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The Mediating Impact of Student Self-Efficacy: An Examination of Vocational and Academic Perceptions Among Students in Living-Learning Communities

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The Mediating Impact of Student Self-Efficacy: An Examination of Vocational and Academic
Perceptions Among Students in Living-Learning Communities

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May 2, 2017

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The Mediating Impact of Student Self-Efficacy: An Examination of Vocational and Academic
Perceptions Among Students in Living-Learning Communities

A Thesis in
Higher Education and Student Affairs Administration

by

Michael Palumbo

Submitted in Partial Fulfillment
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Master of Science
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Abstract

The purpose of this study was to examine the influence of Living-Learning Communities on first-year students at a large Mid-Atlantic university. Students were asked to complete the *Career Decision Self-Efficacy Scale* and the *Academic Major-Fit Scale* in the beginning of their first semester in college, and then again mid-way through their second semester. The final results included 21 participants. No significant difference in career decision self-efficacy was found from the pre-test (prior to their experience in the living-learning community) and the post-test. Two factors of perceived fit in the *Academic Major-Fit Scale* did show significant increases. These were academic major commitment, and academic major satisfaction. The results suggest that Living-Learning Communities do not directly aide students in their academic or career development.

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It is difficult to summarize everything that I have learned from completing this project. The knowledge and experiences that I have gained will tremendously aid me in my career, and in my own growth and development. But more importantly, this project will always be the defining experience of my journey through graduate school, and one that I will cherish well into the future.

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Chapter 1

Introduction

For a large proportion of undergraduates finding clarity in their career and academic objectives can be a daunting task. According to Barber, King, & Baxter-Magolda (2013), much of the demands set on college students, such as applying their newly learned knowledge to work and relationships, developing a vocational identity, and attributing intrinsic meaning to their beliefs and values, require a certain developmental capacity to think critically, and understand multiple points of view. Social cognitive theory, and the associated cognition of self-efficacy, may provide great insight into assisting students with the challenging academic, social, and work related demands of attending college (Bandura, 1989; Scott & Ciani, 2008).

Among higher education institutions, students must face challenging tasks and routine demands that require time management skills, academic skills, interpersonal skills, and an ability to process and retain accurate and detailed information. Developing these skills not only takes a certain degree of intellectual capacity as Barber et al. (2013) suggests, but also an ability to remain focused on goals such as academic success and career attainment, despite reoccurring shortfalls, setbacks, and fatigue. Such ability is a reflection of one's degree of self-efficacy, and a willingness to stay on course toward positive outcomes, even when those expected outcomes fall out of reach. This is the power of students' self-efficacy as Bandura (1977) described. It refers to perceptions humans have about their own capability to achieve positive outcomes.

Self-efficacy's impact on academics, performance, and career decisions has been tested repeatedly across many different applications since it was termed in 1963 by Bandura, Ross, & Ross. Even when compared to traits of general intelligence, personality, learning strategies, and

organizational traits, self-efficacy has been shown to play a larger role in students' grade point average as a measure of academic performance (Richardson & Abraham, 2012). Another form of self-efficacy that leads students toward academic excellence and the successful completion of their undergraduate degree is career decision self-efficacy (Abele & Spurk, 2009). In a world that is placing increasing economic demands on emerging adults, career planning and career decision-making are of great importance to the formation of positive self-efficacy. This is particularly true for students from a lower socioeconomic background (Ali, McWhirter, Chronister, 2005; Ma, 2009; Yerdelen-Damar, & Pesman, 2013).

Based on more broad descriptions of environmental influences from Bandura (1977), and Lent, Brown, and Hackett (1994), there are a number of notable environmental influences in the context of higher education that can act as positive or negative feedback to students which then adds to their developmental experiences. These can be verbal feedback from faculty and peers, failures and success in academic performance, students' grade point average, campus and residential communities, family influences, as well as socioeconomic influences. According to the literature, these environmental influences have a powerful impact on students' self-efficacy, which may be useful for higher education institutions in tailoring their learning environments to the needs of their students (Garcia, Restubog, Bodira, & Roxas, 2015; Richardson & Abraham, 2013; Ma, 2009; Szelenyi, Denson, & Inkekas, 2013). This may be particularly effective when coupled with students' living environment, an aim that is well within the potential of most college and universities (Cambridge-Williams, Winsler, Kitsantas, & Bernard, 2013; Szelenyi et al., 2013). Living-learning communities (LLC's) seek to structure students' living and learning environments around similar peers with similar academic or career goals, and put students in closer contact with their shared faculty. Two of the most fundamental aspects of a living-learning

community are its increased social support and instructor support. Each of these has been specifically demonstrated to positively impact self-efficacy, either as it relates to career decisions or academic commitment (Garcia, Restubog, Bodira, & Roxas, 2015; Ali et al., 2005; Patel, Salahuddin, O'Brien, 2008). These findings demonstrate the relevant potential of living learning communities in improving students' self-efficacy. Based on related research, it is evident that self-efficacy can be improved, or hindered, depending on environmental influences (Szelenyi et al., 2013). The aim of this study is to examine the impact of living-learning communities on student's perceived fit in their academic major, and career decision self-efficacy.

Research Questions and Hypothesis

The study draws literature, which targets the role of self-efficacy among students of higher education, and the utility of living-learning communities. Its key research questions are as follows:

1. What is the relationship between participation in an academically centered living-learning community and students' career decision self-efficacy?
2. Is participation in living-learning communities during students' first year related to their perceptions of their academic major?
3. Is a higher degree of career decision self-efficacy, or perceived academic major-fit related to higher reported grade point average as a measure of academic performance?

In answering these research questions an outline of both the null and alternate hypotheses has been developed based on previous research.

These alternate hypotheses are as follows:

1. Participation in a living-learning community during students' first and second semester in college increases perceived academic major-fit.
2. Participation in a living-learning community during students' first and second semester in college increases career decision self-efficacy.
3. Students with higher scores in perceived academic major-fit or career decision self-efficacy will report higher academic performance as measured by their grade point average.

