MAJOR DECISIONS: A PHENOMENOLOGICAL STUDY OF THE EXPERIENCES AND DECISION MAKING PROCESSES OF UNDECIDED, FIRST-GENERATION COLLEGE STUDENTS

by

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ABSTRACT

KRISTEN GALLOWAY SIARZYNSKI. Major Decisions: A phenomenological study of the experiences and decision making processes of undecided, first-generation college students. (Under the direction of DR. MARK M. D'AMICO).

While many students decide to attend college for increased career opportunities, first-generation college students (FGCS) are far more likely than their peers to report attending college for this reason (Bui, 2002; Byrd & MacDonald, 2005; Martinez, Sher, Krull, & Wood, 2009). However, 75% of college students are unsure about their career or major when they enroll in college and these decisions are often made prematurely, without any real exploration due to pressure students feel to declare a major early (Cuseo, 2005; Gordon, 2007). The sooner these students get support, the better equipped they will be to select a major without impacting their time to degree (Terenzini, Springer, Yeager, Pascarella, & Nora, 1996).

The purpose of this qualitative study is to explore the experiences of first-generation college students (FGCS) who entered college undecided about their major to gain insight as to how they ultimately chose a major. The study utilized interpretative phenomenological analysis as the methodological framework and Social Cognitive Career Theory as the theoretical framework. Eight semi-structured interviews were conducted with FGCS who have a declared major but entered higher education as undecided students. Four overarching themes emerged from data analysis that captured the experiences and decision making influences of the participants including psychological burden, interest in exploration, role of resources, and motivation for majors.

DEDICATION

For Mila and Julia. You are the best thing I've done with my life. I love you forever.

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LIST OF ABBREVIATIONS

FCGS   First-Generation College Students

FYFT   First-Year Full-Time

IPA   Interpretative phenomenological analysis

IRB   Institutional Review Board

SCCT   Social Cognitive Career Theory

CHAPTER 1: INTRODUCTION

While many students decide to attend college for increased career opportunities, first-generation college students (FGCS) are far more likely than their peers to report attending college for this reason (Bui, 2002; Byrd & MacDonald, 2005; Martinez, Sher, Krull, & Wood, 2009). However, 75% of college students are unsure about their career or major when they enroll in college (Cuseo, 2005). Current national figures show that the undeclared major ranks 12th in enrollment, encompassing about 2% of all students (U.S. Department of Education Institute of Education Sciences, 2014). When considering students who have declared a major, but are still undecided, that percentage jumps to 10% (Eagan, Lozano, Hurtado, & Case, 2013).

One of the most important decisions college students have to make is selecting a major (Gordon & Steele, 2015). St. John (2000) stated: "there is, perhaps, no college decision that is more thought-provoking, gut-wrenching and rest-of-your-life oriented— or disoriented—than the choice of major" (p. 22). Like most undecided students, FGCS are often overwhelmed by the number of major and career opportunities they have to choose from (Gordon & Steele, 2015). Students entering college often admit that they know very little about what is involved in some of the careers they are considering, and it is not unusual for students to be unsure of how their strengths and limitations will impact the coursework for majors they are considering, or the tasks required in the specific occupations (Gordon & Steele, 2015).

This study will explore the experience of first-generation students who enter college undecided about their intended major to understand their experience as an undecided student, and to gain insight as to how these students ultimately chose a major.

The literature review will provide a context for framing this study and describe research related to first-generation students and the personal and institutional factors that influence the process of decision making associated with choosing a major. Understanding the stories and experiences of first-generation students who are undecided about their major will aid advisors and student support communities in assisting these students in their exploration process.

Background of the Problem

A 2014 Pew survey states "the disparity in economic outcomes between college graduates and those with a high school diploma or less formal schooling has never been greater in the modern era" (Taylor, P., Fry, R., & Oates, R., p.3). While more and more first-generation college students (FGCS) attend postsecondary school, they are still less likely to do so than their continuing generation peers (Ward, Siegel, & Davenport, 2012). They are also not as likely to persist and graduate from college (Choy, 2001; DeAngelo, Franke, Hurtado, Pryor, & Tran, 2011; Engle, 2008; Gibbons & Shoffner, 2004; Ishitani, 2003; Toutkoushian, May-Trifiletti, & Clayton, 2019; Ward, Siegel, & Davenport, 2012).

Commitment to education and career goals is often strongly linked to persistence and degree completion in retention research. (Wykoff, 1999). For FGCS, commitment to these goals has also been linked to a higher GPA, increased commitment to college, and college adjustment (Dennis, Phinney, & Chuateco, 2005). For many students, major selection is closely linked with career goals.

However, FGCS often encounter barriers that limit the information and experiences necessary to decide on a career or academic major (Choy, 2001). While continuing generation students typically have more career-related social capital (Nichols

& Islas, 2016), FGCS have been found to have more financial strain, less access to role models, and a lack of preparation for college coursework (Choy, 2001). These barriers can have a significant impact on decisions about academic majors and careers as well as goal attainment for FGCS (Ting, 2003).

Gordon and Steele (2015) list family, perceived career barriers, and defining work as a calling as the top three areas that influence major and career selection for college students. Institutions of higher education can also influence students' choice of major by creating barriers and facilitators in the major exploration process. Institutional barriers, including rigid curriculum design and pushing early declaration, have been found to have a negative impact on the decision making process (Cuseo, 2005; Lewallen, 1995; Tinto, 1993). Colleges and universities can facilitate the major declaration and exploration process through academic and career planning courses, quality advising and career centers, and an academic structure that provides an academic home for undecided students.

<div align="center">Statement of the Problem</div>

Students have many reasons for choosing a college major. Some have dreamed of their career, what they wanted to be when they grow up, since childhood, while others are influenced by their families to choose a major that leads to a specific career (Beggs, Bantham, & Taylor, 2008). Many students enter college without concrete career plans (Inkelas, Daver, Vogt, & Leonard, 2007). While being undecided about an academic major upon college entry is not necessarily negative, the earlier these students get the support they need, the better equipped they will be to select a major without impacting their time to degree (Terenzini, Springer, Yeager, Pascarella, & Nora, 1996).

A significant amount of research is available that describes the background characteristics (academic preparation, standardized test scores, socioeconomic status, college enrollment rates) and college experiences (credit hours earned, grade point averages, graduation and persistence rates, college knowledge) of FGCS (Bryan & Simmons, 2009; Bui, 2002; Cho, Hudley, Lee, Barry, & Kelly, 2008; Choy, 2001; D'Amico & Dika, 2013; Nguyen & Nguyen, 2018; Nichols & Islas, 2016; Pascarella, Pierson, Wolniak, & Terenzini, 2004). The process of how students select a major has primarily been explored through quantitative research models (Beggs et al., 2008; Cebula & Lopes, 1982; Chung, Loeb, & Gonzo, 1996; Malgwi, Howe, & Burnaby, 2005). There is a scarcity of current research on the role of institutional attitudes and policies in major and career exploration (Barefoot, 2003; Cuseo, 2005; Kramer, 1994; Lewallen, 1995; Titley & Titley, 1980). While these studies give us some context of the issue, they do not help us to understand how FGCS students make decisions about a major, nor do they help us to understand the essence of these students' experiences in their own words.

Qualitative research can help give undecided FGCS a voice so that student support communities have a better understanding of how they choose a major. These stories can also give university policymakers information to meet the needs of FGCS in their exploration and declaration of a college major.

Purpose of the Study

The purpose of this study is to explore the experiences of first-generation students who enter college undecided about their major to gain insight as to how these students ultimately chose a major. This understanding will aid advisors and student support communities in assisting these students in their exploration process.

Research Questions

The research questions specific to this study include the following:

1. What factors contribute to first-generation college students entering higher education without a major?

2. How do first-generation college students describe their experience as an undecided major?

3. How do first-generation college students describe their decision making process when selecting a major?

Significance of the Study

Research on retention indicates that career goals and commitment to an academic major are the greatest factors impacting persistence and graduation (Wykoff, 1999). Student's initial major selections are seldom well-informed (Gordon, 2007). Decisions about careers and academic majors are often made prematurely and without any real exploration due to pressure students feel to declare early (Gordon, 2007). In fact, majors are most often selected based on salary potential, peer and parental pressure, and popular culture (Beggs et al., 2008).

While many college students have informational needs, developmental needs, or personal and social concerns that prevent them from choosing a major, FGCS often encounter additional barriers that limit their experiences and the information they need to make appropriate career and major choices (Choy, 2001). Having these additional barriers in career exploration and decision making are particularly significant because career motives have been found to increase college commitment (Dennis et al., 2005). For FGCS, who are already not as likely to graduate as their peers (Choy, 2001; Engle,

2008; Gibbons & Shoffner, 2004; Ishitani, 2003), limited experience and information and a lack of appropriate decision making strategies leave FGCS at particularly high risk for attrition.

This study examines the process of how FGCS choose a major and the barriers and facilitators they experience in their selection of a major. Much of the previous research has focused on the characteristics and graduation and retention rates of this population. The results of this study contribute to the limited body of literature that examines FGCS from a qualitative perspective.

University personnel, including academic advisors and career counselors, and academic departments could benefit from understanding how policy decisions may or may not influence the way first-generation, undecided college students select a major. Having a better understanding of how FGCS make decisions about a major can aid university personnel in utilizing their available resources to help these students achieve success and increase their retention rate.

<div align="center">Theoretical Framework</div>

Social Cognitive Career Theory (SCCT) provides the theoretical framework for this study. SCCT incorporates concepts including interests, abilities, and environmental factors that impact confidence and readiness in decision making (Lent, Brown, & Hackett, 1994). This theory provides an appropriate framework for this study because it explores the way career choices are developed and turned into action (Gordon & Steele, 2015). Additionally, SCCT takes into account factors including the impact of peers and families on interests, self-efficacy, and goals (Lent, Brown, & Hackett, 1994), making

this a particularly appropriate theory for examining the ways FGCS develop career interests.

Methodology

This qualitative study utilizes an interpretative phenomenological analysis (IPA) to explore the experiences of first-generation undecided college students. Participant interviews were conducted to gain an understanding of the essence of the student's lived experiences.

Assumptions, Limitations, and Delimitations

In seeking to discover the individual and collective experiences of FGCS who are undecided about their major there is an assumption that there will be some similarities in their stories. In finding the similarities in the participant's experiences, this study aims to learn about the influences as well as the barriers and facilitators to this process.

This study has two major limitations. First, participants selected for this study will have declared a major after entering college in Fall 2016 or 2017 as an undecided student. Some students will have declared their major in their first semester while others may have just declared a major in the previous term. This variance could be a limitation to this study. While each student would have entered the university as an undecided major, some remained undecided significantly longer than others which could impact their experience. Additionally, the decision making and major declaration process could have occurred as long as three years ago for some participants, and for others, it may have occurred only three months ago. This may impact how much a student can recall about their experience and how much time they have had to reflect on it.

Additionally, I am affiliated with the university in which this research took place. Therefore, participants may not be as forthcoming in interviews due to my role at the university. For this reason, students I have advised in the past were excluded from this study. Additionally, my background, having worked with both FGCS and undecided students at the institution has certainly impacted my worldview, and this may have impacted the way participants responded to my questions.

This study is delimited to undergraduate students enrolled at a 4-year, public university. Additionally, delimitations will include:

1. FGCS who entered the university as first-year, full-time students in Fall 2016 or 2017 undecided about their major.

2. Students who are currently enrolled and have a declared major.

Participants were delimited to those students who were enrolled as first-year full-time (FYFT) students at entry because transfer students, and others with substantial credit hours, have less time to decide on and declare a major without an increase in their time-to-degree and are therefore affected differently than FYFT students. This study was also delimited to students enrolled in Fall 2016 and 2017 to ensure they have had time to declare any of the competitive majors offered at the university. Finally, the study was delimited to students that have not been advised by the researcher to eliminate any conflict of interest.

<div align="center">Definition of Terms</div>

Undecided College Student – refers to "students who are unwilling, unable, or unready to make educational and/or vocational decisions" (Gordon & Steele, 2015, p. viii). This

term was used interchangeably throughout the study with students who are undecided about their major.

First-Generation College Students (FGCS) – "students whose parents did not complete a baccalaureate degree or in the case of any individual who regularly resided with and received support from only one parent, an individual whose only such parent did not complete a baccalaureate degree" (U.S. Department of Education, 1998, para. f1).

Continuing Generation College Students – "students who have at least one parent who had some postsecondary education experience" (Redford & Hoyer, 2017, p. 3).

Conclusion

While there is a wealth of research on FGCS, there is limited information on how these students select a major or the barriers and facilitators they face throughout this process. Through learning more about the experiences of undecided FGCS, their exploration process, and the barriers and facilitators they face, colleges and universities will have a clearer understanding of the needs of this population. This understanding can aid university personnel in utilizing their available resources to help these students achieve success and increase their retention rate.

CHAPTER 2: LITERATURE REVIEW

Introduction

The purpose of this study is to explore the experiences of first-generation college students (FGCS) who enter a 4-year university undecided about their major. Three research questions guided the inquiry: (1) What factors contribute to first-generation college students entering higher education without a major? (2) How do first-generation college students describe their experience as an undecided major? (3) How do first-generation college students describe their decision making process when selecting a major?

This literature review begins with the students of focus in this study, first-generation college students. This includes an examination of the seminal studies on the background and academic characteristics of first-generation college students, followed by a focus on their college enrollment and performance patterns, college experiences, and what is already known about how these students choose a major. Next, a review of the literature on undecided college students is provided. This will include reasons for indecision as well as influences in the decision making process. Following this review, the limited body of research on institutional barriers and facilitators to the exploration process is discussed. After the review of these studies, social cognitive career theory (SCCT), which serves as the theoretical framework for this study, is presented. The primary themes in the study as well as the sub-themes, found in the literature, are shown in Table 1.

