broadcast communication requiring the least such assignments. In general, participants described research assignments of accelerating intensity as they moved from required composition and general education courses through their major's methods course, if offered, to the capstone project. Several themes emerged in the data related to students' understanding of the purpose of research assignments, some of which suggest that students perceived research assignments as situated learning experiences. As participants reflected on their experiences with research assignments, they reported that, when given the opportunity to do

so, they drew upon their interests, prior knowledge, lived experiences, and identities to select topics for these assignments. Two different orientations to this strategy were evident—a performance orientation and a learning orientation. While both approaches seemed to help students succeed in the community, the learning orientation may have implications for the students' development of their information literacy.

4.3.1 Perceived purpose of research assignments

Participants were asked about the purpose of research assignments in college, including why they believed professors assigned these assignments. The participants described several purposes to non-capstone research assignments in college, including the assessment of learning, the opportunity to learn more about topics related to the course, the demonstration of critical thinking skills, opportunities to challenge students, and preparation for post-college life. In addition, about half of the students believed that research assignments they completed early in college were intended to give them practice with completing research assignments later in college and served as stepping stones on the path to completing their capstone project. For example, Michelle said the research experience in her intermediate composition course "taught me everything I need to know for future papers." Gabrielle provided a bit more elaboration, reflecting,

> All throughout my three and a half years, four years being here. It's all been research and papers, so without [composition]—I was like, no wonder why they started me off in 100 because it's a lot that you need to know, especially with these research papers.

Alexis made an explicit connection between the smaller assignments that she encountered when she first got to college and the capstone experience. She shared,

> I think the smaller ones are to lead us up to what's expected of us our upperclassmen years. Trying to get as meshed into the college world, coming from high school. Doing it a little but more gradually than just throwing a big, huge project at us.

Just as students reported that many of their professors broke larger research assignments into smaller assignments to help them progress toward completing the larger assignment in a particular course, many students perceived scaffolding within the curriculum. This purpose, in particular, suggests that some students perceive non-capstone research assignments as a medium for situated learning within the community, in that pre-capstone assignments help them to develop and build the skills and knowledge they will need to complete their capstone project.

With respect to the capstone project specifically, students saw it as an opportunity to demonstrate what they have learned in college and/or to prepare them for life after college. For example, Garrett believed that the capstone experience made "the stuff you've learned come full circle," and Laila said that the capstone tied together everything students have learned in college. Cheyenne focused specifically on learning within the major, explaining,

> I guess that's what they want to see, if we learned what they taught us, if we were paying attention to what they were teaching. Yeah, the capstone's really throwing everything that I've learned from all the communication professors into one thing.

Thus students saw the capstone experience as an opportunity for students to synthesize what they have learned through their college experiences and apply that to a project serving as a summative assessment of learning. Gabrielle concurred with this sentiment, explaining, "What have you learned all the way up to now that you can take from this?...Providing that you passed it, you're ready. You've done your job here, pretty much. You've learned everything that you needed to know." These perceptions of the purpose of the capstone experience indicate that students are

aware that learning is cumulative, and they are expected to demonstrate how much they have learned throughout college. In other words, successful performance on the capstone project was indicative of successful participation in the community.

Almost half of the participants believed that the capstone project was meant to prepare them for their post-college lives, which often overlapped with the assessment of learning. For example, Lauren said, "I've learned something. I can go out in the world and do this," meaning complete research similar to that which she completed for the capstone project. Thus she thought it would help her to be successful in her post-college life. Other students mentioned specific types of skills they were developing that they could draw upon in their post-college lives. Malik addresses the development of time management skills and self-regulation, explaining,

> How well they can manage their time and how well that they can do the work that's required of them to do. Then when they get in the real world, if they have a project or an assignment that their supervisor gives them, how well can you take the time out of your day to do what you need to do to get this done in the allotted time period I give you.

Madison focused specifically on the relationship between finding reliable information and successfully communicating with her future colleagues. She surmised,

> I'm most likely gonna be writing emails…to companies saying my company wants to do this and I have to have specific facts and background research saying the revenue's gonna raise this much in so many years and I need to have reasons why and facts why that would happen.

Madison saw the capstone project as useful experience for this future. Jasmine and Josh referenced benefits to writing skills in describing the point of the capstone projects. Even though students believed they were expected to demonstrate the disciplinary knowledge they had

accumulated in the major in their capstone projects, for the most part, these were not the skills that students believed that were developing that could be transferred to their post-college lives. Rather, students reported that the capstone project helped them to develop and practice transdisciplinary skills, such as time management, self-regulation, and communication skills, which they would be able to draw upon in their post-college lives.

4.3.2 Approaches to research assignments

Students understood that they needed to take responsibility for their own learning and success. Most students reported selecting topics for research assignments that were interesting or meaningful to them when they were given an opportunity to do so. Two different orientations to this strategy emerged in their comments—a performance orientation and a learning orientation. The performance orientation seems to be focused on staying engaged and motivated to complete the assignment and meet the professor's expectations. In other words, it is a response to an extrinsic motivation and a method. Students who exhibited a learning orientation used research assignments as opportunities to channel an intrinsic motivation to learn more about a topic. These approaches were not mutually exclusive, in that some students exhibited different orientations in relation to different research assignments. While students described both of these approaches as successful, the learning orientation may have implications for the development of students' information literacy abilities, as discussed at the end of this chapter.

4.3.2.1 Performance orientation

Students who exhibited a performance orientation to research assignments seemed to be responding to an extrinsic motivator (i.e. a required assignment on which they would be

evaluated and graded) and used their interests, prior knowledge, and lived experiences to help them remain engaged and motivated to successfully complete the assignment. Josh and James were, perhaps, the most open representatives of the performance orientation. Josh bluntly shared that he felt research assignments were something that "you just gotta get through." He chose to write a paper for his intermediate college composition course on the causes of lung cancer, since his grandparents had died from the disease and it was "near to [his] heart." He shared, "It's always hard to do somethin' where you really don't care. When you wanna do somethin', like write it, it makes it easier, or when you have a purpose to do something, it makes it easier." Even though he was generally interested in his topic, Josh primarily used this strategy to make the experience more enjoyable. In a response to a question about the purpose of research assignments, James stated, "it's a grade." He explained, "[The professor] want[ed] to see what students thought, what they were interested in…he liked discussions, so he always wanted to know our opinions of stuff, to see what we liked and didn't like, or what we felt passionate about." James did not perceive that learning was the primary purpose for the assignment. As these examples demonstrate, students who exhibited a performance orientation typically used this strategy as a way to stay motivated and engaged with the assignment on which they wanted to perform well. While they may have found their topics interesting, choosing a topic that was interesting was simply a means to an end.

Other students were not as explicit about their performance orientation, but their reflections on how they selected topics for research assignments suggested that they were drawing upon a performance orientation. In some cases, this strategy helped students to lower the barrier to participating in the undergraduate academic community, since it gave them the opportunity to draw upon their prior knowledge. For example, Elizabeth selected baseball as the

topic for her public speaking course, realizing that she already knew "a lot about this topic" having played softball for more than a decade. Ultimately, Elizabeth reflected that "research ended up not being that bad." As a student who had felt peripheral to the community, Elizabeth drew on her prior knowledge to lower the barrier to participation. Similarly, Madison decided to develop a hypothetical rock climbing equipment company for her marketing course because "I knew which target market to do…because I rock climbed and I got to see all the different types of people that rock climb." These examples do not suggest the primary purpose in selecting these topics was learning; rather, this was a strategy to apply the prior knowledge and interests to successfully complete the assignment.

4.3.2.2 Learning orientation

The ways in which students who exhibited a learning orientation to a research assignment described their experiences with these assignments suggest a bigger purpose than successfully fulfilling a course requirement. Rather, these students used research assignments as opportunities to channel an intrinsic motivation to learn more about a topic related to their identities or lived experiences. Two themes related to this orientation emerged from the analysis of the data—self-education and educating others. Almost all of the students who exhibited a learning orientation to a research assignment were in the peripheral group. In addition, all of the students who expressed a desire to educate others were students whose identities were minoritized beyond their first generation status vis-à-vis their race or sexual orientation. Finally, students in the sciences often did not have the same opportunity to select their topics as other students. Despite this, many of them seemed to take a learning orientation to research assignments and tended to view research assignments as a way to develop knowledge or expertise within their major.

Self-education

A few students used research assignments to satisfy their curiosity related to their observations of their environments or to explore issues that were relevant to their personal lives. Laila is representative of the students who used questions related to their daily observations to select a topic for a research assignment. Laila used her observations about other student athletes' behavior in study hall to develop a topic for an honors sociology research project in her first year of college. Laila shared,

> Whenever I was in our mandatory study hours, I would look around at the different athletes. I'd be like, "That person does this," and, "Hmm, they're not doing homework." "This person plays this"…So you're like, "Okay, what's going on here?"

Laila designed a research project for a sociology course around the patterns she observed, which had made her interested in the existing literature about student-athletes' academic outcomes. The project had been an opportunity to apply what she was learning in her sociology course to understanding what she was observing in these study halls. It also provided an opportunity for Laila to challenge herself. She said that her professor had told her, "This is gonna be really good…but it's gonna be really hard," and that her response was, "I know, but go big or go home." Whereas other students picked topics where they felt they had an advantage, Laila picked a topic that she felt would teach her something. Students like Laila described selecting topics they knew would be challenging, and they welcomed the opportunity for learning they would gain in the process.

A few students used a research assignment to explore meaningful issues related to their communities about which they wanted to learn more. Cheyenne was wrestling with a tragedy that happened at her high school—an incident of violence between students, which received

heavy coverage in the local news outlets, including the debate about whether the perpetrator should be tried and sentenced as a minor or as an adult. Cheyenne shared,

> At the time when I picked that topic, they were still trying to decide if they were going to try him as an adult or keep him in juvenile court. I think that's kind of what made me want to focus on that. At the time, I wanted—I had one opinion on it…. That's why I chose the topic.

Cheyenne states that she had an opinion about this topic and implies that the research assignment in her rhetoric and public policy course provided her with the opportunity to explore her opinion and engage in the debate that was unfolding around her. Jasmine was also attuned to debates happening in her community, sharing that she her family were discussing the school-to-prison pipeline and its presence in her hometown. She said,

> [My aunt will] talk about [the issue], so I'm just like "Maybe I should pay more attention." I remember her saying something about the same people that own the school districts also own prisons, so that struck my mind, and I was just like "I'm definitely gonna do this."