The null hypotheses are as follows:

1. Participation in a living-learning community during students' first and second semester in college does not increase perceived academic major-fit.
2. Participation in a living-learning community during students' first and second semester in college does not increase career decision self-efficacy.
3. There will not be a significant relationship reported between academic performance in the measure of grade point average, and career decision self-efficacy or perceived academic major fit.

Chapter 2

A Review of the Research Literature of Self-Efficacy

While the site and sample of this study focused primarily on living-learning communities, four major areas were explored in the research literature to examine their potential for impacting student success in college. Self-efficacy is a broad term surveyed in the literature that can be applied to a number of topics including academic self-efficacy, performance self-efficacy, and career decision self-efficacy (Betz, Klein, & Taylor, 1996; Richardson & Abraham, 2012). Another major component of this study that was examined in the literature is students' perceived fit in their academic major, or academic major-fit. Academically centered living-learning communities, with their emphasis on community and academic engagement with their peers, have previously demonstrated an impact on student career decisions and persistence and serve as the environmental context for this study (Spanierman et al., 2013; Szelenyi et al., 2013; Wawrzynski, Jessup-Anger, Stolz, Helman, & Beaulieu, 2009; Wawrzynski & Jessup-Anger, 2010).

Defining Self-Efficacy and Social Learning Theory

Self-efficacy is a widely studied and applied cognitive construct that has greatly contributed to our understanding of human behavior and cognition. Self-efficacy is a form of perception humans develop overtime through continued interaction with their environment. It was originally defined within the model of Social Learning Theory, but later expanded in social cognition theory, or as Bandura (1989) termed it “a system of triadic reciprocal causation” (p.1175). This model frames learning as a cognitive process that develops from repeated environmental observation and stimulus. Overtime, environmental events interact with behavior

to form a series of perceived expectations (Alt, 2015; Bandura, 1977; Bandura, 1989; Conklin et al., 2013; Dinther, Dochy, & Segers, 2010). Social Learning Theory was originally developed through an experiment conducted by Bandura, Ross, & Ross in 1963. The study examined the behavior of three groups of children in response to observed rewards among other participants. Contrary to much of the research of the time, which focused on behavior as a direct response to environmental stimulus, the study showed conclusive evidence that behavior is part of a learning process within a particular environment which builds on itself overtime (Bandura et al., 1963). Drawing on the role of cognitive functioning in human behavior, Bandura identified the major concept of social learning as self-efficacy (Bandura, 1977). He would later define self-efficacy as, “people’s beliefs about their capabilities to exercise control over events that affect their lives” (Bandura, 1989, p.1175).

Following his research on Social Learning Theory in 1963 (Bandura, Ross, & Ross), Bandura (1977) modified his theory on the role of self-efficacy and outcome expectations into social cognitive theory. Here he emphasized the role of cognition as a mechanism by which humans attempt to affect their environment, or from the perception of most human thought, their daily lives. In order to accomplish that effect on their environment with any degree of reliability, certainty, or consistency, humans must make constant predictive judgments about their environments. They must draw on their past experiences, through both first-hand methods of trial and error, and second-hand methods of social learning. They must overcome continuous uncertainty about the future, anticipate the outcome of their circumstances, and remain perseverant despite inevitable setbacks, failures, and aversive consequences. That is why Bandura emphasized social learning and cognition as primary forces of human behavior. Humans do not act as bilaterally reactive forces to their proximal environment, or only learn

through their own experiences, they learn through watching others take similar actions against a particular set of challenging circumstances, and they build on their past experiences to ascertain more and more accurate expectations for the outcome of those circumstances (Bandura, 1989). Overtime, those outcome expectations help to formulate cognitive constructs of their own personal ability to affect their environment. Through social learning, they compare their own environmental affect with that of others to form benchmarks (an associative cognitive construct) that inform their beliefs about their own capabilities. Depending on the degree of negative feedback, and challenging difficulties in their environment, humans build up self-doubts about their ability to take control of their environmental circumstances in a way that will lead to positive outcomes. Without strong beliefs about their capability to affect their environment, they may sink into mediocrity or prematurely stall their action against particular challenges with a belief that continued effort will lead to negative outcomes. By contrast, those with a high degree of belief in their abilities will persevere through continued difficulties, failures, and adversities in the belief that they can achieve positive outcomes. This is the theoretical framework for the relationship between self-efficacy and outcome expectations (Bandura, 1977).

Self-Efficacy in the Context of Education

As discussed above, self-efficacy is heavily centered on one's perceived capability to achieve any desired outcome. One of its key components, the interactions between cognition, environments, and behavior, is a major part of what creates such a variety of human behaviors across similar environments. For decades a growing body of research has investigated the role of self-efficacy in a number of educational and vocational contexts (Gianakos, 1999; Lent, & Larkin, 1984; Luzzo, 1993; Pajares, 1996; Zimmerman, 2000). As it relates to career decision making, Vocational Psychology has long recognized the importance of the environment and

person interactions in vocational choice, interest, and motivation. Holland (1959), most notable for his occupational interest inventory, wrote on his theory of vocational choice “presumably self-evaluation is a function of the life history in which education, socioeconomic origin, and family influences are major determinants” (p.38). Although this was specific to vocational choice, it serves as a relatively close antecedent to Bandura’s (1977) concepts of self-efficacy and social learning some eighteen years later. More recently, self-efficacy has been shown to influence students’ (in both secondary and post-secondary school) career choice and action as well as their degree of ambition. Suggesting that students with higher self-efficacy in their career decisions set higher, or more ambitious career goals (Choi, Park, Lee, Lee, & Lee, 2012; Conklin et al., 2013; Domene, 2012; Germeijs, Luyckx, Notelaers, Goossens, & Verschueren, 2012). One study by Garcia et al. (2015) provides a more descriptive term for the degree of student ambition in career choice, titled career optimism. It refers to students’ level of positive emphasis on career outcomes, and their perceived potential for growth and development in the pursuit of those outcomes. This study was conducted in the Philippines, and used self-reported data in the form of surveys. Researchers measured career decision self-efficacy, parent support, teacher support, and career optimism (Garcia et al., 2015). Out of the variables measured, they found career decision self-efficacy to play a major role in career optimism (Garcia et al., 2015). This demonstrates the link between self-efficacy and outcome expectations.