Table 1

Thematic Organization of Literature Review

Primary Themes	Subthemes
First-Generation College Students	Defining First Generation College Students (Education, 1998, Pascarella et al., 2004; Pascarella et al., 2004; Prospero & Vohra-Gupta, 2007; Spiegler & Bednarek, 2013; Ward et al., 2012)
	Characteristics (Bui 2002; Choy, 2001; D'Amico & Dika, 2013; Engle, 2007; Gibbons & Schoffner, 2004; Horn & Nunez, 2000; Nguyen & Nguyen, 2018)
	College Enrollment (Becker, 1975; Cardoza, 2016; Choy, 2001; O'Connor et al., 2010; Pazcarella & Terenzini, 2005; Perna, 2006; Sandefur et al., 2006; Toutkoushian et al., 2018; Ward et al., 2012)
	College Performance (Billson & Terry, 1982; Chen & Carroll, 2005; Choy, 2001; Engle, 2008; Ishitani, 2003; Martinez et al., 2009; Pascarella et al., 2004; Toutkoushian et al., 2019)
	College Experience (Bryan & Simmons, 2009; Byrd & MacDonald, 2005; College Board, 2012; Gibbons & Schoffner, 2004; London, 1989; Longwell-Grice & Longwell-Grice, 2008; Olenchak & Hebert, 2002; Nguyen & Nguyen, 2018)
	Choice of Major (Choy, 2001; Garriott et al., 2013; Olenchak & Herbert, 2002; Ting, 2003)
Undecided Students	Defining Undecided Students (Gordon, 2007; Gordon & Steele, 2015; McDaniels et al., 1994; Simon, 2012; Titus, 2006)
	Reasons for Indecision (Bloom et al., 2011; Carduner et al., 2011; Cuseo, 2005; Ellis 2014; Gaffner & Hazler, 2002; Gaililee-Belfer, 2012; Galotti et al., 2006; Goldstein, 1965; Gordon & Steele (2015); Kelly & Lee, 2002; Leppel et al., 2001; Lewallen, 1993; Pryor et al., 2010; Stater, 2011; Thompson & Feldman, 2010)
Major Decision making	Decision Making Influences (Beggs et al., 2008; Choy, 2001; Duffy & Dik, 2012; Duffy & Sedlacek, 2007; Gordon & Steele, 2015; Holland, 1957; Leppel, 2001; Lindley, 2005; Luzzo & McWhirter, 2001; Roe, 1957; Simmons, 2008; Stater, 2011; Swanson et al., 1996; Vargas, 2004)
	Institutional Barriers (Barefoot, 2003; Carduner et al., 2011; Choy, 2001; Cuseo, 2005; Lepre, 2007; Titley & Titley, 1980; Upcraft, 1995)
	Institutional Facilitators (Choi et al., 2013; Garis, 2014; Gordon & Steele, 1992; Gordon & Steele, 2015; Jurgens, 2000; Ledwith, 2014; Makela & Rooney, 2014; Thompson & Feldman, 2010)

Social Cognitive Career Theory	Overview (Bandura, 1986; Bullock-Yowell et al., 2014; Conklin, Dahling, & Garcia, 2013; Dahling, & Garcia, 2013; Feldt & Woelfel, 2009; Gibbons & Borders, 2010; Gibbons, Rhinhart, & Hardin, 2019; Gordon & Steele, 2015; Jin, Watkins, & Yuen, 2009; Lent & Brown, 1996; Lent et al, 1994; Lent et al., 2002; Lent et al., 2013; Niles & Harris-Bowlsbey, 2009; Olsen, 2014; Raque-Bogdan & Lucas, 2016; Rogers, Creed, & Glendon, 2008; Scheuermann, Tokar, & Hall, 2014; Tang, Fouad, & Smith, 1999; Wright, Jenkins-Guarnieri, & Murdock, 2013) Key Theoretical Tenets (Bandura, 1986; Gibbons et al., 2019; Gibbons & Shoffner, 2004; Lent et al., 1994; Lent et al., 1996; Lent et al., 2002; Longwell-Grice, 2003; O'Brien et al., 2000; Olsen, 2014; Ramos-Sanchez & Nicols, 2007; Raque-Bogdan & Lucas, 2016; Vuong et al., 2010) Models of Development (Lent et al., 1994, Lent et al., 2002)

First-Generation College Students

A subset of undecided students who have received a great deal of attention from researchers is FGCS. Policy makers and researchers have used a variety of definitions to define FGCS (U.S. Department of Education, 1998; Pascarella et al., 2004; Próspero & Vohra-Gupta, 2007; Spiegler & Bednarek, 2013; Ward, 2012). This study utilized the definition found in the Higher Education Act, which states a first-generation college student is:

> A) An individual both of whose parents did not complete a baccalaureate degree; or B) In the case of any individual who regularly resided with and received support from only one parent, an individual whose only such parent did not complete a baccalaureate degree (U.S. Department of Education, 1998, para. f1).

To understand how to assist this subsection of undecided students, researchers must first have a better understanding of who these students are, including their characteristics, college enrollment and performance information, their unique college experience, and what is known about how FGCS chose a major.

Characteristics

A number of studies have found that FGCS have characteristics that are associated with a reduced probability of enrollment and success in college including coming from an economically disadvantaged home and starting college without as much academic preparation as other students (Bui, 2002; Choy, 2001; D'Amico & Dika, 2013; Engle, 2007; Gibbons & Shoffner, 2004; Nguyen & Nguyen, 2018). Additionally, FGCS may face other barriers associated with college success including lower degree aspirations (Horn & Nunez, 2000), lower scores on standardized testing (Bui, 2002; Choy, 2001), and having taken less advanced coursework in high school (Choy, 2001).

College Enrollment

There is general agreement in the literature that there is a strong association between a parent's educational attainment and the choices students make regarding college (Pascarella & Terenzini, 2005). Students with more highly educated parents are more likely to enroll in college (Cardoza, 2016, Ward, Siegel & Davenport, 2012), while FGCS may face educational, financial, social, and cultural challenges in both enrolling and succeeding in college (Cardoza, 2016; Choy, 2001; Ward, 2012). Toutkoushian, Stollberg, & Slaton (2018) found that 64.2% of students who have at least one parent who has a bachelor's degree enrolled in a 4-year university while only 34.8% of FGCS enrolled in a 4-year university.

Human and social capital theories may explain this association between college attendance rates and parental education levels (Becker, 1975; Toutkoushian, Stollberg, & Slaton, 2018). Human capital theory would argue that because educational attainment and income are often related, families with more highly educated parents more often have

the fiscal resources to pay for their children's education (Toutkoushian et al., 2018).

Continuing generation students may also perform better in school, which could also

contribute to their educational aspirations and enrollment. Social and cultural capital

theories suggest that continuing generation students with at least one parent who has

college experience have a higher probability of learning about college and may, therefore,

be more likely to attend college themselves (Toutkoushian et al., 2018). Continuing

generation students are also more likely to have increased interactions with other adults

who attended college to offer information and serve as role models in forming

educational aspirations of their own (O'Connor, Hammack, & Scott, 2010; Perna, 2006;

Sandefur, Meier, & Campbell, 2006).

College Performance

Many of the FGCS who enroll in college do not fare as well as their continuing

generation counterparts. FGCS have higher attrition, a higher probability of dropping out

after their first year, and are less likely to graduate (Choy, 2001; Engle, 2008; Gibbons &

Shoffner, 2004; Ishitani, 2003). Toutkoushian et al. (2019) found that 49.7% of

continuing generation students earned a 4-year degree while only 25.9% of FGCS earned

a 4-year degree.

One explanation for this could be the characteristics and experiences of FGCS

often associated with lower rates of college persistence. Studies have shown that FGCS

take fewer credits, have lower college GPAs, and are not as likely to live on campus as

their peers (Pascarella et al., 2004). FGCS also work more hours than their continuing

generation peers, which is known to negatively affect persistence (Martinez et al., 2009;

Pascarella et al., 2004). Additionally, FGCS are less likely to be enrolled full-time or to

participate in programs typically linked with college success (Chen & Carroll, 2005, Pascarella et al., 2004).

College Experience

Gibbons and Shoffner (2004) explain that FGCS perceive the college experience differently than other students. In addition to general student concerns like understanding how to register for classes or what courses to take, FGCS also have to learn "college knowledge" or what the College Board (2012) describes as a new language, code of behavior, and set of responsibilities. The structure and practices of many colleges presume students have the college knowledge and social skills required to successfully maneuver within the college environment, which leaves FGCS at a disadvantage (Nguyen & Nguyen, 2018). FGCS often feel isolated and have to navigate cultural conflicts between home and college (London, 1989), but their parents are often not able to provide the same advice and support as their continuing generation peers. (Bryan & Simmons, 2009; Longwell-Grice & Longwell-Grice, 2008).

FGCS commonly express guilt about being away at college while their families struggle (Olenchak & Hebert, 2002). In fact, FGCS often feel pressure to live close to their families even if this means they will not have the same professional opportunities as they would living somewhere else (Bryan & Simmons, 2009). The pressure to be at home and near family often compels FGCS to live at home while they are in college or to go home on weekends (Bryan & Simmons, 2009).

Major Selection

FGCS face hurdles that limit the information and experiences available to them to make decisions about their career (Choy, 2001). Some of these barriers include financial

stress, a lack of access to role models, parents who have limited information about education and college, and lack of preparation for college coursework (Choy, 2001). These hurdles can influence their decision making and career-related goal attainment of FGCS (Ting, 2003).

Additionally, because their families have often sacrificed so they can attend college, FGCS often have feelings of guilt when they do not pursue majors or careers that their parents had in mind for them (Olenchak & Hebert, 2002). In an effort to make their parents happy and impress their friends, FGCS are more likely to commit to a major early and stay in majors they are not interested in (Olenchak & Hebert, 2002). FGCS are also more prone to have unrealistic expectations about potential major and career options due to their lack of experience and exposure (Garriott, Flores, & Martens, 2013).

<div align="center">Undecided Students</div>

Published studies on the predictors of persistence and outcomes of undecided college students are surprisingly few in higher education literature (Dika et al., 2015). Many of the seminal studies on this population of students are dated and focus on advising practices and interventions. Gordon and Steele's (2015) book *The Undecided College Student: An Academic and Career Advising Challenge* (4th ed.) is frequently referenced in this review of the literature as they have compiled a comprehensive review of the studies on undecided students and are frequently referenced by the National Academic Advising Association. This review of the literature on undecided students utilizes much of Gordon and Steele's research in conjunction with other seminal studies.

Gordon and Steele (2015) describe undecided students as "undecided, unwilling, or unable to make appropriate educational and vocational decisions" (p. viii). Rather

than the term undecided, some studies use the term deciding, which is more proactive and positive (McDaniels, Carter, Heinzen, Candrl, & Wieberg, 1994). In fact, both researchers and institutions of higher education alike are using more positive and proactive terms to describe those students that have not selected a major including deciding, exploratory, discovering, open-majors, etc. (Gordon & Steele, 2015; McDaniels et al., 1994). The term undecided is used in this study as it is more often used in the research literature and has an easy identification with its meaning.

While being undecided about a college major is developmentally appropriate in traditional college students and not necessarily negative, it can affect time to degree as well as student success (Gordon & Steele, 2015; Leppel, 2001; McLean, 2007; Reynolds, Gross, Millard, & Pattengale, 2010; St. John, Hu, Simmons, Carter, & Weber, 2004). As many students who have declared a major actually remain undecided, researchers believe the population of undecided students is larger than many realize (Cuseo, 2005; Montag, Campo, Weissman, Walmsley, & Snell, 2012). Montag et al. (2012) believe it is difficult to have an accurate count of the number of students who are undecided about their major because many of them select a major when applying to college due to pressure from parents and friends, high potential salaries and earnings, and popular culture. While they may have declared a major, a student's initial choice of major is often made without much thought or exploration and therefore is subject to change (Gordon, 2007). Cuseo (2005) concludes that of all the students entering college, 75% are unsure about their major or career plans and at least 50% of all students who have declared a major did so prematurely, with little exploration and will likely change their major before graduation. McDaniels et al. (1994) believe that about 77% of all first and second-year college

students are undecided about their major. Gordon (2007) agreed that this percentage of students was high and estimated that at least 50-75% of college students are undecided about their major when they enroll. While it is difficult to accurately count the number of students who are undecided about their major, it is clear this group of students is large enough to warrant extensive research. Fortunately, researchers have had more success in classifying career indecision types and understanding reasons for indecision.

Career Indecision Types

Students who are undecided about their major make up a heterogeneous student group that varies in types of indecision (Santos, 2001). Early literature describes major and career indecision as extreme cases of chronic indecision in which students are unable to make decisions of any type (Fuqua & Hartman, 1983; Goldstein, 1965; Tyler, 1953). Later research attempts to distinguish developmental and chronic indecision. Unlike chronically undecided students, developmentally undecided students have higher self-efficacy over time due to higher levels of autonomy (Guay, Senecal, Gauthier, & Fernet, 2003).

Numerous studies have attempted to categorize levels of decidedness, on a spectrum from chronic to developmental indecision, to develop subtypes of decidedness. Gordon (1998) reviewed 15 such studies examining career decidedness and synthesized the research. Based on this analysis, Gordon (1998) proposed a Continuum of Decidedness which included seven categories: very decided, somewhat decided, unstable decided, tentatively undecided, developmentally undecided, seriously undecided, and chronically indecisive. This *Continuum of Decidedness* has become a model embraced by the National Academic Advising Association (NACADA) as it demonstrates the way

student needs vary (Gordon, 1998). This model also helps those who work with these students understand that being undecided has less to do with a lack of choice than with their sociological and psychological makeup, their developmental stage, access to information, and decision making skills.

Reasons for Indecision

If each student falls somewhere along Gordon's *Continuum of Decidedness* when they enter college, the first step in assisting this population is to determine their specific area of need (Gordon & Steele, 2015). These needs can be classified into three categories: informational needs, developmental skill needs, and personal/social concerns (Gordon & Steele, 2015).

Informational Needs. For many students, lack of experience and exposure to a variety of educational or vocational fields hinders their ability to choose a major early in their college experience (Cuseo, 2005; Galilee-Belfer, 2012; Lewallen, 1993; Orndorff & Herr, 1996). Gordon and Steele (2015) categorize the informational needs of undecided first-year students into three categories: lack of understanding of their personal characteristics including values and goals, interests, abilities, energy levels, and needs; lack of information and understanding of the majors available to them; and lack of knowledge about careers and occupational areas.

One characteristic that most college students have in common, including those students who are undecided in major, is that they have little information about the careers and majors available to them (Cuseo, 2005; Ellis, 2014; Gaffner & Hazler, 2002; Galilee-Belfer, 2012; Kramer, 1994; Lewallen, 1993; Orndorff & Herr, 1996). In fact, less than 10% of students who begin college with a declared major state that they know "a great

deal about their intended major" (Lemoine, cited in Cuseo, 2005, p.5), and neither

declared or undeclared students have done much work in exploring majors (Orndorff &

Herr, 1996).

The lack of knowledge about majors and careers may stem from high schools

with varying degrees of career and educational planning services and the fact that this is

all a distant concern for many students at the time of college entry (Lewallen, 1993).