Jasmine purposely selected this topic to fill a knowledge gap about an issue that was meaningful to her community, much as Cheyenne had.

Educating others

Four students, three of whom were in the peripheral group, used their identities and lived experiences to select topics for research assignments as a way to educate others. Like the students who sought primarily to educate themselves, these students knowingly selected a difficult topic. All of these students reported minority race or sexual identities.

Gabrielle and Elizabeth both used a research assignment to explore issues relevant to their identities and lived experiences with the goal of being able to educate others. Elizabeth's interest in hate crimes committed against LGBTQ people was initially related to her identification as a lesbian and her desire to learn about issues related to the LGBTQ community. Elizabeth perceived that heterosexuals were unaware of how "spiteful and hateful people can be" to her because of her sexuality, and she established a goal of helping others to understand her experiences. She shared, "I feel like research makes me happy when I know that I can teach other people or let them in a little glimpse of something else that they might not know about." Gabrielle drew upon her identity as an African-American female for her capstone experience. Gabrielle was one of several Black/African-American students enrolled in her capstone course, which focused on racism in the United States. She did not understand how some of her peers of color were "tired of talking about racism," saying, "How could you be tired of talking about it when you're living in it?" Gabrielle shared,

> I didn't just wanna leave out of the class and not take nothing from it, so what I did was I got a small group together, and we actually sat down and just talked about it… Like, "Tell me something that you don't know, and I'll tell you something that I don't know, and we'll try to educate each other." Because I'm not gonna lie, sometimes it does get frustrating to continuously keep talking about it, but it's always gonna be there, so you gotta try to at least educate someone else about it that doesn't know.

Gabrielle explicitly states that it was important for her to learn something in this course that would have a broader application than in that specific course context and was willing to commit to a challenging topic because she believed it would have positive implications that extended beyond the limits of that research assignment.

Malik and DeShawn viewed their research assignments as an opportunity to share what they had learned in their lived experiences as Black/African-American men. Both students had first-hand experiences with their topics—gentrification and racism, respectively. DeShawn shared that he expected to need to educate some of his peers about the experiences of African-American students when he decided to attend a predominantly white, rural campus. When one of his intermediate college composition classmates casually used a racial slur on the second day of classes in his first year, he felt his expectations had been validated. DeShawn reflected,

> The thing with this is, I saw this as an opportunity for me. I could either (a) run and go to a different college or (b) stand my ground and educate people... an opportunity to educate the white populace who really don't understand what it is or what it means to be an African-American student.

DeShawn felt that he had an opportunity to educate his classmates during the presentation portion of his assignment, which focused on different genres of music, and he incorporated music by Kendrick Lamar and Kanye West. He wanted to provoke his classmates to think about these songs and their lyrics and how they were representative of the African-American community, a community with which he believed many of his peers were not familiar.

Malik had written a paper and presentation about gentrification for his intermediate college composition assignment. He shared,

> That was a topic that I really felt passionate about, that I really wanted to make a presentation about, and that a lot of people, which I was surprised about, thought that gentrification was a myth or a hoax, or it was bound to happen in lower downtrodden areas. This was the one instance I saw it happen with my own eyes. I saw the changes that occurred because such and such had happened… I just really wanted to do a project

> on this particular instance cuz I feel like a lot of people don't really know that gentrification's happening in lower developed areas such as where I was from.

Like DeShawn, Malik viewed the presentation in particular as a mechanism to educate their classmates whose backgrounds were different from their own.

Developing expertise

Students with science-related majors rarely had the opportunity to select their topics for research assignments, which included laboratory reports and capstone projects. However, their interest in science seemed sufficient motivation to address assigned topics in their majors. Unlike the students who exhibited a performance orientation to a research assignment, many of the students with science-related majors reported that they were interested in learning more about their topics because they viewed research assignments as opportunities to develop disciplinary expertise. For example, Matthew seemed to be excited by the opportunity to learn about a topic about which his professor had expertise. He said, “I consulted with my professor. He was an ecology expert…. That was right up his alley. That’s what he recommended…. I was totally onboard with it…. I was totally interested in that.” For Matthew the opportunity to work closely with an expert on the topic made it interesting, although he did not express an inherent interest in the topic. In Brooke’s case, none of the biology professors at the Manchester campus were doing research that directly aligned with her own interests, so she was not initially interested in her capstone advisor’s research agenda. As she started to learn more about his research, however, she ultimately gained a sense of expertise and authority about the topic when she would present on it at conferences. She said, “Even after I started reading those papers, it became even more interesting to me. Now, I’ve read so many papers about it and given presentations on it, it’s like I

just—it's almost like I'm an expert." The knowledge that she was developing expertise was a motivator for Brooke.

4.4 INFORMATION LITERACY

In the conceptual framework used in this study, I argue that the habitus of the academic community includes academic literacies, including information literacy. Tapp's (2015) definition of academic literacy is helpful in thinking about the modes of thinking that these academic literacies encompass—"particular ways of constructing meaning, making judgments, and determining what counts as valuable knowledge" (p. 712)—all of which, Tapp argues, can remain tacit to students. I contend that as students move from legitimate peripheral participation toward full participation in the community they are expected to develop critical, reflective, and analytical modes of thinking and incorporate those modes of thinking into their academic work. Information literacy, through its articulation of threshold concepts, knowledge practices, and dispositions, requires that students apply these modes of thinking to their information evaluation and use them for research assignments.

Although students were able to articulate the differences in the intensity of and the expectations related to research assignments between high school and college, many students did not demonstrate a commensurate evolution or transformation in their critical thinking skills related to information use. Instead, students described a process of searching for, evaluating, and selecting information using a checklist approach rather than describing the application of the critical, reflective, and analytical modes of thinking related to information literacy. Students who exhibited a learning orientation to a research assignment, however, provided some evidence for

the modes of thinking related to information literacy at a basic level. In general, regardless of the students' orientation to their research assignments, the data suggest that students perceive that faculty emphasize the final product over the demonstration of critical thinking related to information use.

4.4.1 The checklist approach

Most students were aware that their professors would expect different kinds of sources than their high school teachers had expected. As Dustin said, "High school, it was credible. [The sources we used] were real, not fake ones, but never official scholarly stuff." Kimberly said, "Like, dot-com, dot-org, those things were fine in high school but in this it's like you need either dot-gov or an article or a book." Kayla, who reported being aware of this shift in her first semester of college, elaborated,

> In high school you had just Googled and found some. I knew definitely not to use Wikipedia or something like that, but I mean sometimes you'd grab a book. I mean you would just look it up and if it looks like a legitimate source then it was okay. College and I think definitely because of just the audience that we were writing for and how not necessarily serious, but I mean it's not a joke anymore. It's college. It's a real research paper.

Other students, such as Elizabeth and Jesse, became more aware of this shift in expectations once they began taking advanced courses in their major. Elizabeth shared,

> I don't think that I knew to the extent of what it was until, I think, I took my junior seminar. Then, we were told that scholarly articles were the standard we were to be held

> at, basically. Yeah. I think that was probably the first, I guess, solidifying moment for scholarly articles.

By their third year of college, most students reported being aware that they were being held to a higher standard for information use, namely the importance of scholarly and/or peer-reviewed articles. However, scholarly or peer-reviewed, for many of the participants, became another criterion on their existing evaluation checklist.

Students' comments did not suggest an evolution in critical, reflective, and analytical modes of thinking related to information literacy. Most students reported being taught the same basic set of evaluation criteria in high school, and they relied on these criteria when they first got to college. These criteria include looking at a website's domain (e.g. .org, .gov, .edu), avoiding Wikipedia, looking at the author and publication date, and fact-checking a source by looking at other sources. The ways in which students described applying these criteria suggested that they approached information evaluation as a process of checking off boxes on a list. Brandon's reflection on his high school research experiences demonstrates this, as he was quite literally required to fill out a form and check off criteria as he evaluated his sources. He explained,

> I remember in high school we had…different colored papers. One website was one color…. I remember if you could fill out that page, as long as…it had an author or something. Even the company, if you were lookin' up something and it had from an actual organization, stuff like that. I know the ending of a web address. We learned if it's dot net it's not—Wikipedia is not good, stuff like that.

Though other students had not used a literal checklist, they used figurative ones. For example, Michelle shared,

> I know they would teach us to look up the endings of a website. In other words, a dot-com wouldn't be as credible as, maybe, a dot-gov, or something like that. I guess they would also say, "Check the facts." Like see if something's a fact by looking at other websites to see if that information's the same across the board, and not just take one website's word for it.

One criterion that was notably absent from the participants' high school experiences with evaluating information was determining the relevance of the source to their topic, argument, or research question, and the role a source could play in strengthening their work. In other words, students did not report learning how to think critically about the relationship between the information sources they were finding and the contextual nature of their information needed in high school.

This same checklist approach was evident in the ways that students reflected on their approaches to evaluating information for college-level research assignments, including for capstone projects. James and Emily's approaches to finding and evaluating information for their capstone projects are representative of this. James shared,

> I try to find recent ones. If it's in the 1970s or something, I probably wouldn't use those, but I try to find ones within the last five years, maybe ten years…. I'll read the article the day beforehand. I'll try to find unbiased articles and stuff like that, so you gotta to do that, and then depending on where it's from, even when I go on [the online catalog] I'll search something [to confirm the facts from information] that's from a website that's a new site, rather than a university.

Emily's explanation is representative of how many students responded to this question. She said,

> I just used Google. I was much more aware of what sites were reputable. What research papers were okay to use. I knew what to look for in them. I knew as long as they had—usually if they had other sources at the bottom, that was always a good paper.

When asked about how they would approach finding sources for more recent research assignments, many students simply reported that they knew they needed credible sources, primarily scholarly or peer-reviewed sources, and described a checklist orientation similar to the evaluation strategies they reported learning in high school. Critical reflection on the relevance of the source to the students' work and intentionality in how the source could be used to strengthen their research assignment remained notably absent from their evaluation criteria.

4.4.2 Critical thinking and information use

There is some evidence, however, that students who used research assignments to explore and learn about issues that were meaningful to their identities exhibited some of the dispositions and knowledge practices related to information literacy. These students were primarily students who were members of racial, ethnic, or sexual minorities. In particular, these students provided some evidence that they were aware of an existing discourse related to their topic, approaching research as inquiry, and considering the contextual nature of authority.