Self-Efficacy and Academic Performance

With regard to higher education, academic performance by students’ grade point average (GPA), a major measure for degree attainment and academic learning, has been linked to self-efficacy with medium sized correlations. A meta-analysis conducted by Richardson, and Abraham (2012) across 241 separate datasets demonstrated that academic self-efficacy

specifically can predict students' GPA, the grades students set out to achieve in college, and their tendencies toward self-regulation in pursuit of those goals. Another measure of self-efficacy across these studies, performance self-efficacy, which emphasizes students' beliefs about their ability to perform well on a task, rather than in academic achievement, was the most significant correlate of GPA demonstrating greater effect than academic intrinsic motivation, critical thinking ability, meta cognition, study time management, strategic approach to learning, academic integration, goal commitment and grade goals, need for cognition, and a host of personality traits including conscientiousness, openness, neuroticism, agreeableness, and optimism (Richardson & Abraham, 2012). Interestingly, measures of general intelligence were shown to have only a small relationship with GPA, falling short of its relationship to academic and performance self-efficacy significantly. In view of the weight placed on GPA within institutions of higher learning, its connection to college success and career attainment, and considering the over four hundred articles used in this meta-analysis, this demonstrates that GPA serves as a measure of effort, self-regulation, and self-efficacy above students' objective academic skill and ability (Richardson, & Abraham, 2012).

The Distinction of Career Decision Self-Efficacy

When self-efficacy is used in vocational research, it is often directly applied to examining career decision making. Much of the research in this area makes a clear distinction of career decision making as it relates to self-efficacy. This distinction, referred to as career decision self-efficacy, relates specifically to students' perception of their ability to achieve their desired career goals (Betz, Klein, & Taylor, 1996). In accordance with Bandura's (1977) original analysis of the relation between self-efficacy and outcome expectations; two of the most common factors associated with career decision self-efficacy are career outcome expectations, and vocational

identity (Choi, Park, Yang, Lee, Lee, & Lee, 2012; Conklin et al., 2013). One meta-analytical study found a significant positive correlation between these three factors. Across thirty-four separate studies, students with a high degree of self-efficacy also reported a higher vocational identity, and greater career outcome expectations (Choi et al., 2012). Career decision self-efficacy has also been correlated with students' perceived fit between their academic major and their strengths and interests, the degree to which a student emotionally identifies with their academic major, academic major commitment, and academic performance (Conklin et al., 2013). The influence of career decision self-efficacy, as opposed to other forms of self-efficacy among adolescents and emerging adults, is particularly salient. It greatly depends on each individual's higher education objectives, and the value they place on career attainment, academic achievement, and personal growth (Bandura, 1989; Lent, Brown, & Hackett, 1994). Of particular importance is the link of goal setting, planning, and career exploration and career decision self-efficacy, factors that can help explain why self-efficacy plays an important role in career attainment (Betz, Klein, & Taylor, 1996). However, in consideration of the vocational demands placed on college students, acquiring or maintaining self-efficacy for career decisions may help them to develop clearer outcome expectations in their pursuit of higher learning and academic achievement. Even more salient is the relationships between academic major commitment, career decision self-efficacy, and career outcome expectations, suggesting that students with greater career decision self-efficacy have greater commitment to completing their major, and set higher career goals (Conklin et al., 2013).

Career decision self-efficacy may also be positively related to career exploration. This is another key distinction of career decision self-efficacy as opposed to other forms of self-efficacy, and its unique role in vocational development. Students with a higher degree of career decision

self-efficacy are more likely to experience a lengthy period of career exploration (Garcia et al., 2015; Germeijs et al., 2012). Students with low career decision self-efficacy however, may report commitment to a career choice, but have not engaged in career exploration. These students' career choices are then rooted in other influences. Career anxiety for example, which is a student's anxiety over making any career decision, can severely hinder their career exploration because it may stall necessary actions toward exploration of career options (Germeijs et al., 2012). According to the results of a study by Germeijs et al. (2012), which examined high school students, career decision self-efficacy was influenced by student development. For Germeijs et al. (2012), what appeared to be career decision self-efficacy according to the students, was actually unexplored commitment. This suggests that self-reporting, without a sufficient understanding of somewhat ambiguous perceptual terms such as self-efficacy, or interests, may carry a form of developmental bias for students (Germeijs et al., 2012). This finding not only demonstrates the challenges of student self-reporting on career decision self-efficacy, but also further portrays self-efficacy as playing a role in commitment, and clarity of career decisions.

The Distinction of Academic Major-Fit

Lent, Brown, and Hackett (1994) describe academic self-efficacy and career self-efficacy as fundamentally (due to the integration of vocational and academic development in higher education) two parts of the same process for adolescents and emerging adults. There is a clear distinction between the two within the context of environmental feedback. This is due to the natural differences within environments such as the workplace, the classroom, and living space. These natural differences create considerable variation in their goals, expectations, challenges, and communities. Conklin et al. (2013) introduced the role of career decision self-efficacy within social cognitive career theory, and utilized measures of perceived academic major-fit. Conklin et

al. (2013) defined academic major fit as students' perceptions about their own abilities in relation to the demands placed on them by their academic degree program. It is a term that refers to the dual relationship between self-efficacy and outcome expectations because it describes how students perceive their own abilities to accomplish set demands within their major, as well as their expectations of those demands. This abilities-demand relationship then leads students to draw perceptions about their own performance with their major, and builds a perception of fit that they identify with. These fundamental components of perceived academic major-fit inherently involve academic self-efficacy with regard to the ability within the major, and outcome expectations related to accomplishing the demands set by the major. As consistent with the previously mentioned research regarding career decision self-efficacy, it was found to have been significantly associated with affective commitment and outcome expectations (Conklin et al., 2013).