Students often gravitate to careers and majors they are familiar with due to their lack of

exposure (Galilee-Belfer, 2012; Kramer, 1994; Orndorff & Herr, 1996). Even those

students who have decided on a major and career often do so arbitrarily, narrowing their

initial selections based on a handful of opportunities they are familiar with through

chance circumstances (Cuseo, 2005; Orndorff & Herr, 1996). Their career and major

decisions are often impacted by a lack of information about themselves, their values and

aptitudes, and the relationship between academic majors and future careers (Cuseo,

2005).

Developmental Skill Needs. Students who fall in the developmental skill needs

category either have difficulty with decision making (Gaffner & Hazler, 2002; Gordon &

Steele, 2015), or the strategies they use to make decisions about majors and careers are

ineffective (Orndorff & Herr, 1996). Students can have difficulty with decision making in

general due to maturity level and lack of experience.

Some students have interests and abilities in multiple areas, which can make

choosing a specific direction challenging (Bloom, Tripp, & Shaffer, 2011; Carduner,

Padak, & Reynolds, 2011). These students find choosing a major difficult because there

are so many options that fit with their abilities and interests (Twenge & Campbell, 2008).

They are afraid that in choosing, they will make a mistake, which hinders them from making a choice at all (Carduner et al., 2011).

Personal/Social Concerns. Gordon & Steele state that some undecided students may be experiencing conflict in several ways including values-goal conflict, interest-ability conflict, interest-energy level conflict, and conflict with people they admire and want to please (Gordon & Steele, 2015). Value-goal conflict can occur when students want a job that provides significant financial compensation, but their interests are in fields that do not match this desire (Gordon & Steele, 2015; Pryor, 2011). Interest-ability conflict can occur when a student is interested in a particular field but has a marginal ability in the subjects required or when a student has a strength in a subject, but no interest in majors related to it (Gordon & Steele, 2015). Interest-energy level conflict occurs when a student has an interest in a field but not the courses or education level required to obtain this goal (Gordon & Steele, 2015). Finally, conflict with parents and other significant people whom the student admires occurs when students are unable to separate their own needs from what others believe are good majors and careers (Gordon & Steele, 2015).

Choice Anxiety. In addition to a student's developmental stage prohibiting them from making a good career choice, many undecided students contend with choice anxiety and a lack of exposure to majors and careers (Cuseo, 2005; Lewallen, 1993; Orndorff & Herr, 1996; Titley & Titley, 1980). There are a staggering number of potential majors at many institutions (Carduner et al., 2011; Cuseo, 2005; Lewallen, 1993). The list of majors, often including many concentrations and specializations within them, can feel overwhelming and cause anxiety for students who are trying to find a major that is right

for them (Carduner et al., 2011; Lewallen, 1993). The literature shows that due to external pressures, students are more likely to make decisions about their major that are premature and impulsive than they are to delay making a decision (Cuseo, 2005). Even the well-intentioned faculty and advisors who ask undecided students about their major can have a negative impact and lead students to feel inadequate because they have not selected a major (Cuseo, 2005).

Major Decision Making

Whether or not a student is the first in their family to attend college, deciding on a major is one of the most significant and possibly the first autonomous decisions that many students make when they enter college (Galotti et al., 2006). The literature shows an array of influences on students' major and career choices. This section will focus on three of these: family, career barriers, and work as a calling. Additionally, this section will highlight some of the institutional barriers and facilitators to major and career development that students encounter in college.

Decision Making Influences

Family. Parents often play a significant role in shaping decisions about majors. While research on the influence of families on career and major selection dates back to some of the first publications on the topic of major choice (Holland, 1957; Roe, 1957), parents have become increasingly involved in their students' decision making (Simmons, 2008). Millennial students reported that they relied on parents for advice about decisions regarding academics and careers (Simmons, 2008). In fact, students are more often influenced by their families and peers than by doing research to identify a major (Beggs et al., 2008). While parental influence is strong for many students, it can be even more

significant if a parent has an interest or expertise in the area they are recommending (Leppel, 2001; Stater, 2011).

FGCS often have academic and career goals that are similar to their peers but due to their lack of exposure to college, they do not understand how their high school classes and grades relate to their later success (Vargas, 2004). Due to their lack of exposure to the college environment, parents of FGCS are often not able to help students make these connections (Vargas, 2004). Additionally, parents of FGCS are more likely to give their children advice, which leads to increased doubt in students regarding their academic capabilities and a lack of confidence to declare some majors (Vargas, 2004).

Career Barriers. Swanson et al. (1996) found that the type and number of barriers to a career that a student perceives has a significant influence on their decision making process. Students often hold the view that they cannot overcome external barriers to career progress, which leads to limited career choices even when all other factors are positive (Lindley, 2005). Examples of career barriers can include sex discrimination, uncertainty, racial discrimination, lack of support from significant others, decision making difficulties, and disability/health concerns (Swanson et al., 1996). Career barriers can be particularly significant for students who are female and those who are ethnic minorities. A study by Luzzo and McWhirter (2001) found these students perceived significantly more career and educational barriers than their counterparts.

Work as a Calling. There has been a significant increase in the literature that relates to seeking purpose and the idea of finding one's calling in a career (Duffy & Dik, 2012). This idea of work as a calling can have a significant impact on undecided students (Gordon & Steele, 2015). While there is a positive correlation between feeling called to a

particular career and career decidedness and confidence, the increase in the feeling that careers should be equated to a sense of purpose or a calling can have a negative impact on some students (Duffy & Sedlacek, 2007; Gordon & Steele, 2015). This is particularly true for students who are unable to declare the major they feel a strong calling to when it is not a possibility for them due to selective admissions or their inability to be successful in the coursework (Gordon & Steele, 2015). When these students are forced to choose alternate majors, they may foreclose as their sense of calling makes it difficult to choose another major. Some undecided students may feel they have a calling, but for reasons such as parental pressure, they decide not to pursue it (Gordon & Steele, 2015). Conversely, parents may be exerting pressure on their children to pursue a career that is not of interest to them.

Institutional Barriers

Beyond the more personal decision making influences, institutional attitudes, rigid curriculum design, and a push for students to declare early can impact the decision making process of undecided students (Cuseo, 2005; Lewallen, 1995; Tinto, 1993). While some institutions of higher education are extremely supportive of undecided students, others are indifferent or even non-supportive (Lewallen, 1993). The institutions that are indifferent or non-supportive can affect a student's willingness to be undeclared as well as their subsequent experience (Lewallen, 1995).

Rigid Curriculum Design. A number of academic programs require that students are able to identify and declare their major upon entry or during their first year to avoid delays in graduation. These degree programs limit the student's ability to explore majors and give urgency to major selection. Titley and Titley (1980) found that courses of study

that include an extensive amount of sequential requirements within the first two years can have a negative impact on undecided students and preclude exploration. Additionally, those majors with heavy course sequencing and a large number of pre-major courses (e.g. business, engineering, and health sciences), require students to identify and declare their major during their first semester in order to graduate in four years (Cuseo, 2005). Undecided students often feel their options are limited when their major of interest will cause a significant increase in their time to degree (Titley & Titley, 1980). For some undecided students, this also causes feelings of failure (Titley & Titley, 1980).

Push to Decide Early. According to Cuseo (2005), many universities have policies that require students to declare a major when they enroll or during their first year at the latest. These requirements often lead students to make premature commitments and impulsive decisions, as they have not had the opportunity for self-discovery and exploration that typically happens early in the college experience (Cuseo, 2005; Lepre, 2007).

While many institutions allow students to select "undecided" on their admissions application, others do not recognize this as an option (Upcraft, 1995). Some of the institutions that do allow students to enroll as undecided require or strongly encourage students to identify and declare their major during their first year (Cuseo, 2005). A national survey of almost 1,000 institutions showed that about 44% of colleges and universities required or strongly encouraged students to declare their major in their first year (Barefoot, 2003). With many colleges and universities today offering over 100 majors, the decision is even more difficult for students who feel pressured to choose from

such an expansive list without the time to adequately research the major and career

options that may be a good fit for them (Carduner et al., 2011).

Institutional Facilitators

While institutional policies and attitudes like curriculum design, a focus on

independence, and the push to decide early can be barriers for undecided students, many

institutions have policies that help these students to make informed major and career

decisions. This section will highlight some of the institutional facilitators to the success

of undecided students found in the literature: administrative structure, academic and

career planning courses, advising, and career centers.

Administrative Structure. Some larger institutions advise undecided students

through special colleges, typically called "university college" or "university

division"(Gordon & Steele, 1992). This administrative approach provides advising

services designed specifically for the needs of undecided students and assists the

institution in better identifying and serving this student population (Gordon & Steele,

2015). Gordon and Steele (2015) recommend an administrative structure that offers all

entering freshmen, both decided and undecided, the same opportunity to identify, study,

and confirm a major decision in a supportive and carefully supervised environment. This

approach recognizes that most first-year students need the time, space, and resources to

explore majors and careers that will be the best fit for their values, strengths, and interests

(Gordon & Steele, 2015).

Academic and Career Planning Courses. Courses that assist students in the

exploration of majors and careers is one of the ways that universities facilitate the student

decision making process (Jurgens, 2000; Ledwith, 2014). These courses are often led by

academic advisors, career center staff, or university faculty and may focus on career exploration, self-assessment, decision making, and strategies to gain experience including job searches, informational interviews, and internships (Ledwith, 2014; Thompson & Feldman, 2010). Research has proven the value of these courses in promoting student growth in self-awareness, students' understanding of vocation and how it fits into their lives, and aiding student identification of majors and careers of interest (Thompson & Feldman, 2010).

Academic Advising.   Academic advising is another resource that can assist undecided students with major exploration (Ellis, 2014; Galilee-Belfer, 2012; Gordon & Steele, 2003). Advisors can help to explain major selection so that students understand that careers and majors are not always linear and that the major a student declares does not necessarily have to align with a certain career (Galilee-Belfer, 2012). Advisors can also encourage exploration of interests through general education and electives (Galilee-Belfer, 2012; Gordon & Steele, 2003). Most undecided students need information about available majors, the curricula associated with those majors, and their relationships to careers (Gordon & Steele, 2003). Advisors with expertise in working with this student population can help students relate their interests and strengths to majors by assisting them to prioritize their ideas, narrow alternatives, and organize exploratory tasks around the options they have identified (Gordon & Steele, 2003). Centralized advising centers with well-trained professional advisors who are knowledgeable about many academic areas are especially advantageous to undecided students as they are often able to provide the integration of academic and career information that is vital to undecided students (Gordon & Steele, 2015).

Career Centers. Institutions of higher education have increased their focus on career services in recent years (Ledwith, 2014). Career centers are often viewed as a positive resource that have meaningful impact in the career development of students (Choi et al., 2013; Makela & Rooney, 2014). Garis (2014) states that career center staff are leaders in career development programming initiatives on campuses, particularly concerning resources geared towards helping the undecided student population. When working with undecided students, career centers provide resources that encourage exploration of both major and career opportunities (Makela & Rooney, 2014).

Social Cognitive Career Theory

SCCT provides an appropriate foundation to study undecided students (Gordon & Steele, 2015) and was selected to provide the theoretical framework for this study. Developed in 1994, SCCT is based on Bandura's (1986) general social cognitive theory (Lent et al., 1994). SCCT describes three distinct but interrelated aspects of career development that students experience including (1) the way in which academic and career interests develop, (2) the way educational and career choices are made and (3) the way in which academic and career success is obtained (Lent, Brown, & Hackett, 2002). Three primary tenets serve as the building blocks of SCCT: self-efficacy beliefs, outcome expectations, and goals (Lent et al., 1994). In addition to these tenets, SCCT acknowledges other influences on a student's confidence and willingness to make decisions regarding careers including personal characteristics (interests, abilities, values), environmental factors, and behaviors (Lent et al., 1994).

SCCT has served as the theoretical framework for many studies on college students (Bullock-Yowell, McConnell, & Schedin, 2014; Conklin, Dahling, & Garcia,

2013; Feldt & Woelfel, 2009; Gibbons, Rhinhart, & Hardin, 2019; Jin, Watkins, & Yuen, 2009; Lent & Brown, 1996; Lent et al., 2013; Olsen, 2014; Raque-Bogdan & Lucas, 2016; Rogers, Creed, & Glendon, 2008; Scheuermann, Tokar, & Hall, 2014; Tang, Fouad, & Smith, 1999; Wright, Jenkins-Guarnieri, & Murdock, 2013). In particular, this theory has been useful for addressing concerns related to the persistence of undecided students who face additional obstacles including FGCS (Gibbons & Borders, 2010; Gibbons et al., 2019; Niles & Harris-Bowlsbey, 2009; O'Brien et al., 2000; Olsen, 2014; Raque-Bogdan & Lucas, 2016; Ramos-Sanchez, & Nichols, 2007). Some of these studies include research related to the academic performance and first-year adjustment of FGCS (Ramos-Sanchez, & Nichols, 2007) and the educational achievement of first-generation students in their second year of college (Vuong et al., 2010). As part of the description of the key theoretical tenets below, there are also examples from the literature to contextualize issues specific to first-generation and undecided students.

Key Theoretical Tenets

Self-efficacy. Self-efficacy is a set of beliefs that lead individuals to make judgments about whether they will be able to be successful in certain tasks (Lent et al., 1994). SCCT asserts that students are more likely to have an interest in, decide to peruse, and perform better in activities in which they have strong beliefs of self-efficacy when they have the necessary skills and supports (Lent et al., 2002). These beliefs are often rooted in accomplishments of their own, past accomplishments of those around them, social influences, and physical and emotional states (Lent et al., 2002).

SCCT may be particularly useful when exploring career and major options with FGCS, as these students may eliminate options that would be a good fit for their interests

and abilities based on erroneous assessments of themselves and their ability to be

successful (Gibbons & Shoffner, 2004). FGCS often surmount considerable barriers

throughout their college experience and may not feel they are as accomplished or

successful as they should have been (Olsen, 2014). Additionally, considering the high

attrition rate of FGCS, (Chen & Carroll, 2005), some FGCS may have friends or family

that have gone to college and not been successful (Olsen, 2014). As self-efficacy is also

based on vicarious experiences, some FGCS may believe they will not be successful after

seeing friends and family who were not successful and therefore foreclose on career

options (Gibbons et al., 2019; Gibbons & Shoffner, 2004). Gibbons (2004) suggests

those working with FGCS who have foreclosed career options can reintroduce and

reexamine the career options later to judge self-efficacy and outcome expectations for

accuracy.