One of the six information literacy threshold concepts indicates that learners who are developing their information literacy recognize that scholarship is a conversation, and they are engaging in this conversation through their academic work. Students who exhibited a learning orientation to a research assignment indicated an awareness of discourses related to their topic to which they were intending to respond or contribute. For example, Cheyenne alluded to the conversations that were unfolding in the local media and in her community about the sentencing

of a juvenile perpetrator of school violence. Cheyenne shared, "I think that's kind of what made me want to focus on that. At the time…. I had one opinion on it, and I wanted him to go to adult facilities and all that kind of stuff." She sought to use the research assignment in her rhetoric and public policy course to engage in and contribute to the discourse in her community and in the media about this incident. Likewise, Malik identified the discourse about gentrification in Black popular culture, pointing to its presence in the popular film *Boyz n the Hood*. He shared,

> There was a scene in that movie where Furious Styles explains to everyone in Compton, California, the effects of gentrification and how it was affecting their area in Long Beach or Compton or wherever they live. He was explaining to them how the property value would increase as they moved more of the black people out by putting a gun store and a liquor store on each corner of the neighborhood and have the blacks kill themselves or make themselves even poorer just so that they can get moved out of the area and then watch their home value increase.

Here Malik demonstrated an interest in combining his lived experience with gentrification and the discourse found in Black popular culture to educate his peers at the predominantly white Manchester campus about this issue. These examples reveal that students who exhibited a learning orientation to research assignments demonstrated an awareness that their research was not happening in a vacuum. They identified relevant and specific sources of the discourse, particularly in the media or in popular culture, and exhibited a desire to engage with the discourse through their research assignments.

The *Framework* also posits that learners who are developing their information literacy approach research as inquiry and apply appropriate investigative methods to explore research questions. Laila and Gabrielle are representative of students who viewed research assignments as

opportunities to probe their observations or lived experiences using the theories or methods that they were learning in their courses. For example, Laila demonstrated this quite explicitly when she described the observations she was making about her peers' behavior in the student-athlete study halls during her first year of college, stating that she wondered "Ok, what's going on here?" Laila recognized an opportunity to use the research methods she was learning in her honors sociology course to make a connection between what she was learning in her courses and her broader social environment. As the *Framework* notes, learners who are developing their information literacy "seek multiple perspectives during information gathering and assessment," and, in turn, they continue to ask questions when they receive conflicting information. Gabrielle, for example, makes gathering multiple perspectives on her topic a priority in her capstone project related to racism. Gabrielle explained,

> I was just like, maybe I should just go around and ask people, not a big group like that, but actually ask questions and then see what they know, and then see if they know stuff that they can give back to me…. I wanted to make sure that I had an equal amount of color in the room. I wanted people that was Puerto Rican. I wanted people that was White. I wanted people that was Black. I wanted people that was Asian because I wanted to see exactly how they interacted and how they felt about answering those questions.

Gabrielle implies that speaking to other people about racism was not enough to develop her own understanding of the topic; rather, it was critical for her own learning to engage students of varying races and ethnicities who may share multiple and differing perspectives on this topic. Students who exhibited a learning orientation to a research assignment, such as Laila and Gabrielle, were intrinsically motivated to learn about their topics, which helped them to

investigate their observations and lived experiences and intentionally seek multiple perspectives on their topics.

Finally, some of these students indicated that they considered the contextual nature of authority when evaluating and selecting information sources to use in their research assignments. Despite scholarly or peer-reviewed journal articles being the gold standard for sources in college, these students did not rely solely on that category of information sources to determine whose voices needed to be incorporated into their research and moved beyond a checklist approach to gathering appropriate information sources. For example, Jasmine prioritized interviews with people who were witnessing the school-to-prison pipeline in her hometown first-hand to get a more complete picture of her topic. She shared, "[A news article] was also factual…. It was just telling you what happened and what's going on, but…I wasn't trying to get a biased opinion from other people [the news sources]." Jasmine recognized that news sources typically convey factual information, but that factual information may only present one side of the story. However, she recognized the authority and credibility of first-hand witnesses. Malik's discussion of the film *Boyz n the Hood* is also indicative of the recognition of contextual authority. Malik attributed authority to the film, because he believed it demonstrated how salient gentrification is to predominantly Black urban communities. While these students incorporated sources that are traditionally considered authoritative into their research assignments, they also spoke about leveraging sources that were closer to the communities affected by the topics they were exploring.

4.4.3 Perceived reinforcement of the checklist approach

In general, the ways in which students described their experiences with research assignments in college, regardless of the orientation they exhibited toward an assignment, suggest that they did not perceive that the development of more sophisticated modes of thinking related to information-seeking and use was important to participate successfully in the undergraduate academic community. This can be inferred from the descriptions of feedback they received from professors. Many students perceived the emphasis to be on their writing skills, including both grammar and style. For example, when asked about feedback he received on one of his first research assignments in college, James reflected, "I guess he checked a lot of my grammar and punctuation stuff, but he didn't really go through sources and stuff like that. That was all okay to him." Brooke shared a similar experience in her intermediate composition course, saying,

> I think mostly it was grammar and spelling, and then I know she focused a lot on using different types of sentence structure. She would try to get us to change our sentences so we weren't using all the same. I don't think [sources] was really a big thing.

When students did receive feedback on their sources, particularly written feedback, they reported it was mostly related to correcting errors in their citations, not necessarily about the sources themselves. In general, the fact that students perceived that the written feedback they received from their professors emphasized writing skills, rather than their ability to find and select the best information sources for the context and their topic, suggested that they did not need to further develop critical thinking or analytical skills in this area.

However, a couple of students did describe one-on-one conversations about the importance of sources for the research assignment. Dylan's intermediate college composition professor wanted him to find more "reliable" sources for the paper he was writing.

> A couple of ‘em, she was like, “Oh, this isn’t really a reliable source, so cut the things you found from it.” Well, you can keep ‘em, but you have to find ‘em in a different article, type of deal, and find a better source.

Dylan explained that his professor wanted him to use reputable news sites rather than sources like Wikipedia, on which “anyone can post anything.” Even if Dylan’s professor was attempting to help him develop or refine his critical thinking skills, Dylan interpreted this feedback using a performance orientation, stating that he need to either “cut the things you found from it” or “find ‘em in a different article. This feedback did help Dylan to refine his understanding of expectations for performance, but it did not seem to push Dylan’s information-seeking and use behaviors beyond the checklist approach. Victoria had a similar interaction with her intermediate college composition professor, and she was able to articulate a more sophisticated understanding of the role sources could play in strengthening her argument. In addition, her professor encouraged her to place her argument within a larger discourse about gender and the young adult fiction industry.

> She told me to talk about how many figures they made… or how many books they sold. J.K. Rowling was rejected from several publishers because they didn’t believe that a woman could write Harry Potter. S.E. Hinton was told by her own publisher that, “Hey, you know that girls aren’t supposed to write fiction like this, right?” She published under her initials, and essentially launched the young adult fiction industry into what it is now. I needed to say that, but in order to get the point across properly, I had to state why is this important. It’s because J.K. Rowling ended up selling how many books, and became the first author to become a billionaire. S.E. Hinton launched an entire industry, and they

were told that they couldn't do it. I had to find an outside source to actually have that information there.

Even though she was focusing on a particular young adult fiction author, her professor encouraged her to find sources that would allow her to demonstrate a pattern of sexism in the industry that was larger than this single incident. Victoria's professor was not only encouraging her to find information sources that would strengthen her argument; she was also helping Victoria to develop her scholarly voice by placing her work within a larger context. These were the only two conversations that students described in which faculty gave specific feedback about the appropriateness of information sources.

In addition to the lack of emphasis on the relationship between critical thinking and information-seeking and use behaviors, several students reported that faculty often gave them sources to use, especially as they moved toward or were working on their capstone projects. For example, Brooke said,

> I think [my capstone professor] gave me one or two, and then he told me specific keywords to look up in the databases. I found 25 of them. I think we have to have 25 resources for our Capstone paper. I have over that. I found those all on my own.

In Brooke's case and others, faculty provided students with an example of what kinds of sources they need to find, as well as how to start searching for additional sources. In other cases, students reported that faculty gave them sources that they thought would be helpful. Elizabeth said, "He would always just email and be like, 'Hey look. Actually, I found this source. It might be better than the one from blah, blah, blah. Here, try to see if you like this one more.'" Elizabeth said that she found this "helpful," because it "helped clarify what he expected out of my research." On the one hand, this is a form of academic socialization, as it is normal for scholars to share sources

with their colleagues or their advisees. In addition, students viewed this as a form of support and as an investment in their success. For example, Cheyenne said she found this practice helpful, because it helped her locate sources she might not have otherwise. Nonetheless, the practice deprives students of an opportunity to think strategically about the kinds of information they need for their assignments, where to find that information, and how to evaluate the information they are finding for relevance and reliability.

4.5 CONCLUSION

The data suggests that students' perceptions of their positionality in the community as new members played an important role in how students felt about research assignments and engaged with their professors when they first arrived at college. Students who felt they were insiders within their new community were more successful in applying the skills and strategies they developed in high school, were more confident in their abilities, were less hesitant to reach out to professors for help, and described a smoother transition to college and to college-level research assignments. Students who felt peripheral shared relatively negative feelings, both in general and in terms of research assignments, and were less likely to reach out to and interact with their professors when they first arrived at college. However, required supportive interactions with faculty and entry into the major demonstrated to the students who felt peripheral that faculty are invested in their success and want to help students to succeed. When given the opportunity to do so, students chose topics for research assignments that drew on their identities, prior knowledge, lived experiences, and interests either to stay engaged and motivated or because they were intrinsically motivated to learn more about that topic.

Many of the participants in this study did not articulate the development of more sophisticated critical thinking and analytical skills related to information over the course of their collegiate careers. In general, many students reported using a checklist approach to information evaluation that they relied on in high school and modified that checklist to meet the expectations for information evaluation in college. Overall, this suggests a performance orientation to research assignments, in which students are simply trying to meet both the requirements of the assignment and professors' expectations rather than developing a particular skill set. However, students who exhibited a learning orientation to a research assignment, most of whom had extra-minoritized identities, did articulate some of the modes of thinking and behaviors related to information literacy at a basic level. These findings are significant because a product-driven approach to finding information, as opposed to a process-driven approach, may have implications for students' post-college lives in that they may not have developed a transferrable process related to information use that can be employed in multiple contexts regardless of the specific product.