A Utility of Living-Learning Communities

The most important aspect of living-learning communities that draw them into this study is their connection between academic and residential environments, their increased faculty support, and the increased social and peer support that they can foster. Overall, LLC's bring together students with shared interests (often academically focused) within the same living environment (their residence hall), and the same learning environment (the classroom). For this reason, there are more opportunities for positive environmental influences, such as positive feedback from peers and faculty, relationships with faculty and peers, and additional staff resources, which facilitates more opportunities or the positive development of self-efficacy in these areas. As a distinction, learning communities are not the same as LLCs because they do not incorporate a shared residential living environment, and therefore were not the desired

population for this study. As Wawrzynski & Jessup-Anger (2010) points out, learning communities vary widely in their operation, goals, and structure and need specific definitions to draw their distinctions even among similar institutions and populations of students.

Bandura (1989) theorized that reoccurring environmental experiences both create and reinforce self-efficacy and expectations. He distinctly defined outcome expectations as one's expected environmental responses to a certain behavior. He also used the term efficacy expectations to describe the combination of outcome expectations and self-efficacy (Bandura, 1977). This relationship between expectations and self-efficacy has been repeatedly supported in related research (Choi et al., 2012; Conklin et al, 2013; Gushue, Scanlan, Pantzer, & Clarke, 2006). However, what is not necessarily clear is what environmental factors play a greater role in developing career decision self-efficacy. Educational research on living learning communities, or LLCs, has provided new understanding of environmental influences. Szelenyi et al. (2013), for example, examined LLCs across thirty-four institutions. The results, which focused on women in science, technology, engineering, or mathematics (STEM) programs, showed that STEM students within coeducational LLCs developed greater expectations about the future (career outcome expectations), and more positive relationships with peers. Additionally, both career outcome expectations and positive social relationships were significantly related to greater academic self-efficacy (Szelenyi et al., 2013). These factors, a positive social atmosphere and positive expectations about the future, were more easily provided to students in LLCs in this study (Szelenyi et al., 2013). This might be due to the communities increased opportunities for bonding over shared academic and social challenges, career expectations, and possibly interests considering student relationships are so fundamental to positive learning communities. Regardless of what influences positive learning communities, it also appears to have led to

greater academic performance compared with traditional residence. This demonstrates that there may be a positive relationship between academically centered LLCs and CDSE (Szelenyi et al., 2013).

Another factor repeatedly shown to improve academic and career self-efficacy is social support. Social support has also been shown to improve outcome expectations with increases in self-efficacy (Ali et al., 2005; Garcia et al, 2015; Patel et al., 2008; Spanierman, Soble, Mayfield, Neville, Aber, Khuri, & De La Rosa, 2013). Such data is particularly helpful in the creation of LLCs that aide in the development of positive self-efficacy, interest, and improving academic success. According to Garcia et al. (2015), community living among peers with similar academic interests and career goals may be a more sufficient environment for developing positive self-efficacy. Some research on adolescence has also found a link between teacher support, and career decision self-efficacy. Garcia et al. (2015) conducted research on career optimism among high school students from the Philippines, and found that students with higher teacher support also had higher career decision self-efficacy. This research also found that effects of social support were enhanced when the social support took the form of a role model of which students could relate to. Others have also shown that social support predicts self-efficacy and outcome expectations (Sheu & Bordon, 2017). However, these findings are often among adolescent participants, which may suggest that early intervention programs are necessary to influence these traits.

In the context of Social Cognitive Career Theory, the usefulness of LLCs appears more salient than traditional residential living. Some research has shown that motivation can be influenced by LLCs (Stefanou & Salisbury-Glennon, 2002). Others have found that action and performance can be enhanced by LLCs, as well as self-efficacy, when the LLC helps students to

feel a strong sense of belonging to the learning community (Spanierman et al., 2013). Social Cognitive Career Theory is a group of models that use self-efficacy and outcome expectations as major factors that influence students' career decisions, interests, and performance. It places learning experiences as a mediating factor between personal characteristics such as background, race/ethnicity, and gender, and self-efficacy and outcome expectations (Lent, Brown, & Hackett, 1994). While these learning experiences can occur within the classroom setting, much of the learning experience needed to drive academic and career attainment occurs outside the classroom. LLCs place a more intentional congruency between students' living and classroom environment. Ideally, this could foster more social support and engagement, greater support and interaction with faculty, and more opportunity for the positive feedback necessary to improve self-efficacy and outcome expectations. Bandura (1977; 1989) and Lent, Brown, and Hackett (1994) describe the role of objective ability (as opposed to perceived or subjective abilities) in generating positive self-efficacy. However, they also describe the subjective perceptual complexities of self-efficacy and outcome expectations. As was briefly discussed for its relationship to academic performance, many individuals acquire high degrees of self-efficacy without having abilities that merit continual positive feedback. Instead, the development of positive self-efficacy can be influenced by perceived peer performance, and the motivation to remain on task in the face of challenging and difficult demands (Lent, Brown, Hackett, 1994). The influence of LLCs on the development of positive self-efficacy is in need of additional research.

Considering the body of research showing that environmental influences play an integral role in developing career decision self-efficacy, institutional initiatives targeting student environments (academic and residential) may assist students in their career development.

Numerous studies have examined LLCs, and broader learning communities, to determine their influence on academic performance, social interaction, and self-efficacy. Self-efficacy in particular tends to be higher among students in learning communities, particularly in LLCs (Cambridge-Williams, Winsler, Kitsantas, & Bernard, 2013; Leptien, 2015; Stefanou & Salisbury-Glennon, 2002; Szelenyi et al., 2013). Research on students in learning communities has also found higher rates of motivation, social interaction and support, belonging and community, academic success, and lower rates of anxiety compared with students who do not participate in learning communities (Leptien, 2015; Spanierman et al., 2013; Wawrzynski, Jessup-Anger, Stolz, Helman, & Beaulieu, 2009; Wawrzynski & Jessup-Anger, 2010). LLCs also tend to show greater environmental influence compared with learning communities. Wawrzynski & Jessup-Anger (2010), compared nine LLCs and learning communities. While outcome expectations were similar among the two groups, social interaction and environmental enrichment were significantly higher among students in the LLCs. With regard to self-efficacy, Cambridge-Williams et al. (2013) found that students in LLCs had higher self-efficacy. However, all the participants were enrolled in the same course (UN 100), which seemed to improve self-efficacy for a significant number of participants in both groups. This could also depend on demographical factors, such as with STEM women, who have been shown to have greater improvement of self-efficacy within LLCs (Szelenyi et al., 2013).