  Outcome Expectations. Outcome expectations, the second tenet of SCCT, is the

"imagined consequences of performing particular behaviors" (Lent et al., 1994, p. 83). In

contrast to self-efficacy, which causes a person to evaluate their potential success in a

given endeavor (e.g., "can I do this?"), outcome expectations are a person's outcome

projections of performing a particular behavior (e.g., "if I do this, what will happen")

(Lent, 1994; Olsen, 2014). Lent et al. (2002) postulate that students are more likely to

engage in activities they believe will lead to positive outcomes. According to SCCT, a

person's decision to engage in activities, the effort they put forth, and their eventual

success are determined in part by outcome expectations and self-efficacy beliefs (Lent et

al., 2002).

FGCS may have chosen a particular major, or college in general, with the expectation that it would lead to a prestigious career with a high salary (Longwell-Grice, 2003). However, these outcomes may not be within their control. Olsen (2014) states that FGCS may base their career decisions on inaccurate expectations given the work environment will likely be vastly different from that of their parents.

Goals. Goal setting often guides behaviors and helps people to endure setbacks. SCCT states that goals are interwoven with self-efficacy and outcome expectations (Lent et al., 1994). Students often create goals they believe they can achieve based on the outcomes they want to gain in reaching their goals (Lent et al., 2002). Self-efficacy is related to goals in that students with higher self-efficacy typically create more challenging goals that are more specific, while students with lower self-efficacy typically create less ambitious and more general goals (Lent & Brown, 1996; Lent et al., 1994). When students have high career-related self-efficacy combined with specific goals, they are more likely to believe they will be successful and, in turn, are more prone to succeed despite barriers (Lent et al., 2002).

Brooks-Terry (1988) suggests that FGCS who do not have specific goals will be "vulnerable to the pulls of his (or her) other role sets" (p. 132). FGCS often have both individual goals, such as graduating debt-free, as well as familial goals such as returning home to serve as a role model or buying a home for their parents (Olsen, 2014). Sometimes these goals compete (e.g., living with parents to save money or help with expenses, while having the need to live in a major city for certain career options) (Olsen, 2014). SCCT recognizes the influence of goals on career-related decisions and

establishes a framework for counselors and advisors to understand and investigate goal

conflict (Olsen, 2014).

Models of Development

Interest Formation Model. As shown in Figure 1, career interests are rooted in

outcome expectations and self-efficacy (Lent et al., 2002). Over the course of their lives,

students experience many career-related activities in their schools, homes, and

communities. The number, as well as the type of activities students encounter, is likely

related to the environment and culture they grow up in (Lent et al., 2002). SCCT

suggests that a student must have exposure to direct or vicarious persuasive experiences

that produce self-efficacy beliefs and expectations for positive outcomes for interests to

develop in fields in which students have talent. (Lent et al., 1994, Lent, et al., 2002).

Interest development is most fluid until late adolescence, when general interests become
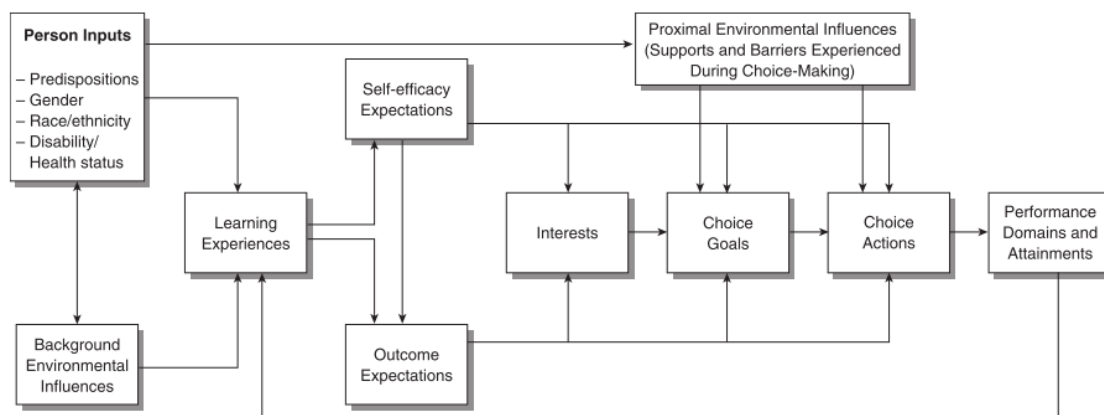
more stable (Lent et al., 2002).

Figure 1. A Simplified View of How Career-related Interests and Choices Develop over

Time, According to SCCT.

Reprinted from Lent, Brown, & Hackett (2002, p. 751).

Career Choice Model. As shown in Figure 1 (Lent et al., 2002), the career choice process builds on the interest model. Career interests, largely developed through self-efficacy and outcome expectations, foster academic and career objectives (Lent et al., 1994; Lent et al., 2002). Students are more likely to take action to reach these goals by declaring a particular major when the goals are important to the student, detailed, made known, and supported by friends and family (Lent et al., 2002). However, SCCT suggests that a student's decisions are often limited by their experiences (environmental influences) including economic constraints, pressure from family, and academic limitations (Lent et al., 2002). SCCT postulates that interests are the most powerful indicator of the types of career choices students will make when they are made in supportive environments. When environmental conditions are restrictive, students are more likely to compromise their interests in favor of more practical or culturally acceptable considerations (Lent et al., 2002).

Task Performance Model. SCCT's performance model explains two features of performance: a student's level of success in academic and career pursuits and the extent to which they persevere despite barriers (Lent et al., 1994: Lent et al., 2002). SCCT suggests that one's ability affects performance directly (students do better and persist longer in subjects for which they have a higher aptitude) as well as indirectly (when paths of self-efficacy and outcome expectations intervene) (Lent et al., 2002). In essence, performance involves both ability and motivation (Lent et al., 2002).

Conclusion

Previous research gives us an understanding of FGCS (Bui, 2002; Choy, 2001; Engle, 2007; Nichols & Islas, 2016) as well as quantitative data about how students, in

general, select a college major (Beggs et al., 2008; Malgwi et al., 2005). However, there

is a scarcity of qualitative research that describes the way students choose majors. There

is also a lack of research that explores the intersection of FCGS and major selection and

the barriers and facilitators to major declaration that these students face. SCCT provides

a useful lens to explore major decision making and gives us a framework to understand

factors that influence this process. The chapter that follows describes the methodology

for exploring the experiences of undecided FGCS at one 4-year public university.

CHAPTER 3: METHODOLOGY

The purpose of this study is to explore the experiences of first-generation students who enter college undecided about their major to gain insight into how these students ultimately chose a major. This chapter will provide a rationale for a qualitative design using interpretative phenomenological analysis (IPA) and describe procedures for participant selection, data collection, and analysis. Additional considerations including the researcher's subjectivity and methods used to ensure trustworthiness of the data collection and analysis will be discussed. The research questions specific to this study include the following:

1. What factors contribute to first-generation college students entering higher education without a major?

2. How do first-generation college students describe their experience as an undecided major?

3. How do first-generation college students describe their decision making process when selecting a major?

Research Design

Rossman and Rallis (2003) state that qualitative research "seeks to understand the deep meaning of a person's experiences and how she articulates these experiences" (p. 97). As the purpose of this study is to understand the experiences of FCGS who entered college undecided about their major, a qualitative research design was selected. A qualitative design will support the examination of the participant's perceptions of their reality in a way that is not quantifiable.

IPA served as the methodological framework for this study. IPA "is concerned with the detailed examination of personal lived experience, the meaning of experience to participants and how participants make sense of that experience" (Smith, 2015 p. 9). Smith and Osborn (2008), describe IPA as a two-stage process of interpretation in which "the participants are trying to make sense of their world; the researcher is trying to make sense of the participants trying to make sense of their world" (p. 53). Two types of analysis are developed from this process: (1) the phenomenon from the perspective of the participant, and (2) what the participant is communicating, either consciously or unconsciously (Smith & Osborn, 2008). This requires that researchers empathize and reflect to have an understanding of their experience.

IPA is most suitable for the in-depth study of individuals in specific groups (Cohen & Omery, 1994) and is based on an inductive process that seeks to discover patterns that emerge from the data (Taylor, Bogdan, & DeVault, 2016). IPA is a suitable methodology for this study as little is known about the experience of FGCS who are undecided about their major or their experience in selecting and declaring a major. It is important for the researcher to understand this through the perspective of the participants themselves. Given that participants may not have thought about their experience of major exploration and declaration and the impact that their status as a FGCS may have had, IPA's focus on sense-making is critical.

<div align="center">Setting</div>

The setting for this study will be a large, public research university located in the southeastern United States. Total enrollment for the institution as of Fall 2019 was nearly 30,000 students, including almost 25,000 undergraduates. While the university

has approximately 80 undergraduate majors, 25% of first-year students belong to University College, making undeclared the most popular choice for entering students. Approximately 42% of all new undergraduates are FGCS, and 35% of first-year students belong to racially underrepresented populations. Additionally, 76% of undergraduate students receive financial aid, and 54% of these students receive Federal Pell Grants, awarded to undergraduate students who display exceptional financial need.

Participants

Sampling in a qualitative study should be "based on informational, not statistical, considerations. Its purpose is to maximize information, not facilitate generalization" (Lincoln & Goba, 1985, p. 202). The goal of purposeful sampling is not to select participants with similar characteristics with the hope of generalizing data, rather the goal is to select participants based on their ability to contribute to the research questions. Thomas and Pollio (2002) assert that participants in phenomenological studies must have both experienced the phenomenon and be willing to talk about that experience. Thus, purposeful sampling is necessary to ensure all participants have experienced the phenomenon being studied.

This study utilized purposeful sampling to recruit participants who met the following criteria:

1. FGCS who entered the university undecided about their major,
2. Currently enrolled students who have a declared major.

Recruitment targeted FGCS who enrolled in the university in Fall 2016 and 2017 as FYFT undeclared students. FGCS status was determined based on self-reporting on admissions applications. Students who reported that neither parent had earned their

bachelor's degree were targeted for this study. Additionally, those students who reported data for only one parent were recruited for this study if that parent did not earn a bachelor's degree.

Enrollment dates were selected as several majors at the university have specific declaration requirements that take time to complete. Students should have been able to complete the requirements to declare any of the competitive majors on campus within two academic years. Students who were denied entrance into a competitive major upon their acceptance to the university were excluded from the study. These students were not truly undecided, rather they were unable to declare their intended major and may have continued to work towards entrance into this major. Additionally, students who were advised by the researcher were excluded from the study for ethical considerations. The participant sample for this study was generated on a first-come-first-serve basis.

The researcher received approval for an Institutional Review Board (IRB) waiver of consent for identifying potential participants. Once granted, the researcher utilized the university's reporting system, to which they had access as an employee of the institution, to generate a list of potential participants who met the initial criteria. Students who met those criteria received an email with a brief description of the study and the requirements to participate. A $20 Amazon gift card was offered for participation in the first interview and a $10 Amazon gift card was to be offered for participation if a second interview was required.

Participant Profiles

A call for participants was sent to 205 students with a declared major who enrolled in the university in Fall 2016 or 2017 as an undecided student. Eight people

responded and each of them was invited to participate. Interviews took place in a study room of the university library. The two males and six females chose to participate ranged in age from 19-21 years. Two of the participants identified as African American, one as Hispanic, and five as Caucasian. One participant declared a major in art, three declared a business major, one declared computer science, and three declared a liberal arts major. Table 2 summarizes the participant demographics. Each participant is identified with pseudonyms.

TABLE 2

Participant Demographics Summary

Name	Age	Gender Identity	Race/Ethnicity	Year Enrolled	Classification	Major
Brooklyn	20	Female	African American	2017	Junior	Philosophy
Caroline	20	Female	Caucasian	2017	Junior	Marketing
Edward	21	Male	African American	2016	Senior	Computer Science
Juliet	21	Female	Caucasian	2016	Junior	Art
Megan	21	Female	Caucasian	2016	Senior	English
Sean	21	Male	Caucasian	2016	Senior	Finance & Accounting
Sophie	21	Female	Caucasian	2016	Junior	English
Vanessa	19	Female	Hispanic	2017	Junior	Finance & Accounting

Note. Gender identity and race/ethnicity are listed as reported to the university by the participants.

Through the use of qualitative inquiry, the researcher was able to investigate the experiences of FGCS, who enter college undecided about their major to gain insight as to how they ultimately choose a major. A brief profile of each participant is below.

Brooklyn

Brooklyn is a 20-year-old African American female majoring in philosophy. She is the youngest of four children in her family. Her parents, who both served in the military, always emphasized that their children should go to college or join the military. Brooklyn decided on college. Once enrolled in college, Brooklyn knew that she wanted to attend law school but was unsure what major would best prepare her. She wanted a major that challenged her but was overwhelmed by her options and couldn't rely on her parents (who she typically relied on for help with decisions) or close friends (none of whom entered college as an undecided major) for help with making this decision. Brooklyn did not feel she received much support from her advisor, who told her she couldn't tell her what classes to take if she didn't have a major. Therefore, she utilized the internet to explore the best majors to prepare for law school and took courses (economics, religious studies, and philosophy) to get experience in some of the majors she found from these results. Brooklyn ultimately declared philosophy as her major based on positive experiences in philosophy courses. She also felt that majoring in philosophy would provide an intellectual challenge as well as improve her writing and critical thinking skills, which would help prepare her for law school.

Caroline

Caroline is a 20-year-old Caucasian female majoring in marketing. She is the youngest of three siblings and currently lives at home with her parents and commutes to campus for classes. Caroline says that while neither of her parents went to college, their example showed her that you can be successful without having a college degree and never felt pressured to attend college. However, college was always something she

wanted to do. Her dad owns his own business, and she took several business classes in high school. These experiences made her think about declaring business, but she wanted to explore other options before declaring. During her first semester at the university, she took a first-year seminar course designed for students who are undeclared but interested in business and said this class helped her feel like she wasn't the "odd one out" as an undeclared major. Caroline wants to have a job that is flexible and that she enjoys. She also wants to stay close to family and has declared marketing to accomplish these goals.

Edward

Edward is a 21-year-old African American male whose parents immigrated to the United States. He is a computer science major and stated he hadn't given much thought to college before enrolling. In fact, Edward says he applied to college in class at the spur of the moment based on the encouragement of a friend who was also applying. When he arrived at college, Edward stated he never thought he would graduate but since he didn't have any better options, he thought he would "see where this goes." As a FGCS, Edward says he didn't know what a major was before coming to college and hadn't given it any thought. When he began college, Edward said he felt somewhat awkward about not having a major. He was too shy to seek out resources and got most of his information regarding majors from the internet. While he was able to rule out some possible majors through taking elective coursework and general education helped him pick history as a minor, Edward expressed a desire to have had a class in which he could have explored majors. Although he says his greatest interests are in the fields of psychology and film, ultimately, he picked computer science as a major for its job outlook and potential salary. However, picking a major that would be an intellectual challenge was important.