5.0 IMPLICATIONS AND CONCLUSION

The purpose of this study was to explore first-generation college students' academic transitions into and within college through their experiences with research assignments. While the nature of research assignments varies from discipline to discipline, research assignments are a common undergraduate academic experience (Head & Eisenberg, 2009). Because of their ubiquity and their connection with students' academic outcomes, an exploration of first-generation students' experiences was warranted given the existing social-class achievement gap in higher education (Stephens et al., 2014). Prior to this study, relatively little was known about first-generation students' experiences with specific academic practices, such as research assignments, and how these experiences may contribute to the achievement gap. In this study, I begin to fill this gap by exploring first-generation students' experiences with a common academic practice and discuss the potential implications of those findings relative to the social-class achievement gap.

The conceptual framework developed for this study brought together a unique combination of theories, which provided a foundation for exploring students' entry into and engagement with academic culture and the values and expectations of which may remain tacit for students who do not come from middle-class or upper middle-class backgrounds (Burke, 2012; Delpit, 1988; Lareau, 2011). Using hermeneutic phenomenology (van Manen, 1990), I explored what it was like for first-generation students to experience research assignments throughout their college careers through semi-structured interviews with 30 first-generation students who were in

their third, fourth, or fifth years of study at two regional campuses of a large research university. In this chapter, I discuss the major findings of the study and their contribution to what we know about first-generation students' academic engagement, as well as share recommendations for practice and further research.

5.1 MAJOR FINDINGS AND IMPLICATIONS

5.1.1 Strategies for determining expectations

The findings suggest that the first-generation participants employed two different strategies for determining expectations for performance—a social approach and an individual approach. These strategies may have a relationship with how students positioned themselves within the undergraduate academic community when they first arrived at college. Students who initially positioned themselves as insiders in the community appeared to be more likely to interact with their professors to fill knowledge gaps, receive clarification on assignments, and to begin developing relationships, thus emphasizing the social nature of situated learning (Lave & Wenger, 1991). Students who perceived their peripherality, however, appeared to be less likely to initiate interactions with their professors and did not begin to proactively build their academic support networks until they entered their college major(s), thus emphasizing the individual nature of situated learning (Lave & Wenger, 1991). The latter finding is consistent with previous research about first-generation students' academic engagement strategies; however, the presence of the social approach challenges the findings of previous research (see Collier & Morgan, 2008; Yee, 2016), which suggests that first-generation students primarily rely upon the individual

approach. In addition, these findings provide a more nuanced understanding of first-generation students' academic engagement strategies than previous research, which has typically sought to understand these students' strategies in comparison to continuing-generation students (see Collier & Morgan, 2008; Soria & Stebleton, 2012; Stebleton & Soria, 2012; Yee, 2016). Findings of these past studies generally indicated that first-generation students behave one way and continuing-generation students behave in a different, typically more desirable, way. At best, this continued emphasis on comparison has resulted in a superficial understanding of first-generation students' academic engagement strategies. At worst, this comparative emphasis has resulted in an inaccurate, monolithic understanding of this diverse student population and has established the continuing-generation students' behaviors and experiences as normative and the lens through which first-generation students' behaviors and experiences should be understood. For example, the relationship between participants' approaches to determining expectations and their perceived positionality suggests that the ways in which first-generation students engage in the academic domain is likely more complex than previous research has indicated.

In addition, the findings indicate that most participants exhibited a social approach as they transitioned into their major field(s) of study and moved toward full participation, regardless of their initial approach. This suggests that first-generation students' engagement strategies may be dynamic, changing or evolving as they become more established within the undergraduate academic community. This finding extends what was previously known about first-generation students' academic engagement strategies as they transition within the undergraduate academic community, as first-generation students in their final years of undergraduate study have been largely neglected in research examining their engagement strategies. Previous research has focused on first-generation students' first two years of college (see Soria & Stebleton, 2012;

Stebleton & Soria, 2012; Terenzini et al., 1996; Yee, 2016), resulting in an inadequate understanding of first-generation students' engagement strategies as they transition to upper-level courses within their major field(s) of study and the longer-term implications of these initial approaches to academic engagement. In the current study, only participants who relied on a social approach when they first arrived at college seemed to have access to opportunities for mentorship (Crisp & Cruz, 2009) and higher levels of achievement, particularly related to their capstone experience, which is consistent with existing research (Fuentes et al., 2014) about the implications of early faculty interactions for mentorship. Although these mentoring experiences were evident only in a small portion of the overall sample, it is notable that these kinds of opportunities were not evident in the experiences shared by students who relied on an individual approach when they first arrived at college. By focusing on the reflections on both the transition into and within college, the findings have uncovered both the shift in engagement strategies and the longer-term implications for students' initial engagement strategies.

5.1.2 Approaches to research assignments

The participants in this study indicated that they often turned to their identities, lived experiences, prior knowledge, and interests to select topics for their research assignments when given the opportunity to do so. This finding suggests that research assignments could serve as opportunities for students to integrate their lived experiences, prior knowledge, and identities—their funds of knowledge (Moll, Amanti, Neff, & González, 1992)—into their academic work and may serve as academic engagement opportunities. This is noteworthy, as the incorporation of students' funds of knowledge provides students with the opportunity to leverage their lived experiences and identities into knowledge construction, transferring learning from one context to

another, and academic success (Eodice, Geller, & Lerner, 2017; Kiyama, Rios-Aguilar, & Deil-Amen, 2017), meaning that research assignments that encourage students to draw upon their funds of knowledge may have positive implications for narrowing the social-class achievement gap.

Students' motivation to incorporate their funds of knowledge into their research assignments was not uniform; this strategy had two manifestations—a performance orientation or a learning orientation. Although students reported using both of these strategies successfully, the orientation a student exhibited seemed to be related to the ways in which they described finding, evaluating, and using information in that assignment, regardless of their class standing. Students who exhibited a performance orientation to their assignment mostly described a checklist approach to finding, evaluating, and using information, whereas some of the dispositions and knowledge practices related to information literacy were present in the reflections of students who exhibited a learning orientation. This finding suggests that a student's goal orientation (Dweck, 1999) may be important in students' development and demonstration of the dispositions and knowledge practices related to information literacy. In general, students who subscribe to a performance goal orientation focus on demonstrating competence and achieving a particular grade, and students with a mastery goal orientation emphasize the development of competence through learning (Dweck, 1999; O'Keefe, Ben-Eliyahu, & Linnenbrink-Garcia, 2013). Based on the findings of the current study, a performance goal orientation may allow students to be successful on research assignments (i.e. receiving a passing or acceptable grade), but it does not seem to allow for or encourage the development of more sophisticated information literacy skills as outlined in *The Framework for Information Literacy for Higher Education* (Association of College & Research Libraries, 2015). Given that previous research

indicates that students who reach out for help with finding, evaluating, and using information for their research assignments often do so with a performance goal orientation in mind (Folk, Safin, & Williford, 2017), this finding might suggest that a performance orientation to research assignments may be more common than a mastery orientation.

The findings of this study indicate that faculty may be reinforcing and rewarding these strategies. Students rarely reported receiving feedback on their information sources and how their sources were being integrated in the assignment. In addition, some students reported receiving information sources directly from their professors, even as they were working on more rigorous research assignments in research methods and capstone courses. Although students perceived the latter to be an indication of support, with both of these practices faculty may be signaling that critical engagement with the information sources students are using in their assignments neither is necessary nor desired. This is consistent with previous research related to the development of critical thinking, research, reading, and writing skills in college (Arum & Roksa, 2011; Lea & Street, 1998, 2006; Manarin, Carey, Rathburn, Ryland, & Hutchings, 2015). The ways in which instructors communicate and reward these behaviors, or their failure to do so, likely have implications for the strategies that students apply to successfully completing their research assignments. Because of this, students may not perceive the development of dispositions and knowledge practices associated with information literacy as being important for their success and instructors may not be effectively communicating the expectation that students develop and apply the critical, reflective, and analytical modes of thinking related to information literacy (Valentine, 2001).

A particularly noteworthy finding is that participants of color in this study more directly drew upon their funds of knowledge, exhibit a learning orientation to research assignments, and

describe the dispositions and knowledge practices related to information literacy, regardless of their initial positionality within the undergraduate academic community. This is noteworthy because past research indicates that first-generation students of color, in particular, may feel alienated or isolated within the undergraduate academic community (Jehangir, 2010), because their own experiences and identities are not present nor valued in their academic work. In addition, students of color are often approached through a deficit lens, meaning that they must somehow be remediated to be successful in academic culture (Bensimon, 2005). The finding that students of color were more likely to describe the complex modes of thinking related to information literacy suggests that this student population has unrecognized strengths that they bring to their collegiate academic experience, which is consistent with the findings of existing research (Carpenter & Peña, 2017; Castillo-Montoya, 2017). This finding lends further support to existing research in this area, suggesting that the first-generation students of color may be more advanced in developing and demonstrating the critical, reflective, and analytical modes of thinking related to information, and provides a potential practical opportunity for institutions and instructors to surface and develop these unrecognized strengths through carefully designed research assignments.

A glaring omission from participants' reflections on their experiences with research assignments, regardless of their orientation to a particular assignment, was a discussion of an information source's relevance to their research question, argument, or thesis statement. This suggests that students do not perceive the application of critical or close reading skills to be important for doing research and completing research assignments (Marain et al., 2015). Students' potential avoidance of critical reading is not surprising, as reading critically is cognitively demanding (Broussard, 2017, p.2). It requires the reader to go beyond skimming an

information source and grapple with the evidence, interpretations, and arguments being made in relationship to their goals for research and writing. In addition, students may be unprepared to read scholarly or technical texts on topics with which they have little familiarity (Broussard, 2017). One may expect students who drew upon their funds of knowledge to select a topic, particularly those who exhibited a learning orientation, to discuss the ways in which they used sources to support their investigations or arguments, but this was only present in the reflection of a single participant. Regardless of their orientation to a research assignment, if students have not been taught critical or close reading skills as an essential component of successful research and writing, and if faculty are reinforcing a check-list approach to information use, then students may not perceive these skills as being important to successfully completing research assignments in college.

5.1.3 The purpose of research assignments in college

In past research, students' reflections on the purpose of research assignments have been absent despite the ubiquity of these assignments in the undergraduate academic experience. Roughly half of the participants believed that non-capstone research assignments were intended to prepare them for their research assignments in upper-level courses, including their capstone experience, which suggests that these students perceived non-capstone research assignments as situated learning (Lave & Wenger, 1991) experiences within the undergraduate academic community of practice. However, students' situated learning experiences were different depending on how they initially positioned themselves within the undergraduate academic community. Students who positioned themselves as insiders were able to apply the skills and strategies they developed in high school to be successful and felt comfortable reaching out for support, but students who

initially perceived their peripherality in the community learned about the expectations and accepted conventions for research assignments through a trial-and-error process and relied on feedback and required interactions with professors to gain information related to expectations for performance. The process of learning about the community's core values and how those values should be applied to or incorporated into research assignments seemed to be a slower process for the students who initially perceived their peripherality.