Overall, students in LLCs, due to their increased engagement in an academic community may help students develop more positive self-efficacy compared with other groups. However, research in this area is insufficient to draw any plausible conclusions. In the future, such research could help determine the differences in effect (or lack thereof) between LLCs and learning communities, and to identify potentially significant factors of environmental influence. Through

targeting LLCs as potential pathways to promoting greater career decision self-efficacy, many students may achieve greater outcome expectations, enhanced vocational identities, increased motivation, and clarity of career choice (Conklin et al., 2013; Domene, 2012; Szelenyi et al., 2013). Research in this area can also help to improve education outcomes for students in learning communities.

Chapter 3

Methods

The sample in this study was solicited from a large public research university in the Mid-Atlantic region of the United States. The on-campus residential population is over 7,000 students. First year students are not required to live on campus, and first-year residential students do not need to participate in a living-learning community. Students can, as an alternative to traditional residential living, select into a living-learning community (LLC) if their chosen major is in Electrical or Mechanical Engineering, Architecture, Pharmacy, Business Management, the Social Sciences, or Health Promotions. A quantitative methodology was utilized in order to examine a higher proportion of eligible students. A large sample of students in living-learning communities was accessible through the help of the university's Residence Life office. Using a self-reported survey quantitative methodology also offered a greater potential for answering some of the main research questions for the population of students in LLCs at this university.

Participants

First-year undergraduate students were recruited from a large, public university in the Mid-Atlantic region of the United States. Using a convenience sample, participants were solicited to participate from the University's seven first-year Living Learning Communities

(LLC). In the case of the LLCs used in this study, each consisted of a proximal residential living environment designated by each major. Students were paired with roommates who shared their academic major and class standing, and faculty played a leading role in planning the community’s academic resources. Only students who were directly involved in an LLC were eligible for participation. All participants provided informed consent, and the study was conducted with approval from a local Institutional Review Board. Of the 21 final respondents, 7 identified as male (33%) and 14 identified as female (66%). With regard to ethnicity, 18 identified as Caucasian (80%), 2 identified as Asian American (5%). There was one participant who identified as Middle Eastern, and another who identified as Latino. Participants who did not complete the questionnaire both during and after their first college semester were omitted from the final data analysis.

Table 1

Respondent Demographic Information

<u>Living-Learning Community Affiliation</u>	<u>total (n)</u>
Architecture	2
Pharmacy	4
Health Promotions	2
Business Management	3
Social Sciences	3
Engineer	7
<u>Gender</u>	<u>total (n)</u>
Male	14
Female	7
<u>Ethnicity</u>	<u>total (n)</u>

White/Caucasian	16
African American	0
Asian American	2
Hispanic/Latino	1
Middle Eastern	1
Multiracial	1
<u>Grade Point Average Range</u>	<u>total (n)</u>
2.50-3.00	2
3.00-3.50	1
3.50-4.00	13
Not indicated	5

Procedure

In order to measure differences in students' perceptions of their career and academic major along their first year in college, a pre and post-test survey was conducted. Participants were asked to complete the survey once during their first semester, and once during their second semester. The two rounds of survey administration occurred 4 months apart, with the first phase occurring in October of 2016 and the second occurring in March of 2017. Participants were asked to provide additional demographic information, their current grade point average specifically, and the number of college course credits they have earned at their undergraduate institution. The Academic Assistants assigned to each LLC administered the surveys, including the informed consent form. These Academic Assistants approached their respective LLC as a group, and then followed up with each potential participant during both the fall semester of 2016 (pre-test), and the spring semester of 2017 (post-test).

Instruments

The Career Decision Self-Efficacy (CDSE) scale, developed by Betz, Klein, and Taylor (1996), was the primary instrument utilized for this study. Proper licensing was purchased in order to obtain the long form of the CDSE questionnaire. This questionnaire is comprised of 50-items that reflect one's thoughts about career decisions and one's approach to career decision-making. Betz, Klein, and Tylor (1996) identify five dimensions of career decision-making self-efficacy, which include Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem Solving. While the short form of the scale only used 5-items for each of the five dimensions, the long form utilized in this study expanded that to 10 items per dimension (subscale). Participants were asked to indicate the degree to which they agree or disagree with each question on a 5-point Likert scale (1=strongly disagree and 5=strongly agree). The 10 items were averaged and scored based on each participant's answers to each question and the corresponding variable.

Students' perceived ability, commitment, and satisfaction with the demands of their academic major was measured with a 12-item Likert scale. This questionnaire was developed based on a similar scale, which sought to measure the ability-demand fit of various occupational jobs. Originally developed by Brkich, Jeffs, and Carless (2002), the questionnaire has been shown to predict things like job satisfaction, and perceived engagement with work. Conklin et al. (2013) later modified this questionnaire to apply it to students' perceived fit of their academic major. On a 5-point scale (1=strongly disagree to 5=strongly agree), students were asked 12 questions. These questions were then scored based on three topics, how empowered they feel by their academic major, the degree to which they are satisfied by their academic major, and how committed they are to their academic major. These topics were targeted with 4 items for each.

This expanded the 6-item scale developed by Conklin et al. (2013) to a 12-item scale. The mean scores of each response were calculated to determine the score of each of the three targeted variables. Table 2 displays the three major variables and their corresponding questions.