Juliet

Juliet is a 21-year-old Caucasian female majoring in art. Her mom was a stay-at-home mom and her dad was a truck driver. Juliet says her parents didn't talk much about college but that her dad encouraged her to attend only if she was going to study something she loved. She explains that she had an interest in art before she applied to college but received negative feedback about going to college for art from people close to her, so she delayed declaring a major in hopes of exploring through general education courses. While she planned to "figure it out" when she got to college, Juliet says she began to feel pressure to declare in her second semester. She talked with some of her professors, which helped her eliminate majors. Juliet says that her biggest influence to declare art was her dad, who encouraged her to do whatever makes her happy. She ultimately applied and was accepted into the art program where she is concentrating in photography.

Megan

Megan is a 21-year-old Caucasian female majoring in English with a plan to attend graduate school for library science. While her parents took a few classes in community college, Megan stated that many of her cousins have attended college and that it runs in the "second generation" of her family. She described some general anxiety as well as stress about being undecided and a feeling like there was a "timer" to decide. Megan described students being broken into groups by major at Convocation on the very first day of college and says this caused a lot of stress. She was involved in a learning community for undecided students that helped her to connect with other students without a declared major. Megan was able to explore majors through general education and

taking electives and received messages about the value of a liberal arts education. She described some very positive aspects of being undecided and said she wouldn't have picked her current major, a choice she feels really good about, if she had to declare a major on her college application.

Sean

Sean is a 21-year-old Caucasian male majoring in finance and accounting who says he hadn't thought about majors at all before college. Rather, everyone else was applying, and he thought that is what he was supposed to do. While neither of his parents attended college, he was raised by his mom who was laid off from her corporate job and struggled to find employment without a college degree. Sean says his mom stressed that he attend college. However, he feels the lack of role models in his life caused him to have trouble deciding on his major. While he has declared a major, he says he still feels unsure and doesn't know what he wants to do for a career. He chose to major in business because he did well in the introductory courses and feels it's a flexible major that will afford him a comfortable salary so he can support a family. While he likes working with children, becoming a teacher did not feel like an option for him due to the average annual salary of teachers.

Sophie

Sophie is a 21-year-old Caucasian female majoring in English. Her dad went to community college but did not complete a degree. While he has had a career in the military, Sophie says her dad always wished he had a degree and pushed Sophie to attend college. She has many interests in things like art, humanities, and science, and although she considered attending college for art or English while she was in high school, she

received negative feedback regarding those majors. However, Sophie said she didn't understand why anyone would declare a major before coming to college because she feels it is important to explore. Taking general education courses led her to discover the field of linguistics and prompted Sophie to take her first college-level English class. General education coursework also helped her to eliminate subjects she previously thought she might be interested in, such as bioinformatics. Sophie wanted to find a major that would lead to a job she liked. After being discouraged about becoming a teacher in the past, she realized becoming a high school English teacher is something she really wants to do. Sophie stated that she had a more lax approach to college before declaring her major, but now has a better understanding of who she is as a student.

Vanessa

Vanessa is a 19-year-old Hispanic female majoring in finance and accounting. Her parents immigrated to the U.S., and Vanessa says that while her parents have wanted her to attend college since she was little, she didn't have many role models who had been to college to tell her about majors or help her decide on a major. Vanessa began her search for a major by taking some general education classes, including biology, and Googling careers and majors that make the most money. While she also went to the university's career and advising centers, she did not find these resources helpful. One of her role models at the university had a degree in accounting, and many of her teachers talked to her about the flexibility of this major, which appealed to her. Finding a major that would challenge her was also important to Vanessa. As she began taking business classes, she realized she liked them, and that business was a good fit for her values and interests.

Data Collection

This study utilized semi-structured interviews with 8 FGCS who entered a 4-year public university in Fall 2016 and 2017 as an undecided FYFT student and have since declared a major. Smith and Osborn (2015) recommend a small sample size for IPA studies as the detailed case-by-case analysis is time-consuming and the purpose of the study is to "say something in detail about the perceptions and understandings of this particular group rather than prematurely make more general claims" (p. 55). Smith and Osborn (2015) state that semi-structured interviews, used in most IPA studies, allow for dialogue between the researcher and participant in which initial questions can be modified based on the response of the participant. This allows the researcher to have a better understanding and, as far as possible, for the participant to share in the direction of the interview as the experiential expert (Smith & Osborn, 2015).

Each participant engaged in an in-depth interview that lasted approximately 60 minutes. Interviews took place in a study room in the campus library, an educational space convenient to participants, to ensure privacy. Prior to each interview, the researcher gave each participant a consent form that contained an overview of the study and informed participants of any potential risks or benefits. Each participant had an opportunity to read the consent form and ask any questions before the interview to ensure they were comfortable with the interview process. Confidentiality measures were shared with participants.

Interviews were recorded on the researcher's password protected phone. At the conclusion of each interview, the recording was uploaded to a password protected

professional transcription service and deleted from the phone. Pseudonyms were used on all transcripts throughout the research study to protect confidentiality.

Additional evidence was gathered to triangulate the interview data and used to understand more about departmental declaration policies and major exploration resources available to students (Creswell, 2013). The researcher examined electronically published documentation related to student resources, academic majors, and declaration policies from sources including departmental websites and the institution's catalog to develop a deeper understanding of the institutional environment.

<div align="center">Data Analysis</div>

Smith and Osborn (2015) suggest a step-by-step approach to the analysis of IPA that begins with looking for themes in the first case, connecting those themes, and continuing analysis with other cases. Each interview was transcribed at its conclusion. The researcher then reviewed each transcript several times for accuracy and understanding before uploading to Nvivo 12 for manual coding. Once uploaded, the researcher highlighted interesting or significant statements and identified 18 initial factors that emerged. The initial factors and the number of participants who identified them as part of their experience or decision making process are shown below in Table 3.

TABLE 3

Frequency of Factors

Research Question	Initial Factors	Number of Participants who Identified Factor
Factors that contributed to being undecided		
	Decision making difficulty	4
	High school resources	3
	Lack of role models	3
	Desire to explore	8

Experience as Undecided		
	Isolation	5
	Advising and career centers	4
	Sustained engagement	3
	Time and space for exploration	4
Decision making Process		
	Pressure to decide	3
	Lack of confidence and uncertainty	4
	Role models	4
	Internet	4
	Coursework	6
	Information and experience	3
	Career and financial stability	6
	Flexibility	4
	Major/career fit	7
	Challenge and growth	3

IPA research requires each transcript to begin afresh, allowing the material to speak in its own terms rather than being overly influenced by what other participants have said (Smith & Osborn, 2015). After creating an initial list of factors related to each research question, the researcher examined each case individually to look for patterns and variations that emerged. Four overarching themes were selected based on prevalence within the data: psychological burden, interest in exploration, role of resources, and motivation for majors. After the overarching themes were established, each interview was recoded based on these themes. Table 4 illustrates the overarching themes and the frequency they were coded for each participant. Unique themes found in some cases were also utilized in the data analysis.

TABLE 4

Overarching Theme Frequency

Theme	Psychological Burden	Interest in Exploration	Role of Resources	Motivation for Majors
Brooklyn	3	3	5	7
Caroline	9	2	4	4
Edward	4	3	11	8
Juliet	3	5	2	3
Megan	6	4	6	3
Sean	3	1	5	3
Sophie	2	6	2	6
Vanessa	6	3	7	8
Total	36	27	42	42

Trustworthiness

Trustworthiness, an essential component in any research study, has four components according to Lincoln and Guba (1985). These components are credibility, transferability, dependability, and confirmability. This study utilized the following methods to ensure trustworthiness: clarifying researcher bias, triangulation, member checking, and peer debriefing.

Clarifying researcher bias is a validity procedure that requires the researcher to disclose any assumptions, beliefs, and biases that may shape their analysis (Creswell & Miller, 2000). While this validity procedure uses the lens of the researcher, it is situated within the critical paradigm where the researcher reflects on any factors that may shape their interpretation of the data (Creswell & Miller, 2000). This procedure includes a subjectivity statement to be transparent about the possible beliefs and biases of the researcher.

Triangulation is a validity procedure that makes use of multiple and different sources to corroborate evidence (Creswell, 2013). This practice requires that researchers provide corroborating evidence instead of relying on a single event or datum in the study (Creswell & Miller, 2000). Triangulation was achieved through examining electronically published documentation, including campus resources and information on majors and declaration policies gathered from the university and departmental websites and the academic catalog. A list of university resources available to aid undecided students was compiled before conducting interviews. These resources were identified through the university's website as well as the websites of departments that work specifically with undecided and first-generation students on campus. This preliminary list aided the researcher in probing when participants discussed campus resources that were utilized when deciding on a major. This list also helped the researcher to learn more about what resources the participants were aware of and which ones they were not aware of or did not access. Specific information regarding major requirements, declaration procedures, and departmental policies were accessed when participants discussed them to gain further information about barriers and facilitators they may have experienced in their major exploration and declaration process.

Member checking is another method of ensuring trustworthiness that was utilized in this study. Lincoln and Guba (1985) describe member checking as "the most crucial technique for establishing credibility" (p. 314). It allows participants to review their meanings, correct errors, and provide additional information for clarity and understanding (Lincoln & Guba, 1985). To facilitate member checking in this study, the researcher sent

each participant a copy of their interview transcript as well as their profile and a summary of the themes that emerged to solicit feedback and check for accuracy.

Peer debriefing is described as an external evaluation of the research process to assess the meanings and interpretations of the data collection process (Lincoln & Guba, 1985). Creswell and Miller (2000) describe peer debriefing as a means of adding credibility as it utilizes someone external to the study to provide feedback and act as a sounding board for ideas. This study utilized a Ph.D. qualitative researcher who works with undergraduate students as a peer debriefer. The peer debriefer reviewed emerging categories at the beginning of data analysis and again with the final report.

Considerations

The researcher has a responsibility to respect the rights and values of the participants and to anticipate ethical issues that could result from the research process (Creswell, 2013). While this study posed a minimal risk for participants, the researcher protected them by ensuring the data collection, analysis, and storage process followed proper protocol. The purpose of the study, as well as the time commitment, was explained in writing to potential participants during the recruitment process and reiterated in person before interviews. Participants were also informed that their participation in the study was voluntary and that they could withdraw at any time. While participants shared personal information, the interview questions did not address overly sensitive topics. The researcher and supervising faculty members had access to the collected data transcribed by a third-party transcription service. Data was securely stored on password-protected networks and de-identified with the use of pseudonyms that replaced the names of people

and places before analysis. The protocol in this study was reviewed and approved by the IRB and any necessary adjustments were made before data collection.

<center>Subjectivity Statement</center>

To clarify researcher bias and have a better understanding of how the researcher might have arrived at specific evaluations, the researcher must describe biases and assumptions (Merriam & Tisdell, 2016). This is not to remove the researcher's worldview, but to account for this worldview and to understand that it might have influenced the conclusions of the study (Maxwell, 1996).

My educational background is in the field of social work, and I began my career in higher education through work with college access programs. I worked with an Educational Talent Search program, a federal TRIO program that assists first-generation, low-income middle and high school students to prepare for college. While I worked with middle and high school students, the program was housed on a college campus, and the part of my job I most enjoyed was working with high school seniors through the application process and the beginning of their transition to college. This experience led me to work with a TRIO Student Support Services program where I was fortunate enough to work with many students who were the first in their families to attend college. I served as a secondary academic advisor to the students in this program and learned about the students I served, including the pressure that many of them felt to be successful and to be a good role model for their younger siblings. During my four-year tenure with this program, I developed very close relationships with many of these students and still keep in touch with many of them today.

For the past nine years, I have worked in the field of academic advising with students who are undeclared or transitioning between majors. During this time, I have served as an advisor and taught a first-year seminar course to students who entered college undecided about their major. Many of these students have expressed that they feel a sense of stress about not having identified a major and feel a sense of urgency, based on either internal pressure or pressure from families and peers. During their major exploration process, I have witnessed many of the facilitators and barriers to major exploration. All their experiences and stories have left a deep impact on me, and my experiences with these students have left me with biases that will shape my study.

Conclusion

This chapter discussed the methodology for an IPA study on the experiences of first-generation students who enter college undecided about their major. IPA design was explained and a description of the research setting and participants, as well as data collection and analysis methods, were discussed. Additionally, strategies to ensure confidentiality and quality were reviewed and a subjectivity statement was provided to give the reader a better understanding of the views and experiences of the researcher.

CHAPTER 4: RESULTS AND FINDINGS

The purpose of this study was to explore the experiences of FGCS who enter college undecided about their major to gain insight as to how they ultimately chose a major. Research questions included:

1. What factors contribute to first-generation college students entering higher education without a major?

2. How do first-generation college students describe their experience as an undecided major?

3. How do first-generation college students describe their decision making process when selecting a major?

Chapter Four presents findings from data collected through interviewing eight FGCS who entered a 4-year university as undecided majors and later declared. Findings are shared as they relate to each research question to capture the experiences of participants during three distinct points in their journey, including enrolling in college without a major, their experience as undecided students, and their decision making process in selecting a major. Quotes from participant interviews are woven throughout to illustrate participant experiences from their own voice. Finally, overarching themes identified through the three research questions will be presented.

Research Question 1: What Factors Contribute to First-Generation College Students

Entering Higher Education Without a Major?

While the experiences of each participant varied, four factors emerged from the analysis of the data that contributed to participants enrolling in higher education without selecting a major. Four participants discussed difficulty with decision making as the

most important factor in enrolling in college as an undecided major, while six cited a lack of resources in high school and lack of role models as being significant. Ultimately, each of the eight participants in this study stated that they wanted to spend more time exploring majors before committing to one.

Decision making Difficulty

While some of the participants in this study said they had not given much thought to majors before entering college, four had thought a great deal about their potential major prior to enrolling but expressed difficulty with decision making. Reasons for this ranged from generalized difficulty with decision making and anxiety to receiving negative feedback regarding majors being considered.

While choosing a major was a difficult decision for many of the participants, Caroline described a more generalized difficulty with decision making. Like the other participants in this study, she did not declare a major when she applied to college and stated it was due to the fact that "it felt scary" to decide her future at such a young age. She described feeling overwhelmed by the gravity of deciding on a major even though she knew that in reality, she could change her mind and that it was not something that was necessarily "set in stone." She talked about her difficulty with decision making several times throughout her interview. She stated:

> I think for me; definitely, one thing is I'm very indecisive. It's something I've definitely been working on trying to get better at. Again, I know I said earlier that business was at the forefront of my mind. That was something that I feel like has always been there. I sorta knew that that's probably the route I would go. It's just

what I enjoyed. But at the same time, I was having a hard time like actually

deciding.