In general, participants perceived that the capstone experience was intended to be a demonstration of what they had learned in college, as well as an opportunity to develop or deepen skills they would need in their post-college lives. Both of these perceived purposes are consistent with Keup's (2013) argument that the capstone experience is "the last chance [for faculty] to instill the competencies that the institution hopes [the students] achieve." Lave and Wenger (1991) do not elaborate on the nature of full participation; however, based on their discussion of the process leading to membership in a community, I argue full participation is achieved when a participant perceives their membership in the community and other established members accept and validate the newer participant's membership. The perception that the capstone experience is intended to validate students' demonstration of what they learned throughout college suggests that the participants perceived the successful completion of a capstone project as an indication that they had achieved full participation in the community. In addition, findings indicate the importance of the major for helping students to develop relationships with their faculty, and the students who were working on or had completed their capstone projects indicated a high level of interactivity with their professors, which they seemed to perceive as an investment in the students' success and membership in the major. The movement from supportive interactions to the development of supportive relationships with

faculty seems to help all students, regardless of their initial positionality, perceive themselves as full participants within the undergraduate academic community.

5.2 MAJOR FINDINGS AND THE CONCEPTUAL FRAMEWORK

In general, the findings suggest the conceptual and theoretical foundations underpinning the conceptual framework presented in chapter two are appropriate for exploring first-generation students' experiences transitioning into and within the undergraduate academic community. The use of the community of practice concept as a heuristic provided a foundation for exploring how first-generation students transition into and within the undergraduate community of practice, which has resulted in a more nuanced understanding of their academic engagement strategies throughout college. In addition, the inclusion of both the academic curriculum and accumulated social capital aided the exploration of research assignments as sites of situated learning, including the ways in which students gain information about expectations for performance in the community. However, the findings suggest that the relationship between full participation in the community and the core values contained within the community's *habitus* may not be as clearly defined as initially suggested. In this section, I discuss the findings as they relate to the elements of the proposed conceptual framework.

5.3 THE REVISED CONCEPTUAL FRAMEWORK

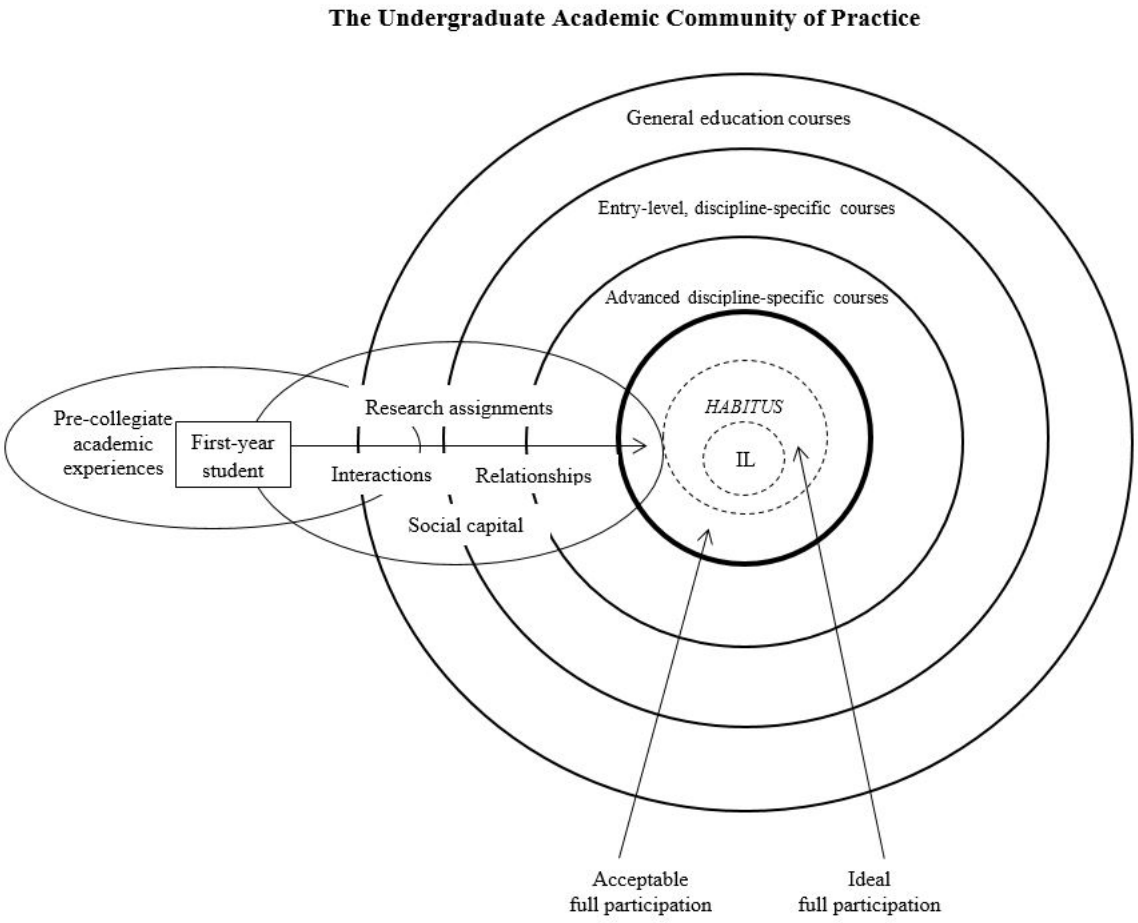

Figure 3. Revised Diagram of Theoretical and Conceptual Frames

The findings of the study provide a more complex and nuanced understanding of the role of social capital within first-generation students' experiences transitioning into and within the undergraduate academic community. In the initial conceptual framework, I implicitly defined the social capital that students brought with them from high school to college as positive relationships they developed with their high school teachers. However, most students reported developing positive relationships with their high school teachers, and this did not seem to influence students' overall transition experiences or how they initially perceived their initial

positionality in the undergraduate academic community. The findings indicate that the "college knowledge" students derive from these relationships and their pre-college academic experiences, as well as students' success in transferring and applying that knowledge in the undergraduate academic community, are important to how students perceive their initial positionality in the community. This suggests that accumulated pre-college social capital may play an indirect role in students' transition experiences. Although the findings of this study provide a more nuanced understanding of the role of accumulated pre-college social capital, they cannot provide definitive understanding of its relationship to first-generation students' experiences transitioning into the undergraduate academic community and should be considered in future research. In the revised framework, students' pre-college academic experiences and accumulated social capital intersect with students' entry into the undergraduate academic community, because participants' reflections indicate that students bring these both to bear on their engagement with courses, assignments, and faculty early in their collegiate careers.

The findings also provide a more nuanced understanding of the accumulation of social capital within the undergraduate academic community, in that this accumulation may have a relationship with students' perceived positionality when they enter the community and as they transition within the academic curriculum. The applicability of the college knowledge derived through pre-college social capital seems to be related to students' accumulation of social capital in college, a relationship which appears to be mediated by students' initial perceived positionality in the community. Students who successfully transferred and applied the college knowledge they gained in high school were more likely to position themselves as insiders in the new community and quickly began developing an academic support network. In addition, the findings suggest that the academic curriculum not only serves as a mechanism to introduce

students to a community's cultural values, it also is a mechanism by which students develop "institutionalized relationships of mutual acquaintance" (Bourdieu, 1986, p. 248) and accumulate social capital within the undergraduate academic community. Students' entry into their college major(s) seemed to indicate a shift from supportive interactions, which could either be voluntary or required, to the development of relationships with faculty. In addition, research assignments, as sites of situated learning, throughout the academic curriculum, presented opportunities for students to accumulate social capital through voluntary or required supportive interactions with faculty about their academic performance. In the revised diagram, I demonstrate the shift from interactions to relationships with faculty through experiences with research assignments, the accumulation of social capital, and movement from lower-level courses to upper-level courses in the college major.

In the initial diagram of the undergraduate academic community, the *habitus* was a single layer that included the core academic literacies valued in the community that students needed to develop and demonstrate in their work to reach full participation. The findings indicate that the relationship between full participation in the community and the core values contained within the community's *habitus* may not be as clearly defined as initially suggested. Lave and Wenger (1991) do not elaborate on the nature of full participation; however, based on their discussion of the process leading to full participation in a community, I implicitly surmised that full participation was achieved when peripheral participants incorporate the community's core values (embodied in the *habitus* of the community) into their participation in the community and established members validate the newer participants' membership. However, the findings suggest that peripheral participants may not have to incorporate the community's core values in their participation to be accepted as full participants. Because of this, the revised diagram

includes two layers of full participation. The outer layer, acceptable full participation, indicates that students may not have completely developed and incorporated the academic literacies contained within the community's *habitus* into their participation. A student who successfully completed their capstone experience by relying on a checklist approach to finding, evaluating, and using information is representative of acceptable full participation. Ideal full participation, however, resides fully in the *habitus* of the community. The permeable boundary between acceptable and ideal full participation indicates that students may demonstrate the academic literacies within the community's *habitus* in their participation; however, the demonstration of these literacies may not be consistent and it may not manifest in their capstone experience. Faculty and other institutional agents, such as administrators or librarians, may have idealized expectations for the characteristics and dispositions that students develop throughout their collegiate experiences. However, the findings of this study suggest that, in practical terms, students do not necessarily achieve the ideal before becoming full participants in the community and "good enough" or acceptable may suffice.

A students' goal orientation to situated learning experiences (i.e. research assignments) and their ability to draw upon their funds of knowledge are not adequately accounted for in this revised framework. A student's goal orientation to a research assignment, which may have a relationship to the incorporation of a students' funds of knowledge, seemed to be important for both the development and demonstration of the dispositions and knowledge practices associated with information literacy, which is contained within the community's *habitus*. This may be critically important for students with extra-minoritized identities, who may feel that they are navigating two distinct cultures—their home culture and academic culture (Jehangir, 2010). However, students' goal orientations were inconsistent across research assignments and goal

orientation appears to be highly dependent on the particular assignment. Nor was goal orientation associated with students' progression toward full participation, as participants could demonstrate a mastery goal orientation for an assignment in their first year of college and a performance goal orientation for their capstone experience. Despite its apparent relationship with the demonstration of the academic literacies in the community's *habitus*, the irregular and inconsistent application of goal orientations throughout a student's college academic experience makes it difficult to adequately represent in the revised conceptual framework.