Table 2

A Breakdown of the Academic Major-fit Questionnaire

<p>Academic Major Commitment</p>	<ol style="list-style-type: none"> 1. My current major is not really me 2. All things considered, my major suits me 3. I feel like my major is the right type of major for me 4. I am sure there are other majors for which I am better suited
<p>Academic Empowerment</p>	<ol style="list-style-type: none"> 1. My knowledge, skills, and abilities match the requirements of my major 2. I believe that my personality is congruent with my major 3. I possess qualities that are valued in my major 4. I am able to develop my talents, skills, and interests in my major
<p>Academic Major Satisfaction</p>	<ol style="list-style-type: none"> 1. My major is not really what I would like to study 2. I find my current major motivating 3. I find enjoyment in learning the material I am expected to learn in my major 4. I feel that my goals and needs are met in my major

Data Analysis

To determine the relationship between participation in an academically centered living-learning community and students' career decision self-efficacy, the difference in scores for the career decision self-efficacy questionnaire from pre-test to post-test were compared using a paired sample *t test*. The pre-test and post-test are designed to measure changes from the beginning of students' participation in a living-learning community, to the end of their first year in a living-learning community. The change in mean scores across all 21 participants indicates whether the mean scores increased, decreased, or remained the same. Therefore, if the mean scores of career decision self-efficacy do not change then there can be no measured relationship between career decision self-efficacy and participation in a living-learning community. With the pre-test and post-test providing two separate but similar samples, a paired sample *t test* was used to measure variability across these two samples.

To examine the relationship between participation in a living learning community and perceived academic major fit, the differences in mean scores of the academic major-fit questionnaire were compared using a paired sample *t test*. By measuring changes in mean scores on the pre-test and post-test, changes in students' perceived academic major-fit can be compared to their participation in a living-learning community from their first semester in college to their second semester. These changes in mean scores can show an increase, decrease, or no change. If the mean scores of academic major-fit do not show a change, then there can be no measured relationship between perceived academic major-fit and participation in a living-learning community. With the pre-test and post-test providing two separate but similar samples, a paired sample *t test* was used to measure variability across these two samples.

And finally, to analyze whether there is a relationship between career decision self-efficacy or perceived academic major-fit related and higher reported grade point average, a

Pearson r correlation coefficient was run. Unlike the first two research questions, this examination does not specifically address students' participation in a living-learning community directly. The two instruments in this study, the academic major-fit scale and the career decision self-efficacy scale, can be broken down into eight distinct variables. For the Career Decision Self-Efficacy scale these are: Self-Appraisal, Occupational Information, Goal Setting, Planning, and Problem Solving. For the Academic Major-fit scale these are: Academic Major Commitment, Academic Major Satisfaction, and Academic Empowerment. In order to measure whether career decision self-efficacy or perceived academic major-fit can be linked to grade point average, each of these variables had to be correlated to one another in order to show the validity of the overall scores in measuring these two overarching factors, and then they could also be correlated with grade point average. For example, if grade point average could be significantly correlated with career decision self-efficacy, then each of the five measures of career decision self-efficacy would significantly relate to one another, and significantly relate to either a high range in grade point average or a low range in grade point average. Considering the limited sample size, that the dependent variable in this research question (grade point average) was not included in both samples, and the added use of a paired samples t test, a Pearson r correlation coefficient was chosen to identify linear relationships between these eight variables and grade point average. This provided information on the relationship between variables in each instrument and grade point average with a minimal chance of error.

Chapter 4

Analysis and Results

The purpose of this study was to examine the relationships between participation in an LLC, perceived academic major-fit, career decision self-efficacy, and academic performance as measured by students' reported grade point average. The first questionnaire, the Career Decision Self-Efficacy scale, was measured using five variables: Self-Appraisal, Occupational Information, Goal Setting, Planning, and Problem Solving. The second questionnaire, the Academic Major-Fit scale, was measured using three variables: Academic Major Satisfaction, Academic Commitment, and Academic Empowerment. These variables have been used to calculate mean scores for each participant's pre-test to post-test within each questionnaire distinctively, and correlated to find relationships between them collectively. The sample included 21 first-year students from a large mid-Atlantic university who had selected into one of seven LLCs based on their chosen academic major.

Pre and Post Survey Analysis

Two research questions can be addressed by analyzing the means scores from pre-test to post-test. The first asked whether participation in a living-learning community could be linked to either increased or decreased career decision self-efficacy. The pre-test and post-test included career decision self-efficacy as a distinct instrument, and can show data on how participants reported scores in the measured variables of career decision self-efficacy changed from the first semester to their second semester. It specifically addresses whether participation in an LLC influenced students' career decision self-efficacy. The two scores would should the highest mean increase on the career decision self-efficacy scale were goal selection, and self-appraisal. The variables planning and problem solving did show slight increases from pre-test to post-test, but these increases are within the margin of error, and are therefore not significant. Each of the five variables of career decision self-efficacy did show mean increases, however the significance of

these changes is not enough to show that career decision self-efficacy increased with experience participating in a living-learning community.

The second research question asked whether participation in a living-learning community could either increase or decrease perceived academic major-fit. Academic Major-Fit is measured by three variables: Academic Major Commitment, Academic Major Satisfaction, and Academic Empowerment. The mean scores across all 3 variables of academic major-fit ranged from 3.22 (pre-test score for Academic Major Satisfaction), to 4.44 (pre-test score for Academic Empowerment). Two of the variables, Academic Major Commitment and Academic Major Satisfaction, saw slight to moderate increases in mean scores. Academic Empowerment demonstrated a slight decrease in mean scores across all the participants.

Across both the career decision self-efficacy scale and the academic major-fit scale, Academic Empowerment held the highest mean for both the pre-test and the post-test across. The largest mean score increases from the pre-test to post-test were Academic Major-Satisfaction, and Goal Selection. Planning and Academic Major Satisfaction also demonstrated mean increases from the pre-test to the post-test. Table 3 and 4 display the mean scores for all 8 variables measured in both the career decision self-efficacy scale and the academic major-fit scale.