Although she was interested in business, Caroline was overwhelmed at the enormity of

the decision she had to make. While she had taken several business classes in high

school and had a role model in her father, who worked in the field of business, she lacked

the decision making skills and confidence to declare her major of interest. She hoped that

more time and experience with the major would help her to feel sure it was the right

choice.

Decision making was difficult for Megan as well, who said her anxiety prevented

her from declaring a major before entering higher education. Megan said her anxiety

stemmed from being undecided about her future career and plans for a college major.

She went on to describe a feeling of paralysis that resulted from this anxiety, which

prevented her from exploring majors and careers until she entered college:

Right before college, like junior year or senior of high school, is when my anxiety

was really bad, and part of it was that I had no idea what I wanted to do. I had

anxiety about picking something. So, until like the last moment of school, I did

not do anything. It wasn't until my freshman year of college that I started thinking

more in-depth about things.

While several participants mentioned anxiety regarding being undecided once enrolled in

college, Megan's experience illustrates that this anxiety can begin much sooner. It can

also cause a delay in declaring a major. Later in her interview, Megan noted that her

anxiety "went away" after she declared a major.

For two of the participants, difficulty with decision making stemmed from

discouragement from important people in their lives. These participants had an idea of what they wanted to major in when they went to college; however, the negative feedback they received regarding this choice caused a lack of confidence and clarity. Juliet stated that she wanted to major in art when she was in high school and shared this desire with friends and family. She said that many of the people she shared her plans with replied, "You are going to school for art? That's so stupid." This feedback caused her to doubt herself and her choice of major. She decided to rule out art as a major but thought she would still like to go to college, so she decided to enter college without a major. Sophie had a similar experience in receiving negative feedback regarding her potential major and career choice in high school. She stated that she did not even think of majoring in English when she was applying to college due to some of the negative comments she got about teaching. She described several people close to her telling her that there was nothing she could do with an English degree other than teach. Sophie stated that her stepdad, a person she says she looks up to, often said, "if you can't do, you teach," and that really discouraged her. In looking back, Sophie wished she had not allowed other people's opinions to direct her and cause her to doubt herself.

Beyond some of the more personal reasons that contributed to FGCS entering higher education without a major, a lack of resources also played an important role in not feeling prepared to make such a big decision. Six of the participants in this study cited a lack of resources as a contributing factor to entering higher education without a major. Specifically, participants in this study expressed a lack of opportunities to explore majors and careers in high school and a lack of role models in their lives who had been to college themselves.

High School Resources

     Three participants, Edward, Vanessa, and Sean, said they did not do any exploration in high school that would have prepared them to choose a major on their college application. In fact, both Edward and Vanessa discussed the fact that they were not clear about what a major was and did not know how to go about selecting one. Edward stated: "I didn't even know what a major was. Like, I was so lost in the college application process." Vanessa also stated that she didn't have any exposure to the concept of a major and had not been exposed to any career exploration activities in high school. She stated, "I was not told about [majors] or like how to choose a major. I wasn't really exposed to like many things that I could do if that makes sense."

     Sean said he felt unprepared to choose a major from his experience in high school. He discussed that he did not have any help exploring majors or potential careers through his high school coursework or from high school personnel. Sean elaborated:

> I think it's just like an overall lack of preparation in regard to high school.
> Counselors were useless – [they just said] 'go to college.' No clue what I'm
> studying. It kind of seems like you just have to go out and hunt for like what you
> need to find.

     As FGCS, these participants all expressed feeling ill-prepared for making decisions on careers and majors. They did not receive any resources in high school through guidance counseling, interest inventories, or courses to explore their interests. In fact, two of the participants stated they were unsure what a major was prior to entering college. They did not feel high school prepared them to make decisions about majors or careers.

Lack of Role Models

In addition to feeling ill-prepared by their high schools to make decisions regarding a major or possible career, the same participants discussed a lack of exposure to information that would prepare to make these decisions in their personal lives. They did not feel they had family or peers that could act as role models to expose them to different fields of interest. They also didn't feel they had anyone they could talk to about this decision.

Sean said he didn't have a social circle who had experience with college or careers that required a college degree. This lack of a social circle meant he didn't have anyone to look up to or talk to about majors or potential careers. He described feeling "blind – like I know my purpose, but I don't have any specifics on how that'll work out." Sean said his purpose was to have a family and to treat others with kindness and respect, but he didn't know what major would best prepare him for the life he wanted. He was interested in religious studies and education but also felt enormous pressure to earn enough money to support a family. He had not been exposed to a variety of career options within his social circle and felt this contributed to his entering college as undecided.

Like Sean, Edward and Vanessa said, they lacked role models who could expose them to a variety of career fields. They agreed that this lack of role models was a factor in their decision to enter higher education undecided about their major. Vanessa described a lack of role models who could teach her about college majors or careers when she said:

I never knew anyone who went to college, so, it was just so new to me. I was just

like, let's just get there. It was just baby steps, and my parents knew nothing

about it, so they couldn't even tell me.

She didn't feel her parents or anyone in her social circle could help her with this decision.

Edward elaborated that a lack of role models was the primary reason for his entering

higher education as an undecided student. He said:

If I would've actually known people in different fields or people who went to

college, I could have asked around and really thought about what major I wanted

to pick before I got here as opposed to waiting a year or so and then deciding.

These participants described a lack of resources as the primary factor in entering

higher education without a major. They did not feel they had resources that were helpful

in high school through exploratory courses, teachers, or guidance counselors. A lack of

role models in their own lives who had been to college meant that at least two

participants in this study were not familiar with the concept of majors. Additionally, they

did not have role models to gain experience from vicariously.

Desire to Explore

Whether it was due to difficulty with decision making or a lack of resources, all of

the participants expressed that they were not ready to commit to a major before enrolling

in higher education. Each of them hoped to delay their decision and expressed a desire to

explore their options once they were enrolled through coursework or the utilization of

campus resources. Sophie was one of the participants who expressed that she wanted to

explore before committing to a major. While some of the participants said they felt

deficient in some way, or that they should have known what major they wanted to select before they entered college, Sophie did not share this belief. She stated:

> I didn't really understand why anyone could pick a major going in. Like I kind of wanted to go through it first before I even picked anything. Before I came [to college], I didn't realize that your major was such a big thing. I thought that most people went into college without a major. In fact, when they asked me to declare as undecided, I was like, why do I even need to declare right now? That's kinda silly."

Sophie saw being undeclared as a developmentally appropriate place to be as an entering college student.

Like Sophie, Vanessa was also unready to commit to a major when she entered college. Instead, she wanted to explore majors when she got to college. She hoped to accomplish this by utilizing campus resources and decided she would "figure it out when I got [to college]" rather than picking a major she was not sure about. Vanessa thought delaying her decision would give her time to explore majors. She stated, "I'll just go undecided for now, take some classes I might be interested in, and that's what I did."

While all of the participants were not ready to commit to a major prior to enrollment in college and wanted an opportunity to explore, some had no ideas about possible majors, and some had many majors in mind. Megan said that before college she had "absolutely no idea" about a major. Rather, she had a "long list of things" she did not want to major in (including math). She said she "literally had no idea" about a major. Sophie was on the other end of the spectrum and had lots of ideas of possible majors that she had difficulty narrowing down.

I wanted to be an animation person for a long time. I wanted to do art school, and then I decided that that was too expensive. And then I wanted to be a writer for a really long time, and then I was kind of like, do I even go to college for that? I explored archaeology, anthropology, the sciences I was interested in for a while. Genetics. I was pretty interested in genetics coming up to college. So when I went into college, like one of my biggest things I wanted to explore was genetics and biology.

Sophie had several ideas in mind that she wanted to explore before deciding whether they would be a good fit. Edward also expressed an interest in having more time and experience to explore majors and gather information before committing to one major. Edward's desire to explore majors and careers was based on what he perceived as a lack of information. He believed his status as a FGCS was one of the reasons he didn't have enough information to be ready to commit to a major before enrolling in college. He stated:

I like to think before I make decisions, so I felt like [as a FGCS] I didn't have a lot of information, so I didn't want to just pick a major; like come to college, pick a major and the year later, have to drop the major because I didn't know what I was doing. If I wasn't first-generation, I don't think I would have been undecided. Probably not.

Although Caroline is also a FGCS, her father owns a business, and she was able to gain self-efficacy through seeing her father's success. She had also taken some business classes in high school and thought she would likely declare business. However, she was not yet ready to commit to a major without more exploration. She explained:

I guess I just thought if I come in undecided, I can explore my options. I'm not stuck in this one, you know, lane of business classes and I can have more leeway of like, 'oh, let me take this class this semester and let me take this one because you know, that business class isn't required right now cause I'm not declared.' I just had more room to figure out for sure what I wanted to do.

Regardless of where they were in their exploration process, many participants expressed that they wanted to wait until they started college and had taken some classes before committing to a major. They were hopeful that their coursework would help them to have a better idea of the major that would be best for them. Juliet stated, "I had no idea what I wanted. I was just like, I'll figure it out when I get there." She went on to explain, "I wasn't sure what general education classes I'd take that might interest me in something, so I thought, we'll see where it goes." Brooklyn said she also wasn't exactly sure what she wanted to major in and "was just like, I'll finish my general education classes and hopefully they will help me decide. After I am done with [general education courses], I'll just kind of see."

All of the participants in this study had, in common, a desire to explore majors. When they were completing their college applications, they were not ready to check a box next to one of the majors to declare it. Some participants had no idea what a major was or which one they would like to pursue, others had several ideas they wanted to try out before declaring, and some participants had an idea what major they wanted to declare but hoped to spend a little more time confirming it was the right choice for them. Each of the participants hoped to explore majors once they began their college experience

and hoped the time and space they had in general education courses would give them the opportunity they needed to make the best decision.

In total four main factors contributed to the participants in this study entering higher education without declaring a major: decision making difficulty, lack of resources in high school, lack of role models, and a desire to explore majors in college. Reasons for decision making difficulty varied from generalized difficulty with decision making, anxiety regarding decision making, and negative feedback from significant people on majors being considered. Some of the decision making difficulty could have stemmed from a lack of resources in high school and a lack of role models with college experience. Two of the participants expressed a lack of knowledge on the concept of a major and stated they did not have any opportunities in high school to explore majors or careers. These participants cited a lack of courses to explore career fields and academic disciplines as well as a lack of help from guidance counselors and other forms of assistance to make decisions about future majors and careers. This, in conjunction with a lack of role models who had been to college, left participants without a specific major in mind when they enrolled in college. These participants felt strongly that if they had more role models and resources earlier on, they would have had a more clear idea of their major when they entered higher education.

In light of decision making difficulties and an absence of role models and resources in high school, all of the participants in this study expressed that they did not declare a major upon enrollment in college because they were not sure which major would be the best option for them. One of the participants knew her intended career path but was unsure of the best major to prepare for that path. The remaining participants

either had no idea what major to pursue or had several options in mind but were not ready

to pick one. While they may have been in different places on the continuum of

decidedness, they all had in common a desire to explore majors before selecting one to

declare.

Research Question 2: How do First-Generation College Students Describe Their
Experience as an Undecided Major?

The FGCS who participated in this study described their experiences as undecided

students. More than half of the participants described feelings of isolation in their

experience as an undecided major. Advising and career centers only increased feelings of

anxiety and isolation for participants. However, not all experiences were negative.

Several participants were involved in sustained engagement activities that increased

feelings of support and decreased the participants' sense of isolation. Additionally, half

of the participants felt that being an undecided major gave them the time and space to

explore majors so they could find the best fit for them and even discover majors they did

not previously know about.

Isolation

Five of the participants in this study reported feeling isolated in their experience

as an undecided major. For Megan, the feeling of isolation began before she started

classes. She described a sense of isolation that began when groups were divided by

major during summer orientation, which caused stress and anxiety:

It was stressful because when you go to orientation, you're divided up by your major,

and then, like the first day, Convocation, you're divided up by your major, so it was

kind of stressful and I was having anxiety.

Megan was not alone in her feelings of isolation or the anxiety that was caused by this sense of being "the only one without a major." Brooklyn, Caroline, Edward, and Vanessa shared her feelings of isolation, all of them said they felt that their peers had already declared a major. In fact, Edward stated he was embarrassed when others discovered he did not have a declared major:

> Being undecided was definitely weird. Like being in classes with people who knew what they were doing, and you're just sitting there. That was embarrassing, honestly. Freshman year, they always asked that question, 'What major are you?' and I was just saying undecided. I felt that it was awkward every time I had to say it.

Brooklyn discussed how her feelings of isolation meant that she did not have anyone to talk to that she felt could understand her. As a FGCS, she stated that she didn't feel she could talk to her parents about college. This was compounded by feelings of isolation from her college-going peers who had declared majors. Brooklyn stated "all of my peers, they already know what they want to do and I'm just like 'I don't know what I want to do.'" She went on to explain:

> I think not really having anyone to talk to about choosing a major that could really relate to me and be in the same boat as having an undecided major was hard. There was really no other person that I had that could go through that process with me.

Vanessa shared in this sentiment that there was no one she felt she could relate to. In addition, she revealed that her sense of isolation led to a feeling of failure and added pressure to decide on a major. She stated:

At first, I felt like I started realizing that everyone had a major and an idea of what they wanted to do. So I kind of felt left behind or like I was slacking in a way. I was just like, you know, people know what they want to do. It was a lot of pressure, and I just felt left behind.

Each of the participants in this study who described feelings of isolation discussed feeling they were alone in not having declared a major. Not feeling connected to others who were undecided in major left participants feeling there was no one to talk to about being undecided, how to choose a major or the anxiety associated with being undecided.

The psychological burden of being an undecided student manifested in feelings of isolation for more than half of the participants in this study. While the high number of undecided students on campus makes it unlikely that all friends of the participants in this study had declared majors, they were disconnected and did not feel that they had anyone to talk to who could share in their experience. As in Brooklyn's case, more than half of the participants stated they could not talk to their parents about their college experience. It is likely that their status as FGCS only heightened the feelings of isolation the participants already felt as undecided students.