5.4 RECOMMENDATIONS FOR PRACTICE

5.4.1 Academic engagement

The findings challenge the underlying assumption of this study that academic research assignments may serve as sites of academic isolation or alienation, as many participants reported experiences in which they were able to incorporate their funds of knowledge into research assignments throughout their collegiate careers. Institutions should reevaluate the role that required general education courses, such as college composition courses, could play in engaging first-generation students and other minoritized student populations through the explicit incorporation of students' funds of knowledge in assignments (Jehangir, 2010). Although each student's curricular experience is unique, general education courses, particularly college composition courses, tend to target students in their first two years of collegiate study. Research indicates that first-generation students are less likely to be retained after their first (Engle & Tinto, 2008) and second (Ishitani, 2006) years of college, so early opportunities for academic

engagement is critical for persistence through degree completion and closing the social-class achievement gap.

This recommendation is consistent with previous research which suggests that the incorporation of students' funds of knowledge into their academic assignments may have positive implications for students' engagement and learning. For example, the Meaningful Writing Project study (Eodice, Geller, & Lerner, 2016) found that students identified writing projects as meaningful when they had the opportunity to incorporate their interests and identities, and these meaningful projects reportedly helped students to develop their agency, to engage with faculty and peers, and make connections between their personal and academic lives. This was true regardless of how academically prepared a student felt in general or specifically related to research assignments, which suggests that students who feel peripheral and students who feel like insiders could benefit from this approach. First-generation students may feel like they are straddling and balancing two different cultures—their home culture and academic culture (Elmborg, 2006b, Jehangir, 2010). Research assignments that allow students to bring their identities, communities, interests, or lived experiences—their funds of knowledge—to bear can help first-generation students to combine what may feel like two separate identities.

Although the importance of supportive interactions between students and faculty and/or academic support staff has been well-documented (e.g. Fuentes et al., 2014) and has been integrated into various student success models (e.g. Tinto, 1993; Weidman, 1989), neither the higher education nor LIS literature have directly considered research assignments in required general education courses as opportunities to foster these kinds of interactions. In addition to a programmatic funds-of-knowledge approach to assignments in required composition or writing courses, instructors should consider requiring students to interact with faculty or

learning/academic support staff (i.e. librarians, writing center staff) as they work on research assignments. Research assignments can typically be scaffolded as students make progress toward the final product, thus providing multiple opportunities for supportive and formative interactions related to students' performance and learning. The participants in the current study often had difficulty recalling specific written feedback that they had been given related to research assignments, even for recent assignments. However, they could share details about face-to-face conversations they had with their faculty and often spoke positively about these interactions, even when they pertained to a negative event, such as accusations of plagiarism. Based on these findings, institutions should consider requiring early interactions with faculty and learning support staff as students work on research assignments, particularly in required general education courses. Consistent with other research on academic socialization, the findings of the current study suggest that these interactions may have a particularly strong effect on students who may be struggling with their transition into the community and are slower in building their academic support network.

Routine academic assignments, which have the ability to reach a larger student population than special programs, have been overlooked as a potential tool for academic engagement in service of retention and persistence, as indicated by their absence from the academic engagement and student success literature. Instead, many colleges and universities facilitate the transition of first-generation students, as well as other minoritized student populations, into the undergraduate community and promote engagement through special programs or initiatives, such as summer bridge programs or learning communities (i.e. Jehangir, 2010). While there may be positive outcomes for students who participate in these kinds of programs, research suggests mixed results with regard to their longer-term benefits (e.g. Barnett,

Bork, Mayer, Pretlow, Wathington, & Weiss, 2012; Cabrera, Miner, & Milem, 2013; Walpole, Simmerman, Mack, Mills, Scales, & Albano, 2008). In addition, these programs and initiatives can be expensive, and their cost(s) may limit the number of students who can participate or be prohibitive to implement altogether. Students may not identify with the first-generation label (Wildhagen, 2015) and may not see these as opportunities intended for them. Students must choose to participate in these programs, so students who are more likely to be engaged may be the students who are self-selecting to participate and students who could benefit the most may not choose to participate. Finally, past research has shown that first-generation students are more likely to have a number of factors that may prevent them from participating, such as being enrolled part-time, working full-time, living off campus, or being the head of a household or a care giver (Engle & Tinto, 2008; Jehangir, 2010; Terenzini, Cabrera, & Bernal, 2001). I am not suggesting that special programming or initiatives targeting first-generation students be abandoned; instead, I am recommending that institutions leverage the findings of the current study and consider the ways in which the general education curriculum, in particular, can be revised in service of academic engagement for minoritized student populations.

5.4.2 Reframing composition and writing courses

Based on the finding that students primarily focus on a checklist approach to evaluating and using information and that faculty may be rewarding this approach, institutions should consider reframing required writing or composition courses as inquiry courses, in which developing information literacy, critical reading, and writing skills are equally emphasized. These courses typically intend to introduce students to the accepted academic conventions for research and writing in college and give students practice with developing research questions, finding and

evaluating information, and writing prior to entry into the college major. However, participants in the study perceived the primary emphasis to be on writing, receiving less feedback and guidance from their instructors related to research. In addition, the findings suggest that the participants either lacked critical or close reading skills or did not perceive these skills to be essential to research and writing, which may have constrained their development of the critical, analytical, and reflective modes of thinking associated with information literacy. This recommendation is consistent with Arum and Roksa's (2011) finding that the first two years of a student's collegiate experience is foundational for developing critical thinking skills.

Ideally these inquiry courses would be co-taught by instructors with expertise in information literacy, critical reading, and writing, but that likely is not feasible for many campuses given resource constraints. Rather, institutions should consider a collaborative redesign of required writing or composition courses at the program level, in which expertise in these three areas is present. Course objectives should explicitly cover information literacy, critical reading, and writing, drawing upon relevant frameworks, such as The Framework for Information Literacy for Higher Education and the Framework for Success in Postsecondary Writing, and students should be given regular oral and written feedback on their development within each of these three areas. All three of these essential competency areas extend beyond discrete skills or behaviors and require students to develop complex, critical, and reflective modes of thinking, which can be difficult to both teach and assess. This may also require a reconsideration of the traditional research or term paper that these courses typically require with a new emphasis on the process that leads to a completed research paper, rather than performance on the final product.

The development of a foundational inquiry course, one that emphasizes relatively equally the development of information literacy, critical reading, and writing skills, also provides institutions with the opportunity to develop related learning objectives that extend beyond the general education curriculum into a student's college major. Critical modes of thinking related to information literacy, critical reading, and writing cannot be mastered through one or two semester-long courses early in a student's college career; these skills needs to be nurtured, practiced, and refined in more advanced, discipline-specific contexts. Depending on both the institution and a department's requirements, students may or may not have to take additional research- or writing-intensive courses prior to completing a culminating research experience, and students may experience a gap between their foundational course and the culminating research experience. If institutions require departments to consider a road map for explicitly and intentionally nurturing the development of students' information literacy, critical reading, and writing skills, then students may perceive their importance to their success in college. Institutions may want to consider incentivizing the development and assessment of learning outcomes in these three competency areas at the departmental level in collaboration with librarians, writing center and writing across the curriculum staff, educational developers, and learning specialists.

5.4.3 Building metacognition into the curriculum

Institutions must offer, and potentially incentivize, opportunities for professional development for faculty related to teaching information literacy, critical reading, and writing skills, as well as the intentional development of students' metacognitive abilities. The findings of this study and previous research (Folk et al., 2017) suggest that many students emphasize performance on the final product rather than mastering the process that produces the final product. Some of the

participants in this study were able to articulate the ways in which they have grown, but participants did not provide evidence that this kind of reflection on learning and modes of thinking had been integrated into their coursework, even in capstone courses. Faculty may assume that students' have developed these competencies in high school or in other courses, or they may feel ill-equipped to tackle the transdisciplinary competencies within their courses (Saunders, 2012). Professional development programming based on the Decoding the Disciplines model (Pace & Middendorf, 2004), which is applicable to a range of disciplines, might provide instructors with structured opportunities to critically and reflectively interrogate how they communicate, model, and reward expectations for learning and mastering competencies both within and beyond their course(s). Faculty cannot motivate a student to exhibit a learning orientation to assignment; however, faculty can build structures that reward critical and reflective thinking in the process that leads to a final product.

5.5 RECOMMENDATIONS FOR FURTHER RESEARCH

5.5.1 First-generation students and academic engagement

First-generation students' identities are complex and intersectional (Engle & Tinto, 2008; Jehangir, 2010; Terenzini, Cabrera, & Bernal, 2001), and much of the existing research has not acknowledged the complexities of this student population in terms of academic engagement. Previous research about first-generation students' academic outcomes and engagement has primarily focused on comparing first-generation students to their continuing-generation peers (see Collier & Morgan, 2008; Soria & Stebleton, 2012; Stebleton & Soria, 2012; Yee, 2016),

which has resulted in a monolithic portrait of first-generation students that repeatedly focuses on their academic weaknesses rather than surfacing the strengths they bring with them to their collegiate academic work. Future research must recognize that the value in exploring first-generation students' academic experiences and outcomes does not reside solely in comparing them to continuing-generation students. The findings of the current study challenge the findings of previous comparative studies, which have indicated that first-generation students largely exhibit an individual approach to joining their new academic community. These findings advance our understanding of first-generation students' academic engagement strategies as they transition into and within college, demonstrating that there is within-group variation in term of their academic engagement strategies and the implications of these strategies for the academic experiences as they move toward degree community. In addition, by placing the focus solely on first-generation students, the findings of this study reveal strengths that students bring with them to college—their funds of knowledge—which is consistent with an emerging line of research focusing on minoritized students' strengths rather than their weaknesses (Carpenter & Peña, 2017; Castillo-Montoya, 2017; Jehangir, 2010; Kiyama & Rios-Aguilar, 2017).