Table 3

Mean scores of career decision self-efficacy from Pre-test to Post-test

Career Decision Self-Efficacy Scale	Mean Scores	N	Standard Deviation	Standard Error
Self-Appraisal Pre-test	3.80	21	.784	.171
Self-Appraisal Post-test	4.10	21	.523	.114
Occupational Information Pre-test	4.07	21	.562	.122
Occupational Information Post-test	4.08	21	.635	.138
Goal Selection Pre-test	4.03	20	.530	.118
Goal Selection Post-test	4.22	20	.560	.125
Planning Pre-test	3.89	21	.562	.122
Planning Post-test	4.01	21	.574	.125
Problem Solving Pre-test	3.80	18	.640	.150
Problem Solving Post-test	3.97	18	.640	.150

Table 4

Mean scores of academic major-fit from Pre-test to Post-test

Academic Major-Fit scale	Mean Score	N	Standard Deviation	Standard Error
Academic Major Commitment Pre-test	3.22	21	.370	.08
Academic Major Commitment Post-test	3.53	21	.667	.145
Academic Empowerment Pre-test	4.42	21	.488	.106
Academic Empowerment Post-test	4.32	21	.662	.144
Academic Major Satisfaction Pre-test	3.76	21	.366	.079
Academic Major Satisfaction Post-test	3.90	21	.46419	.10130

Correlations Between Variables Within Each Instrument and GPA

The last research question asked whether career decision self-efficacy or perceived academic major-fit was related to students' grade point average as a measure of academic performance. A two-tailed Pearson r Correlation Coefficient was used to find any relationships between the 8 variables tested and the participants' grade point average at the end of their second semester in college. The sample for this particular analysis only consisted of 16 respondents, as 5 did not report their GPA. Only two variables demonstrated a potential negative relationship with GPA after the pre-test, Self-Appraisal ($r=-.667$) and Academic Major Commitment ($r=-.508$). No statistically significant relationships were found between any of the variables and self-reported GPA.

Chapter 5

Discussion

The purpose of this study was to examine the impact of living learning communities have on first-year students' perceived fit in their academic major and on their career decision self-efficacy, and how these characteristics may relate to their reported grade point average. More specifically, it was to assess changes in students' career decision self-efficacy (CDSE) and their perceptions of their academic major over the course of their first year in an LLC. The findings showed no significant difference from the pre-test to the post-test in CDSE scale scores. Although the significance was small, a small difference was found in Academic Major-fit from pre-test to post-test in two of the measured variables: Academic Satisfaction and Academic Major Commitment. A negative relationship (although not statistically significant) was also

found between self-appraisal and GPA as well as between academic major commitment and GPA.

Career Decision Self-Efficacy

In support of the null hypothesis, the results indicate that CDSE was not influenced by participation in a living-learning community. This finding may also suggest that self-efficacy may include too many external environmental influences to reliably impact participation LLCs. This finding may also reflect the target population of students in this study. Considering the inexperience in career exploration that many first-year students experience upon their entry into college, it should not be surprising that many of these first-year students saw no improvement in their career decision self-efficacy. Further demonstrating the reliability of the CDSE questionnaire, the five variables included did correlate well in the results. For example, a high degree of Occupation Information was correlated with a high degree of Planning, Goal Setting, and Problem Solving within the same period of data collection. In other words, a participant who scored high in one area was likely to score high in the others. With congruency in the mean scores of each variable of the career decision self-efficacy scale and across the sample of participants, the overall score could more easily be linked to career decision self-efficacy. This adds to the validity of this questionnaire in measuring career decision self-efficacy.

Academic Major-Fit

There was some indication that Academic Major-Fit as a whole did improve for first-year students in an LLC. However, it is difficult to relate this directly to participation in a living-learning community. Considering this was their first year in college, this finding may be a result of students' natural exploration of their chosen major. In addition, the three factors of the

Academic Major-Fit scale: Academic Major Commitment, Academic Empowerment, and Academic Major Satisfaction, did not correlate well in the final results. In fact, one factor, Academic Empowerment, saw a slightly significant decrease from pre-test to post-test which calls this finding into further question. Despite these significant increases in Academic Major Commitment and Academic Major satisfaction as well as the decrease in Academic Empowerment, and given the lack of significant correlations across the three variables measured, this does not confidently support the alternative hypothesis. Furthermore, the lack of consistency between the three measured variables in this questionnaire demonstrate the need for continued research and improvement for the Academic Major-Fit questionnaire to strengthen its validity.

Academic Performance

Overall, academic performance, as measured by students' grade point average during their second semester in college, was not related to career decision self-efficacy or perceived academic major-fit. In order to reject the null hypothesis, the results would have needed to demonstrate that there is a significant relationship between students' grade point average, and the overall scores across each variable within either the academic major-fit scale, or the career decision self-efficacy scale. Therefore, neither perceived academic major-fit or the career decision self-efficacy can be linked to grade point average. However, there was a negative relationship between Self-Appraisal and Academic Major Commitment, and grade point average. This finding may illustrate a divide between students' perceived abilities or chosen major, and their performance in that area academically. It also may demonstrate a lack of reliability in measuring academic performance by grade point average. It is also important to note that these students, being in these first-year of college, could not provide a comparative GPA during the pre-test. This further confounds the reliability of this finding.

Implications for Practice and Future Research

The measured increase in academic satisfaction, and academic commitment may suggest that LLCs can aide students in their exploration of their academic major. However, given that participants were starting their first year in college, this finding may have been a result of the common, and in many respects natural, exploration of an academic major that occurs after students gain more knowledge and experience in their chosen academic major. This, coupled with the lack in significant change in CDSE, may more broadly suggest that academically centered LLCs, such as those included in this study, do not impact the academic outcomes of their students. While many of the positive implications of LLCs have been demonstrated such as in social support and sense of community (Spanierman et al., 2013), these characteristics are not reliably linked to positive academic or career outcomes. More research is necessary that further examine the impact of LLCs.