Academic Advising and Career Centers

While Sean reported that his academic advisor was somewhat helpful, other participants did not express as much success utilizing advisors as a resource in major exploration. Sophie stated, "I tried using the advisor, but that didn't really prove too much for me." While Brooklyn said her advisor was able to suggest "really good classes for me to take that definitely influenced my decision," she also described her advisor as a hurdle. Brooklyn explained, "you can't really help a student if they don't know what

they want to do" and stated her advisor stated multiple times, "I mean if you don't know what you're doing, I can't really tell you what to do." Rather than helping Brooklyn to explore her interests, strengths, and values and connecting them with careers, or referring her to resources in the career center or academic departments, Brooklyn's advisor made her feel the advising center was not a place she could go to for help as an undecided student.

Vanessa also had a negative experience with her academic advisor, who she says "told me to figure out what I like and then sent me on my way." While she says the career center was more helpful, she didn't feel her career advisor was specific enough. She stated, "he pulled out little pamphlets for me, but it wasn't the most helpful because I felt like it was broad definitions." She added, "I wanted to know actual jobs, lists, and descriptions of them." Vanessa said of advisors:

> I definitely feel like they need to work with undecided students. I know my advisor wouldn't give me any help. Especially when it came to me, I needed direct help. Like somebody to be like, "what do you like?" Somebody who cared a little bit more, or who actually tried to be helpful towards me. And I don't know; I guess just something to help undecided students because they might come from a background like me where they have immigrant parents. I'm just going to college. I don't know why, but I'm here. English is not my first language. I don't know something to help that group of people. Because I definitely feel like if I would've had that as a freshman, I would've done better. I would've been more prepared.

The messages that Brooklyn and Vanessa received from their advisors are especially significant in light of the sense of isolation that participants in this study reported. The FGCS in this study said they felt out of place and even "awkward" for not having a major. They also reported that they didn't feel they had anyone they could talk to at home about their college experience or majors. Career centers were not seen as helpful in their major exploration process, and some of the participants were likely made to feel increasingly isolated as undecided students.

Sustained Engagement

While most participants in this study did not report positive interactions with advising and career centers, they reported much more positive experiences with university resources that offered more sustained engagement, including first-year seminar courses and learning communities. Caroline enrolled in a first-year seminar course during her first semester in college. The course was taught by an advisor and geared towards undecided students who had an interest in exploring business. Caroline stated: "that course helped a lot as well. Just getting adjusted to college and feeling like I can explore my options, and that I do have options."

Megan enrolled in a learning community designed for undecided students. One of her learning community classes was a first-year seminar course taught by an academic advisor. Megan stated, "She showed us how to go to the webpage and look at each major's website. All of the information I got about majors basically came from that class and that advisor cause I loved her." Megan also stated about the class:

> One class we had someone come in and tell us how to make goals, we went to the
> student health center, we took a career assessment from the career center, and we

did a lot of like stuff like that. I wrote a paper about social work. So there's a lot

of sources from that class that helped me think about a major in a critical way.

In addition to helping with major exploration, Megan said her experience being in a

learning community for undecided students made her feel less isolated. She said that

being in the learning community helped her feel that she was "not the only one who

didn't know" what she wanted to major in.

While Edward did not take a first-year seminar course, he expressed in his

interview that he believed he would have benefitted from taking a course on career

exploration. He stated:

> I felt like it would've been cool to have a class with other people that were
>
> undecided. I think I had to take four or five liberal studies courses, which
>
> basically meant nothing towards the field I'm going into. Maybe they could even
>
> replace one of those classes, where if you're undecided, you take an undecided
>
> class and then talk about the different majors and the different fields you could go
>
> into. I think that would've been really cool to have freshman year as opposed to
>
> going on the internet trying to find this stuff out.

While academic advising and career centers, as well as sustained engagement

programs offered specifically for undecided students, certainly played a part in their

major exploration process, they were also part of these participants' experiences as

undecided students. Generally, academic advising and career centers were not as helpful

as participants had hoped they would be in terms of career exploration. Some of their

interactions with advisors likely increased their feelings of isolation. However, sustained

engagement opportunities for undecided students helped to normalize participant's

experiences as undecided students. Participants could see that they were not alone in this process and that they had support from the university to help guide them through their journey to declaring a major.

Time and Space to Explore

Half of the participants in this study found that their experience as an undecided major was positive in that it gave them the time and space to explore majors. Edward and Juliet discussed how they appreciated not being forced to declare their major. Edward stated, "It felt good like not having to like pick so early." Juliet agreed and said:

It's kinda nice because I didn't have any kind of restrictions on what kind of pre-classes I could take. So it was just like, 'hey, I don't have to take that level of math because I don't need it.' So I mean it was nice. I liked it. I got to explore like, definitely [humanities] and stuff like that. And sciences, I got to do a lot more than I thought I would.

Both of these participants appreciated the fact that their experience as an undecided student provided some space and freedom. They didn't feel they had as many restrictions on courses they had to take and therefore had an opportunity to take courses they wanted to take in subjects that were of interest to them.

Both Megan and Brooklyn shared these feelings and felt that their experience as an undecided student allowed room for exploration that their friends did not have. They explained that being an undecided student also gave them the space to take classes that were of interest to them both in general education and through taking electives. Megan recommended that all students enter undeclared and take courses in subjects they are interested in before taking the step to declare a major. She elaborated:

I think [being undecided] was for the better because when you hear all these stories of people switching their majors like five times because the one they started with, they hated. So I always tell people like, take a class. If you think you like computer science, take one computer science class before you go down that path. But for me, it was literally my freshman year, it was like, what classes that fit my general education also interests me? So it was really, my first two semesters were just classes that interested me and even the ones I hated, I still learned something from it.

Brooklyn was also grateful for her experience as an undecided student and felt it allowed her to explore in more depth than her peers who were declared when they entered college. She stated:

I would say I'm definitely glad I came in undecided because it really helped me to search more and look in certain majors than I think some of my other friends have, because they were very decided on one thing, and some of them ended up not liking it and having to change their mind. Then they're like, 'I don't know what to do.' But I think me going in not knowing what to do definitely left me more open-minded to kind of just choosing anything that I thought I would like, or just exploring any and every degree or major that there is on campus.

Like the other participants who believe that their experience as an undecided student provided them opportunities to explore, Brooklyn felt that her experience as an undecided student gave her an advantage over her peers. She was able to explore subjects she didn't have any experience with prior to college, and she believes this opened her up to new

possibilities and allowed her to confirm her major decision rather than just picking something.

For the participants in this study, the experience of being undecided meant they had some room to take classes outside of a strict program-related curriculum. They were able to explore subjects that were of interest to them both through taking general education courses as well as electives. Participants were glad they had this opportunity to try things before committing to a major.

Participants in this study had both positive and negative experiences as undecided majors. More than half discussed feeling disconnected from their peers who had declared a major, even acknowledged feeling "awkward" about not having a major. They did not feel they had anyone to talk to who could relate to their experience as an undecided student or help them make a decision regarding a major. Experiences with academic advising and career centers did not prove helpful and only increased participants' sense of isolation and anxiety about the need to declare a major. These experiences seemed to increase the frustration that participants felt with their status as an undecided student.

Conversely, sustained engagement activities helped to alleviate the feeling of isolation reported by participants and increase their connection to the university. First-year seminar courses and learning communities helped participants to connect with peers who were also undecided majors as well as university officials who could offer support and assistance through their exploration process. Finally, half of the participants in this study described their experience as undecided as beneficial in that it allowed them the time and space to explore majors and careers in a variety of ways before declaring a major.

Research Question 3: How do First-Generation College Students Describe their Decision

Making Process When Selecting a Major?

The participants in this study described their decision making process when

selecting a major in a number of ways. Several participants described feeling pressure to

decide as well as uncertainty and a lack of confidence.   Some discussed role models, or a

lack of role models, as being important resources in their decision making process, while

others utilized the internet and coursework to explore majors and careers. Six

participants cited the information and experience they gathered as undecided students as

important in their decision making process. Finally, participants heavily associated

majors with careers. While there were some variations among gender, the motivation for

participant's selection of majors included career and financial stability, flexibility, and

major and career fit. Additionally, the three students of color in this study said they

wanted a major that would also provide a challenge and personal and professional

growth.

Pressure to Decide

Three participants, Juliet, Edward, and Megan, discussed the pressure they felt to

declare a major. Each of them discussed feeling that they had a timer to decide, or they

would risk adding time and expense to their degree program. For Juliet, this pressure did

not begin right away. She stated: "When I hit the second semester of being undecided, it

was just kind of like, okay, I've kind of got to figure out what I want to do now." Megan

felt that she needed to hurry to decide on her major and stated: "I knew if I waited too

long that I was going just to screw myself over and have to do school longer." She was

concerned that if she didn't decide quickly, it would increase the amount of time she

would have to spend in college. She went on to say:

> There was the constant stress of 'you're not decided,' because there's like a timer
>
> that you have to decide. Like they say, you can technically wait until your senior
>
> year, but that's not gonna be effective. So there's this constant, this timer. Like at
>
> some point, I have to make a decision - there's a deadline pretty much. And so I
>
> think my goal was end of sophomore year, which I think I met. But there's a
>
> constant feeling of like I need to choose.

Edward shared this pressure to decide on a major quickly and discussed the messaging he

received from the university that intensified his feeling of urgency. Additionally, he

blamed himself for not deciding on a major before college and stated:

> I should've taken responsibility and figured this out in high school. But, it felt
>
> like - I'm here, and they're saying you have to hurry up and pick something or else
>
> you won't graduate, or like every semester that you take could be like a semester
>
> that you have to stay longer. So I knew that after a year I was just, I had to pick
>
> something. I couldn't waste any more time.

Feeling pressure to decide can mean that some students select majors that they

have not fully explored because they feel a sense of urgency. This was true for Edward,

who did not feel he had time for exploration. He stated:

> I think it could have changed my decision just because if I would have been
>
> thinking about it way earlier, I probably could've like started planning for
>
> something I actually wanted to do as opposed to what I thought was going to be

the most beneficial to me…but it was like I'm already here, I'm paying for a university. I really have to hurry up and decide.

While Edward is declared, he doesn't necessarily feel his major is the best fit for him. Had he not felt pressure to decide on a major for fear of extending his time in college, he may have spent more time exploring various majors and learning how to market himself so that he could achieve his goal of having a job that paid well while still doing something that was of interest.

Lack of Confidence and Uncertainty

While pressure to decide on a major was at the forefront of some participant's minds, others expressed that a lack of confidence affected their decision making in choosing an academic major. While Caroline was always leaning towards business, even when she entered college, she was nervous to take the step of declaring it as her major. She stated: "I think it was more so myself and just actually feeling like confident enough, I guess to actually pick something and be content in that and actually want to do that." She went on to say that her lack of confidence led her to "overthink it" and delay her decision making. In Caroline's case, she knew what she wanted to do before applying to college, but did not have the confidence to finalize that decision and declare her major. Vanessa also discussed feeling a lack of confidence in her major decision making process. Even though she had been successful in her introductory coursework, she was unsure she had the skills to be successful in the major. Vanessa expressed that her lack of confidence was amplified by what she perceived as a lack of confidence of those around her in her ability to be successful in such a challenging major. She stated:

I didn't really have a lot of confidence in myself, and I think a lot of people didn't really either. I would call my mom, and she'd be like, 'well, you know, what does that mean?' 'Like what does business mean?' 'What are you doing with that?' 'Like how does that work?' And I doubted myself and there wasn't really a lot of support there. So I felt stuck sometimes and it definitely made me question - maybe I should try something the easier, maybe I shouldn't do it. Sometimes I'll tell like people, 'yeah I'm accounting and finance major' and they'd be like, 'Oh really?' Like, kind of in disbelief. It's a barrier definitely. Because it just made me think like, should I change my major? Am I even good enough for this? It's weird because it's like I always remind myself - you made the grades for it. My confidence is the biggest barrier.

As in Vanessa's case, declaring a major does not necessarily remove doubt and insecurity. Even after declaring their major, Sean and Caroline expressed uncertainty about their futures and whether or not they had selected the right fit for them. Sean said: "There is a lack of clarity. Like, I still to this day do not know what I want to do, which is why I don't know what I want to major in." Although he has declared a major, Sean still does not feel confident in his choice. Caroline is also still uncertain about her future, even though she is majoring in marketing and has done a significant amount of exploration to ensure this is a good fit for her. She stated: "Even though I technically have declared a major, it's still is overwhelming to know that everything's not set in stone yet. And the future is...I can't predict my future currently." Her feeling of uncertainty remains with her even though she is no longer undecided.

Lack of confidence affected the ability of some of the participants to decide on their major. Although two of the participants stated they had positive experiences in coursework and had some information about the major, a lack of confidence left them wondering if they would like and be successful in the major they planned to declare. Perhaps a combination of a participant's lack of confidence and their feeling pushed to decide contributed to feelings of uncertainty as to whether or not they had picked the best major for them.

Role Models

Lack of role models who had been to college was one of the most significant factors that influenced participants to enter higher education without a major in mind. While most of the participants described a lack of role models as an important factor in not having more information about majors and careers when they entered college, Brooklyn aptly described the impact that a lack of role models played in her decision making process regarding a major. She said that although her parents were very supportive, and that she talked to them often about her major, she still felt alone in her major exploration process. She explained:

> I had no one that experienced college to help me decide. So it's kinda hard to go
>
> in and decide something when your only resource is the internet. Even if there is
>
> an end goal in mind, no one else in my family has taken these steps to reach the
>
> goal that I want to reach [of being an attorney] or something even near it, I guess,
>
> even just getting a bachelor's degree or anything like that. No one close to me has
>
> done that. And so it's kind of hard to guide someone when you don't know
>
> yourself. It was difficult to ask my parents about certain things cause they're like,

'I don't know, I never did it, I don't know.' So it was, it was definitely, a hard

thing to go through. Especially cause I'm really close to my parents and I go to

them for everything, and this is like one of the first things that I couldn't go to

them about because it was like they don't know.

Brooklyn's parents were unable to help her with this decision, and she didn't have any

role models who were able to give her information about careers, or her interest in law.

She was not alone in her sense of isolation and lack of career-related role models.

While most participants did not have family members or an immediate social

circle who they felt could help them with exploring majors, some did report utilizing

teachers and other role models for support in their major decision making process.

Caroline mentioned that she "had a lot of teachers in my life that influenced a lot of my

thinking when it came to majors." Juliet, who is an art major, stated, "my best friend's

mom, she went to school for art, and she was just like, you know, doing an art program is

a long road, but it's definitely worth it." While Sean expressed frustration with a lack of

role models in his family, he talked in-depth about a family that he looked up to and often

sought out for advice. Sean emphasized several times how much he respected and

admired this family and how important advice from the father was in his pursuit of a

major:

I'm tight with a family; their last name is Jones. So their oldest son did

economics, which is in business. The other one was thinking about doing

business, and one is an engineer. Their dad said, 'go business.' I've got nothing

to lose; I just needed a degree. So I went business.