Future research must also give as much attention to first-generation students' academic experiences as they approach degree completion, rather than focusing solely on their academic experiences within the first two years of college (see Soria & Stebleton, 2012; Stebleton & Soria, 2012; Terenzini et al., 1996; Yee, 2016). Previous research indicates that first-generation students' first two years of college are indeed critical for persistence through degree completion (Engle & Tinto, 2008; Ishitani, 2006); however, little is known about how academic experiences in the first two years shape experiences in first-generation students' final years of study. The findings of the current study suggest there may be implications for access to mentoring (Crisp &

Cruz, 2009) related to the academic engagement strategies first-generation students employ when they transition into college (Fuentes et al., 2014). Future research needs to explore the relationship between first-generation students' initial engagement strategies and their access to opportunities for mentoring and higher levels of academic achievement.

Future research should also consider the exploration of first-generation students' experiences with sites of situated learning, such as research assignments, rather than or in addition to exploration with the academic domain more generally (e.g. Collier & Morgan, 2008; McLoughlin, 2012; White & Ali-Khan, 2013; Yee, 2016). A more narrow focus should result in a more nuanced understanding of how students engage or disengage with various aspects of the academic domain, and how that (dis)engagement may contribute to their academic outcomes. For example, the findings of the current study suggest that the way in which first-generation students perceive their positionality in the undergraduate academic community is influenced by their ability to successfully leverage the academic skills and strategies they developed in high school, both in general and specifically in terms of research assignments. By focusing narrowly on research assignments, the participants in this study were able to share detailed reflections about their experiences with a specific and common academic experience, thus providing a better understanding of their academic engagement.

5.5.2 Information literacy research

Future research must assess the information literacy of specific student populations, particularly minoritized and underserved populations. Previous research assessing information literacy has focused on undergraduate students more broadly (e.g. Head, 2013; Head & Eisenberg, 2009, Head & Eisenberg, 2010b) thus providing no evidence for first-generation students' or other

minoritized students' information literacy and the implications of their information literacy for both the social-class and racial achievement gaps. This recommendation is consistent with Bensimon's (2005) equity cognitive frame in that faculty and other academic support staff cannot begin to narrow and close achievement gaps if the nature of these gaps is not well understood. The information literacy of minortized and underserved student populations is largely absent from LIS research and scholarship (Pawley, 2006) thus making the potential relationship between information literacy and achievement gaps invisible. If LIS practitioners and researchers are unwilling to conduct rigorous research related to the information literacy in these student populations, then these students' experiences will continue to remain invisible and we are complicit in the reproduction of achievement gaps (Bensimon, 2005). We cannot help to narrow or close achievement gaps that we consistently fail to recognize, because this lack of recognition results in complacency in our own practices.

Future research should further explore the first-generation students' and other minoritized student populations' experiences with research assignments as they transition from high school into college. Although the findings of the current study partially uncovered the role of high school research assignments in preparing first-generation students to transition academically into college, a comparative exploration of first-generation students' experiences with research assignments in high school and the early years of college was not an explicit goal. This kind of an exploration would provide a more detailed understanding of both the successes and struggles that first-generation students face when they encounter research assignments early in college, which institutions could use to better develop, deploy, or promote services that are meant to help students succeed academically. In addition, narrowly focusing on students' experiences with research assignments in high school may provide additional insight into how the academic

literacies in college are or are not communicated to students prior to enrolling in college, as well as exploring the ways in which teachers portray college professors. This kind of research would likely advance an understanding of the factors that may contribute to first-generation students' perceived initially positionality in the community, as well as their willingness to initiate interactions with faculty when they first arrive at college.

In addition, longitudinal exploration of students' experiences with research assignments as they transition within college is needed. Existing research has largely taken a snapshot approach to understand students' experiences doing research for a specific assignment (e.g. Johnson & McCracken, 2017) or asked students to reflect more generally on their research process(es) (e.g. Logan& Pickard, 2012; Pickard & Logan, 2013). In the current study, participants were asked to reflect upon their experiences with research assignments throughout college, which helped to uncover the ways in students' strategies, relationships, and information literacy did or did not evolve over time. However, this approach has its limitations to understanding this kind of an evolution, because the participants were attempting to reflectively describe a past identity rather than a current identity. In addition, threshold concept theory, on which the current conceptualization of information literacy is based, is intended to provide a foundation for understanding how students master disciplinary content and develop disciplinary expertise. Existing LIS research has not provided an adequate foundation for how undergraduate students master the information literacy threshold concepts as they enter their major field(s) of study and transition within the collegiate academic domain.

Future research should also explore the relationship between goal orientation and information literacy. An emergent finding of this study was the potential importance of a student's intrinsic motivation to learn more about a topic (i.e. goal orientation) related to their

identity or lived experience for a research assignment to the demonstration of the modes of thinking related to information literacy. This is an exciting finding, yet more research is needed to understand the potential relationship between students' goal orientations, as well as a funds-of-knowledge approach to research assignments, and the development of students' information literacy skills, particularly for minoritized students. In terms of existing LIS research, Folk (2016) hypothesized that there may be a relationship between a student's goal orientation and their information literacy development, and Flierl, Bonem, Maybee, and Fundator (2018) recently found evidence for such as relationship. In addition, this recommendation is consistent with the findings of related, non-LIS research. The Meaningful Writing Project (Eodice, Geller, & Lerner, 2017) found that assignments which allowed or encouraged students to draw on their prior knowledge and identities (i.e. funds of knowledge) were more likely to be considered meaningful, which also increased the chances that students would transfer what was learned in that assignment to other contexts. This transfer of learning is central to the development of information literacy, which is transdisciplinary in nature. Ideally students will develop their information literacy within the academic context but transfer those critical, analytical, and reflective modes of thinking to their professional, personal, and civic lives.

Finally, more research is needed to understand the relationship(s) between critical reading skills, reflection, and the development of information literacy. Others have argued that critical reading skills are essential to developing information literacy, as students are expected to engage with information sources to determine their relevance for their current information need or context (Broussard, 2017). However, the findings of this study and others (Manarin et al., 2015) suggest that students may perceive that close and critical reading are not essential for success in the undergraduate academic community and faculty may reinforce this perception. This may

have implications for the development of the critical modes of thinking related to information literacy and the frequency of the checklist approach to evaluating and using information apparent in the current study. In addition, little is known about the importance of reflection to the development of information literacy. Based on their analysis of reflective writing in an undergraduate business intelligence course, McKinney and Sen (2012) argue that reflective writing is an appropriate method to assess students' information literacy development. However, this reflective writing was summative in nature, and little is known about the potential formative value of reflection to the development of information literacy.

5.6 CONCLUSION

My purpose for conducting this study was to examine the ways in which academic culture and specific academic practices (i.e. research assignments) contribute to the social-class achievement gap (Stephens et al., 2014). Based on the findings of previous research (Collier & Morgan, 2008; Jehangir, 2010; McLoughlin, 2012; White & Ali-Khan, 2013; Yee, 2016), I assumed that research assignments may be alienating experiences for first-generation students. However, the findings of the present study challenge that assumption. Previous research did not consistently account for the complex and intersectional identities of first-generation students. The findings of the current study challenge the practice of continually comparing marginalized student populations (i.e. first-generation students, low-income students, students of color) to students whose identities align more with the upper-middle-class, white, patriarchal, heteronormative cultures, which have traditionally been privileged in higher education. This continued focus on comparison has resulted in a monolithic understanding of first-generation students' academic

engagement, one that has largely surfaced the weaknesses that these students bring to their collegiate academic experiences, rather than acknowledging their strengths. In addition, it reinforces that notion that there is a normative academic experience, and that experiences that deviate from this normative experience are aberrant or undesirable. It is imperative that scholars conduct rigorous research that focuses on understanding the complexities of marginalized student populations and the ways in which the culture of higher education must change to become more inclusive of these students if we are to make progress in narrowing and closing the social-class achievement gap. This will become even more important as the demographics of this nation continue to shift such that the United State will become a majority-minority nation.

The findings of this study serve as call to action for faculty, both individually and collectively, to consider the ways in which they create inclusive learning environments for marginalized student populations. The findings suggest that research assignments have the potential to engage first-generation students when faculty provide them with the opportunity to explore topics that are meaningful. In addition, faculty-initiated interactions may be critical in helping first-generation students and other marginalized student populations to feel that they are part of the undergraduate academic community and begin to build their academic support network. This call to action is aligned with Bensimon's (2005) equity cognitive frame, which asserts that the burden of successful academic engagement and performance should not be placed solely on the student, nor should we seek to fix students whose identities may not intersect with the dominant cultural paradigms in higher education. Rather, this call to action requires faculty to consider the ways in which we can change our practices, at both the individual and programmatic levels, to empower students and validate the identities, lived experiences, prior knowledge, and

interests they bring with them to their collegiate academic work and signal to these students that they belong.

APPENDIX A

INTERVIEW PROTOCOL

Background/Warm-Up Questions

1. Tell me about your experience transitioning from high school to college in terms of your academic work?

    - Can you think of some challenges that you faced in college when you first started your classes?
    - What was it like to complete your academic assignments when you first came to college?
    - What was it like to participate in class discussions?
    - What was it like to talk to your professors?

First College Research Assignment Experience

2. Tell me what you remember about your one of your first experiences doing research for a college-level research assignment.

    Potential prompts:
    - Tell me about how you selected your topic.
    - What made you select this topic for your assignment?
    - Describe the interactions you had with your professor on your topic selection, if any.

3. How did you figure out what you were supposed to do for this assignment?

    Potential prompts:
    - Tell me about interactions you had with the professor about the assignment after class, during office hours, or via email?
    - If you were confused about or unsure about any of the expectations for this assignment, how did you seek clarification?

4. What do you remember about finding sources for the assignment and picking which sources you would use?

   Potential prompts:
   - Tell me what you remember about which tools you used to search for your sources and why you decided to use them.
   - What do you remember about the criteria you used to pick sources to use in your assignment?
   - What do you remember about how you used the sources in your assignment?
   - Who did you turn to for help, if you asked for help?

5. What do remember learning from completing this research assignment?

   Potential prompts:
   - Why do you think your professor assigned a research assignment?
   - What do you think your professor wanted you to learn through completing this assignment?

6. What do you remember about how you felt when you received your grade for the assignment?

   Potential prompts:
   - What kind of feedback did you receive from the professor, if any?
   - If the student did receive feedback:
     - How helpful was the feedback that you received from the professor?
     - What was most helpful about the feedback?
     - What was the least helpful or most confusing about the feedback?
     - Was there anything that surprised you about the feedback?

Recent Research Assignment Experience

7. Describe the most recent research assignment you completed in your major or in one of your majors.

   Potential prompts:
   - Tell me about how you selected your topic.
   - What made you select this topic for your assignment?
   - Describe the interactions you had with your professor on your topic selection, if any.
   - How was the experience of selecting a topic for this assignment different from the one you described earlier, if at all?