Limitations

There were a number of limitations in this study that were both inherent to the data collection method, and precipitated by the final sample. These limitations should be weighed heavily in the results of this study. With regard to the methods, the study's timing, sampling, and use of self-reported data are all notable. Despite the aims of measuring the participant's full first-year in their LLC, there was only a four to six month gap between the pre-test and the post-test. A more longitudinal analysis of students' experience in LLCs might have yielded different results. A random sample, as opposed to a convenience sample, might have also yielded different results. Without a random sample, it is unreliable to generalize these findings to other groups of students because they do not represent the overall population of students in LLCs. Finally, self-

reported measures can be unreliable in accurately measuring the targeted variables. However, the most considerable limitation is the sample size. With its inaccurate representation of the overall population, the findings may be similar in their inaccuracy. Additionally, when a small unrepresentative sample is combined with self-reported data, the limitations can be considerably more confounding.

Conclusion

The results of this study show that the way students perceive themselves in relation to their academic major and their career decisions is not necessarily linked to participation in LLCs. Despite some increases in students' academic commitment and academic major satisfaction, this study's major take away remains the lack of a reliable relationship between career decision self-efficacy, academic major-fit, and participation in LLCs. However, considering this study's limitations, more research is needed to generate reliable applications for LLCs, or alternatives that can assist students in their academic and career development. More data is needed across many more ethnic groups, academic majors, and LLCs.

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Appendix A

Career Decision Self-Efficacy Questionnaire

For use by Michael Palumbo only. Received from Mind Garden, Inc. on April 27, 2016

Score: _____

Please provide the following information:

Name or I.D. _____

Date _____ Age _____ Gender (Please Circle): **F** **M**

Career Decision Self-Efficacy Scale

INSTRUCTIONS: For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks by marking your answer according to the following 5-point continuum. Mark your answer by filling in the correct circle on the answer sheet.

Example:

No Confidence at All	Very Little Confidence	Modest Confidence	Much Confidence	Complete Confidence
1			4	5

How Much Confidence Do You Have That You Could:

- a. Summarize the skills you have developed in the jobs you have held? 1 2 3 4 5

If your response on the 5 point continuum was 5, "Complete Confidence", you would fill in the number 5 on the answer sheet.

For use by Michael Palumbo only. Received from Mind Garden, Inc. on April 27, 2016

No Confidence at All 1 Very Little Confidence 2 Moderate Confidence 3 Much Confidence 4 Complete Confidence 5

How Much Confidence Do You Have That You Could:

- | | 1 | 2 | 3 | 4 | 5 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. List several majors that you are interested in. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Use the internet to find information about occupations that interest you. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. Select one major from a list of potential majors you are considering. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. Make a plan of your goals for the next five years. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. Determine the steps to take if you are having academic trouble with an aspect of your chosen major. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6. Accurately assess your abilities. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7. Find information about companies who employ graduates of college majors in English. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8. Select one occupation from a list of potential occupations you are considering. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 9. Determine the steps you need to take to successfully complete your chosen major. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 10. Persist with your major or career goal even when you get frustrated. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 11. List several occupations that you are interested in. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 12. Find information about educational programs in engineering. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 13. Choose a career that will fit your preferred lifestyle. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 14. Prepare a good resume. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 15. Change majors if you did not like your first choice. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 16. Determine what your ideal job would be. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 17. Talk to a faculty member in a department you are considering for a major. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 18. Make a career decision and then not worry about whether it was right or wrong. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 19. Get letters of recommendation from your professors. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 20. Change occupations if you are not satisfied with the one you enter. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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	No Confidence at All 1	Very Little Confidence 2	Moderate Confidence 3	Much Confidence 4	Complete Confidence 5
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How Much Confidence Do You Have That You Could:

	1	2	3	4	5
21. Decide what you value most in an occupation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Ask a faculty member about graduate schools and job opportunities in your major.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Choose a major or career that your parents do not approve of.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Get involved in a work experience relevant to your future goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Resist attempts of parents or friends to push you into a career or major you believe is beyond your abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Figure out whether you have the ability to successfully take math courses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Describe the job duties of the career/occupation you would like to pursue.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Choose a career in which most workers are the opposite sex.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Find and use the Placement Office on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Move to another city to get the kind of job you really would like.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. Determine the academic subject you have the most skill in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. Find out the employment trends for an occupation in the next decade.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. Choose a major or career that will fit your interests.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. Decide whether or not you will attend a graduate or professional school to achieve your career goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. Apply again to graduate school after being rejected the first time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. Determine whether you would rather work primarily with people or with information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. Find out about the average yearly earnings of people in an occupation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. Choose a major or career that will suit your abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. Plan course work outside of your major that will help you in your future career.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. Identify some reasonable major or career alternatives if you are unable to get your first choice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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No Confidence at All 1 Very Little Confidence 2 Moderate Confidence 3 Much Confidence 4 Complete Confidence 5

How Much Confidence Do You Have That You Could:

- | | 1 | 2 | 3 | 4 | 5 |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 41. Figure out what you are and are not ready to sacrifice to achieve your career goals. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 42. Talk with a person already employed in the field you are interested in. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 43. Choose the best major for you even if it took longer to finish your college degree. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 44. Identify employers, firms, institutions relevant to your career possibilities. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 45. Go back to school to get a graduate degree after being out of school 5-10 years. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 46. Define the type of lifestyle you would like to live. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 47. Find information about graduate or professional schools. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 48. Choose the major you want even though the job market is declining with opportunity in this field. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 49. Successfully navigate the job interview process. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 50. Come up with a strategy to deal with flunking out of college. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Appendix C

Demographic Information Questionnaire

Please answer the following

What is your current academic major _____

The learning community I am apart of is _____

What is your current Grade Point Average (GPA) if applicable _____

Indicate the number of college credits you have completed to date _____

Indicate the number of college credits you have completed at UB _____

How do you describe yourself?

- Male
- Female
- Other

How would you best describe your ethnicity?

- White/ Caucasian
- Hispanic /Latino(a)
- Black/ African American
- Asian American

Native American

Multiracial

- Prefer not to say
- Other, please specify