8. How did you figure out what you were supposed to do for this assignment?

   Potential prompts:
   - Tell me about interactions you had with the professor about the assignment after class, during office hours, or via email?

- If you were confused about any of the requirements for this assignment, how did you seek clarification?

9. How did you find sources for the assignment and pick which sources were the best to use?

   Potential prompts:
   - Tell me about which tools you used to search for your sources.
   - Describe the criteria you used to pick sources to use in your assignment.
   - How did you use the sources in the assignment?
   - Who did you turn to for help, if you asked for help?
10. How did this assignment contribute to your understanding of doing research within your major?

    Potential prompts:
    - What did you learn from completing the research assignment?
    - How did this assignment complement or contribute to what you were learning in the classes you were taking toward your major?
    - What do you think your professor wanted you to learn through completing this assignment?

Comparison and Reflection

11. How did your strategies for figuring out what you were supposed to do for research assignments change from early experiences with research assignment in your freshman year to this most recent experience?

    Potential prompts:
    - What do you think you know now about doing research for these assignments that you didn't know then?
    - What do you think you know now about professors' expectations that you didn't know then?
        - How did you learn more about professors' expectations? Interactions with classmates or friends? Interactions with your instructors? Feedback on your work?

12. Compared to when you were a freshman, in what ways have you started to think about research assignments differently?

    Potential prompts:
    - Tell me a little bit about how your confidence in successfully completing research assignments has changed or not changed from your freshman year until now.
    - What factors do you think have contributed to your changes in confidence?

13. What role do you think these assignments have played in your college education?

Potential prompts:

- What skills or competencies do you think you have learned or developed through completing these assignments, if any?
- How do you think your experience with research assignments compares to those of your peers?

14. What do you think it takes to be successful academically as a college student?

    Potential prompts:

    - How have your experiences with research assignment shaped how you view yourself as a college student?
    - Can you tell me about some challenges or obstacles that you've faced in feeling like a successful college student?
    - When you've faced challenges or obstacles to academic success, how did you overcome them?

15. Some people believe the relationships you have with people before you start college change once you are in college. What do you think about that belief?

    Potential prompts:

    - How do you think your relationships with people you knew before college, such as with your family or your high school friends, have changed or remained the same?

16. Is there anything else you'd like to share with me about your experiences with research assignments in college or about your collegiate academic experiences in general?

APPENDIX B

POST-INTERVIEW QUESTIONNAIRE

For Manchester campus students

What is the highest level of schooling your father completed?

__Middle school/junior high
__High school
__College or beyond
__I don't know

What is the highest level of schooling your mother completed?

__Middle school/junior high
__High school
__College or beyond
__I don't know

What are you majoring in? (select all that apply)

__Accounting
__Applied Mathematics
__Athletic Training
__Biology
__Biology Education
__Broadcast Communications
__Business Management
__Business, Computer, & IT K-12
__Chemistry
__Chemistry Education
__Computer IS & Technology
__Early Level Educ. PreK-4
__Economics
__Energy Science & Technology
__Engineering
__English
__English Education
__Environmental Studies
__Exercise Science
__General Studies
__Health & Physical Education
__History-Political Science
__Hospitality Management
__Human Relations
__Interdisciplinary Arts
__Mathematics Education
__Nursing
__Physical Sciences
__Psychology
__Public Relations
__Radiological Science
__Social Sciences
__Social Studies Education
__Sociology
__Sport & Recreation Mgmt
__Sports Medicine
__Writing
__Other

Which category best describes your race/ethnicity?

__Black/African-American
__Hispanic and/or Latino/a/x
__Asian/Asian-American
__White
__Bi-racial
__Multi-racial
__Other

Which category best describes your race/ethnicity?

__Black/African-American
__Hispanic and/or Latino/a/x
__Asian/Asian-American
__White
__Bi-racial
__Multi-racial
__Other

Did you start at this campus as a first-time freshman, or did you transfer to here from a different campus or school?

__Started as a new, first-year student
__Transferred from a different campus or school
__Other

Please tell me which of these best describes your college living situation during the school year.

__I currently live on campus, but I have also lived off campus during college.
__I have always lived on campus.
__I currently live off campus, but I have also lived on campus during college.
__I have always lived off campus.

Do you currently have a job?

__Yes
__No

If the answer to the previous question was Yes…

Do you work on campus or off campus?

__On campus
__Off campus
__Both

About how many hours do you typically work in a week?

__Less than 5 hours
__5 to 10 hours
__11 to 15 hours
__16 to 20 hours
__More than 20 hours

If the answer to the previous question was No…

As a college student, have you ever worked during the school year?

__Yes, I have worked on campus.
__Yes, I have worked off campus.
__ Yes, I have worked both on campus and off campus.
__No

For the Springfield campus students

What is the highest level of schooling your father completed?

__Middle school/junior high
__High school
__College or beyond
__I don't know

What is the highest level of schooling your mother completed?

__Middle school/junior high
__High school
__College or beyond
__I don't know

What are you majoring in? (select all that apply)

__American Studies	__Spanish Education	__Public Policy
__Anthropology	__English Literature	__Spanish
__Biochemistry	__History	__Visual & Performing Arts
__Biological Science	__Information Technology	__Interdisciplinary
__Chemistry	__Management	__Humanities
__Communication	__Management: Accounting	__Natural Sciences
__Creative & Professional Writing	__Management: Information Systems	__Behavioral Sciences
__Criminal Justice	__Mathematics	__Self-Designed
__Early Childhood Education	__Political Science	__Other
__Secondary Education	__Psychology	

Which category best describes your race/ethnicity?

__Black/African-American
__Hispanic and/or Latino/a/x
__Asian/Asian-American
__White
__Bi-racial
__Multi-racial
__Other

Did you start at this campus as a first-time freshman, or did you transfer to here from a different campus or school?

__Started as a new, first-year student
__Transferred from a different campus or school
__Other

Please tell me which of these best describes your college living situation during the school year.

__I currently live on campus, but I have also lived off campus during college.
__I have always lived on campus.
__I currently live off campus, but I have also lived on campus during college.
__I have always lived off campus.

Do you currently have a job?

__Yes
__No

If the answer to the previous question was Yes…

Do you work on campus or off campus?

__On campus
__Off campus
__Both

About how many hours do you typically work in a week?

__Less than 5 hours
__5 to 10 hours
__11 to 15 hours
__16 to 20 hours
__More than 20 hours

If the answer to the previous question was No…

As a college student, have you ever worked during the school year?

__Yes, I have worked on campus.
__Yes, I have worked off campus.
__ Yes, I have worked both on campus and off campus.
__No

APPENDIX C

RECRUITMENT EMAILS

C.1 FOR MANCHESTER CAMPUS STUDENTS

Subject: Seeking participants for a study about first-generation students' academic experiences

Hi,

You are receiving this email because you have been identified as a first-generation student at the Mid-Atlantic University, Manchester. Your email address has been obtained through the TRIO Student Support Services Office with permission from the Office of Academic Affairs.

This study is about how first-generation students experience academic research assignments as they transition from being a first-year student to becoming an upperclassman who will be expected to complete a capstone or senior research project. If you participate in this research study, you will be asked to participate in a 60- to 75-minute, one-on-one interview. You will be asked about what it was like to complete academic research assignments and their role in your college education. You will receive $25 for a completed interview.

If you are interested in participating, please contact me at alfolk@pitt.edu.

Thank you for your consideration,

Amanda Folk

C.2 FOR SPRINGFIELD CAMPUS STUDENTS

Hi,

You are receiving this email because you have been identified as a first-generation student at the Mid-Atlantic University, Springfield. Your email address has been obtained through the Office of Academic Affairs.

This study is about how first-generation students experience academic research assignments as they transition from being a first-year student to becoming an upperclassman who will be expected to complete a capstone or senior research project. If you participate in this research study, you will be asked to participate in a 60- to 75-minute, one-on-one interview. You will be asked about what it was like to complete academic research assignments and their role in your college education. You will receive $25 for a completed interview.

If you are interested in participating, please contact me at alfolk@pitt.edu.

Thank you for your consideration,

Amanda Folk

APPENDIX D

CONSENT FORM

Learning the Rules of Engagement: Exploring First-Generation Students' Academic Experiences through Academic Research Assignments

You are invited to be in a research study about first-generation students' collegiate academic experiences. I ask that you read this form and ask any questions you may have before agreeing to be in the study and participate in the interview.

The principal investigator (PI) for this study is Amanda Folk, a PhD student in the Department of Administrative and Policy Studies at the University of Pittsburgh's School of Education.

Background Information:

The purpose of the study is to learn more about the first-generation students' collegiate academic experiences. This study will attempt to learn more the ways in which first-generation students figure out what the expectations for academic performance in college are.

Procedures:

If you agree to be in this study, we would ask you to participate in an individual interview that lasts 60-75 minutes. The interview will be conducted in a private room and will be audiotaped.

Risks and Benefits of Being in the Study:

I will ask you questions about your experience of being a college student. There are not immediate risks to participation in this study. I will ask you briefly about your transition from high-school to college-level academic work and then ask you describe both early and recent experiences with academic research assignments. Finally, I will ask you to reflect on the differences between your early and recent experiences with academic research assignments, as well as the role these assignments have played in your college education.
The benefits to participation are: 1) the opportunity to share your story with academic professionals; 2) the chance to help educators learn more about the first-generation students' college experiences; 3) participating in an academic study and learning more about the research process.

Compensation:

You will receive a $25 incentive after completing the individual interview. You will receive your incentive immediately after the interview portion of the study.

Confidentiality:

The records of this study will be kept private and confidential. The audio recordings of the interviews will be shared with a third party transcription service, but identifying information will not be shared with this service. In any reports or articles I might publish, I will not include any information that will make it possible to identity you as a participant. Research records will be stored securely and only I will have access to the records. I will have access to the audiotapes and interview transcripts. Transcripts will be held in a locked office and all records will be destroyed after any resulting publications are completed.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Pittsburgh. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The research conducting this study is Amanda Folk (principal investigator). You may ask any questions you have now. If you have questions later, **you are encouraged** to contact Amanda Folk at 724-836-9688 or alfolk@pitt.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the tHuman Subjects Protection Advocate at the University of Pittsburgh IRB Office, 1-866-212-2668.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature:

_____Date:_____

Signature of Investigator:

_____Date:_____

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