The advice of these role models significantly shaped the choices these participants made. In addition to advice, Caroline said that her dad owns his own business and that "seeing how my dad works, how he runs his company, I think that played a role" in deciding on her major of business. She was able to have vicarious experience through her father, who she says also read and talked about business often. She gained a great deal of information about her current major, marketing, from these conversations with and observations of her father.

The Internet

The internet was one of the most significant resources, outside of those provided by the university, for career and major-related research. Several participants described the beginning of their exploration process as starting with a Google search. A few participants went further by naming the internet as their main source for major and career information. Vanessa and Edward discussed searching for careers that make the most money as the starting point for their major search, while Brooklyn looked up majors that were more likely to be admitted into law school. Edward stated:

> Honestly, I just looked up the highest-paying majors. It was like engineering, computer science and like some other stuff. But computer science was always in the top three. So that was one of the biggest reasons [for choosing that major].

Vanessa echoed what Edward described when she said:

> I was Googling careers that make money, majors that make the most money, top jobs in the United States. Like, that's all I was Googling. I spent a lot of time on my laptop, a lot of time doing that.

In addition to using search engines to search for majors, participants also discussed utilizing YouTube videos for help with major exploration. Brooklyn said she "loved YouTube videos and that she found them helpful." Edward stated that he "watched a whole bunch of YouTube videos of a day in the life of a software engineer, mechanical engineer, and network engineer." These videos helped him to decide on software engineering and his current major in computer science. Beyond search engines and YouTube, some students also utilized university websites for exploration and information about majors. Edward provided insight into why the internet was such a prominent resource for him when he stated:

> I probably should have gone to the resources center and asked around, but I was really shy at the time. I probably would have had to go out of my way to find people who could help me out, and I wasn't really comfortable doing that.

Perhaps, like Edward, other participants hesitated to seek out university resources, or perhaps it is because the internet is so commonly used for research on so many topics in academic and everyday life. Whatever the reason, participants in this study were clear that the internet was one of the most predominantly used tools in major exploration and decision making.

Coursework

Participants in this study also cited coursework as being helpful in their major exploration and decision making process. Caroline took courses in high school that were beneficial in her decision making process. Other participants mentioned both general education courses and electives as aiding them in deciding on a major.

Caroline was unique in that she had an opportunity to take some business classes while in high school. She expressed that those classes, and the instructors who taught them, played a significant role in her decision making process regarding a major. She explained:

I think the largest deciding factor for me was just taking all of those [business classes in high school]. I'm just a very hands-on person, so I can't just see something on paper and be like, 'Oh, that sounds nice.' I need to be hands-on with it and actually do it, and that's what those classes provided for me.

For Caroline, the opportunity to gain experience with the field from taking business classes in high school helped her to know that it would be a good fit for her.

` While none of the other participants in this study discussed having experience with majors or careers through high school coursework, many said taking general education courses helped them to discover what subjects they liked and helped them rule certain majors out, which in turn aided their decision making process. Brooklyn stated:

I took a few economics classes, and religious studies classes, and philosophy classes, and just kind of decided which one I liked better at the time. So I was just taking a few classes here and there, just to get a feel for them, and I guess, and seeing which one I enjoyed the most. So I definitely did take courses in several majors before I completely committed to being in one.

While some participants took several electives to aid in their decision making process, others focused on introductory courses of majors in which they had an interest. Both Edward and Caroline took the introductory courses for their current major as electives. While they had an interest in these majors, they wanted to take a class before

committing to the major. Both Edward and Caroline said that they liked the introductory course and did well, which helped to solidify their major selection.

In addition to taking electives to help them decide what major to select, some participants discovered an interest through taking one of the courses required for general education. Edward took a history class as part of his general education coursework and "thought it was pretty fun" and therefore decided to declare a minor in history. Megan took a linguistics course as part of her general education liberal studies requirement and discovered this field of study that she previously did not know existed. She liked it so much that she decided to make it her minor since the university did not offer this subject as a major. Finding the linguistics minor led her to give an English class a try. Megan says she decided to take an online English elective because she "loved reading" but thought she hated English. After really enjoying the course and learning that it paired well with linguistics, she decided to declare English as her major.

Sophie and Edward also discussed taking courses as part of general education requirements that helped them to rule out majors and career fields. Edward described how taking a chemistry course helped him rule out the medical field when he stated: "I was taking chemistry my freshman year, and after taking that class, I knew I wanted nothing to do with chemistry. So being a nurse or a doctor wasn't in the plans." Sophie liked science and wanted to explore majoring in bioinformatics by taking a course to fulfill her general education science requirement. She stated:

> I also took a bioinformatics class, which I was excited about because I love the
> study of genes. Genes were my favorite part of biology, and biology was my
> favorite science class by far. When I got into the class, it was mostly data and

analyzing, and there was a lot of like math. It took the life out of it, you know?

And what really excited me was the boundlessness of genes and the idea of like

'how did it even become that way?' The history of it, and that kind of stuff. I

guess I realized that doing bioinformatics was not, I was not going to be able to

do that as a job.

Whether they were able to eliminate a potential major, or they discovered a

subject that they enjoyed, exploration through coursework played a pivotal role in the

decision making process for many of the participants in this study. An opportunity to

gain experience with a major and to try it out seemed key in helping participants to feel

more sure about their choice.

Information and Experience

Their experience as undecided students allowed participants in this study the time

and space to explore majors and potential careers. Many of the participants in this study

described being an undecided student, and the exploration that this status allowed, as

beneficial to their decision making process in regards to picking the best major and career

fit. While some of the participants were able to confirm that the major they were

considering was the best choice for them, several participants stated they would have

chosen a different major if they had to declare upon college entry and that being

undecided gave them time to take classes and gather the information required to make a

better decision. Several participants said they wouldn't have known about the major they

eventually declared had they not been an undecided student with an opportunity to

explore majors. Brooklyn, who eventually declared a major in philosophy, said she did

not know there were so many majors to choose from until she got to college. She

elaborated:

> I just didn't really have anything in mind about anything concrete that I
>
> wanted to do pertaining to a major, cause there's a lot. No one ever told
>
> me that there were this many majors in college. So after you see like how
>
> many there are, I'm like, 'Oh, there are so many other things I could do
>
> besides, like just like the normal things that are talked about.'

Brooklyn didn't know how many majors there were to choose from, but rather

than feel overwhelmed by the number of majors available, she expressed that she was

able to take some electives and general education courses to explore some of the

academic disciplines that she didn't realize were even options before attending college.

Sophie expressed similar feelings and stated that she wouldn't have known about the

field of linguistics, which she selected as a minor to complement her major in English,

had she not had the opportunity to explore through the general education curriculum. She

explained:

> If I had just picked something when I came in [to college], I definitely wouldn't
>
> have explored what I explored. I took [a course on linguistics] because it was a
>
> general education class; it was something I had to fulfill for a liberal arts credit. I
>
> took a seminar on language and the mind, and that opened me up to then doing
>
> linguistics. If I hadn't taken that class, I would not be where I am now, you
>
> know?

Sophie went on to discuss how important exploration is for college students and believes

that when students enter college as a declared major, "that means you're not taking

classes in other areas, and you're not exploring. So I think I encourage other people to explore, definitely." Like Sophie, Megan mentioned that she would not have chosen her current major had she not entered college undecided and had the opportunity to explore. She stated:

> I think it is probably one of the best things I've done. And I always recommend it to people who aren't sure. Because when I worked at a movie theater, a bunch of kids started college, and I was like, 'if you don't know, just go in undeclared. It's the best thing ever because you can take your time and explore a little bit and then see if you like it.' Because if I went in declared, I would have never chosen the major I am today. I don't know what it would have been, but it wouldn't have been the one that I'm happy with.

Sophie, Megan, and Brooklyn stated they likely would not have known about their major or picked the major they are now very happy with if they hadn't had the opportunity to explore majors through coursework in college. While many students select a major or career they are familiar with, exploration could be beneficial in opening up areas of interest and potential majors that they did not know existed before coming to college. For FGCS, many of whom have limited exposure to a variety of careers that require a college degree, an opportunity to explore majors could be even more critical.

Each of the participants in this study expressed a desire to explore majors. Some weren't ready to commit to the major they were strongly considering, others had a few majors in mind and wanted to gather information to decide between them, and some participants had no idea what they wanted to major in. Wherever they were on the continuum of decidedness, none of them were ready to commit to a major before

enrolling in college. Each of them expressed that they wanted the opportunity to explore major and career options before making that final commitment. Once on campus, participants expressed that they were glad to have the opportunity to explore majors through coursework. Since they did not have a major the participants did not have a rigid curriculum they had to adhere to and were able to take electives to learn more about subjects of interest to them. Some learned about academic disciplines and majors they did not know existed through general education coursework. Three participants in this study said they did not know about their current major until they had the opportunity to explore majors through coursework. Only one participant, Caroline, had the opportunity to take classes to learn about her major of interest in high school. The other participants did not have this opportunity in high school. Perhaps it was due to the lack of opportunities to explore majors in high school, or because as FGCS, they did not know many adults in their lives with jobs that required a college degree, but whatever the case, the exploration process was important to the participants in this study. Ultimately, exploration helped many of them select a major they felt was the best one for them.

Role models, the internet, and coursework helped to increase participant's information and experience to declare a major. When deciding on a major, participants cited a variety of reasons for their choice. All of the participants' associated majors with careers and participants were most interested in career and financial security, flexibility, a good fit, and a major that would provide a challenge.

Career and Financial Stability

Six of the participants described career and financial stability as a reason for choosing their particular major and equated the selection of a major to their future career.

Edward stated, "I just wanted something that was going to get me a job. I wasn't really thinking about interest until like after I narrowed it down." Edward was not alone in his sentiments. The ability to gain employment and make a good living was discussed in each of the eight interviews conducted for this study and was a strong factor in the decision making process for each participant. In fact, several participants noted that they eliminated majors they were interested in for fear of a lack of professional opportunities or potential financial compensation. Sophie stated, "I thought of art and sociology for a while, but mostly it was not being able to find applications of the major in a job in the real world." Likewise, while Edward stated he liked history, he explained: "I didn't pick history cause I didn't think I'd be able to do anything with it after college."

Selecting a major was intertwined with thoughts of its application in the "real world," which was a factor for all participants. Brooklyn described her experience weighing the pros and cons of a major and whether the degree would be "worth it" in terms of career and financial prospects:

It was also kind of hard to decide because I was thinking about all the factors, like: How long is this going to take? How much time am I going to spend? Will it make me money in the future? Is this degree, like in the bigger scheme, worth it, you know, going in for a certain major. And I guess more, how will it impact me in the future?

While finding employment post-graduation was important for nearly all of the participants, financial security was another strong factor weighing on participants' minds. Although she is happy about her choice of major now, Vanessa expressed that when she

initially decided on business, the main factor driving her choice was financial stability. She stated:

> When I chose [my major] initially, I was like, 'okay, it's going to be business,' it was really about money. I would just look up what careers would I get paid the most, and I was going down the list, cause that's why I came here. So that's honestly why I picked business.

Both of the two male participants emphasized that financial compensation was perhaps the number one factor in their selection of a major. In fact, financial stability was important enough that it outweighed majoring in a subject that was particularly interesting to them. Sean stated that he chose business because "I knew I needed to make money. I don't need to be rich, but I need to survive, and I want to have a family, and that was going to cost a lot of money, so I went business." While he enjoyed a job he had while in college working with youth and thought that he would like to be a teacher, he stated, "It didn't even come to mind because I knew that teachers don't get paid well. So I knew it wouldn't be a good decision. It would be really cool. Like, I'm sure I'd love it, but I just can't."

Edward expressed similar feelings regarding the importance of financial stability. He stated, "as far as picking a major, it didn't really like align with the stuff that I want to do, or like I do for fun. I'm interested in film, psychology, stuff like that." He went on to explain that when he told people about his interest in these areas, they responded by telling him that it would be hard to get a job in those areas or that they wouldn't pay well, so he decided he would "just hold off on this and try to do it later." Instead, he picked his current major in computer science through internet research. Edward stated:

Honestly, I just looked up highest-paying majors, and it was like up there; it was like engineering, computer science, and like some other stuff. But computer science was always in the top three. So that was one of the biggest reasons [for choosing my major]".

Edward added that he thought being a FGCS contributed to his lack of knowledge about majors and stated: "If I had started thinking about [a major] earlier, I probably could've planned for something that I actually want to do."

Career and financial stability was an important factor in deciding on a major for all of the participants in this study. Higher education was clearly aligned with being able to find employment after graduation that would provide financial stability for themselves and their families. The male participants in this study listed career and financial stability as so important that it trumped interest and enjoyment in terms of importance. Their role as a provider was dominant in their decision making process regarding their major and future career.

Flexibility

While nearly all of the participants wanted to find a major that would lead to career and financial stability, half of the participants in this study were also interested in a major that would lead to a career field that provided flexibility. Each of the participants that discussed flexibility as an important factor in choosing a major did not have a specific career in mind when they declared but rather were drawn to the major because it offered a number of possibilities. Megan decided on English and said much of this was based on flexibility:

People were like, 'Oh, what are you gonna do, like be a teacher?' I told them I

could do with English anything I want to do. Because I still didn't know my

career yet. So it's like with English I could literally do like whatever, even if I

decide business, which was never going to happen. But it was the flexibility of

English, that I could really do whatever I wanted. That was a big part of it.

In addition to choosing English for its flexibility, several participants decided on business

for this reason. Sean said he still wasn't sure of exactly what he wanted to do but decided

on business because it is general. He said, "I could do economics, or accounting or

finance and end up in a similar career with any one of the degrees." Vanessa found that

internet searches and teachers alike kept coming back to business because "you could do

so much with business" and because "a lot of jobs need that background." While

Caroline already had an interest in business from the courses she took in high school and

the influence of seeing her father run a business, she decided to specialize in marketing

due to the "broad spectrum of jobs that you could have with it." She further stated:

Also going back to how social media works, you have YouTube, you have all

these different influencers and all these sorts of things. Marketing nowadays is so

broad, and there are so many things you could do with it. You can travel, you can

stay at home and do internet marketing. You can do social media marketing.

You can see that you have all these different opportunities.

Majors were still closely aligned with potential jobs for these participants who

wanted to ensure they would have flexibility in their careers. They wanted to have

options in terms of the types of jobs they could do with their degree. Therefore, finding a

broad academic major with lots of flexibility was of high importance in the decision making of participants.

Major/Career Fit

Seven of the participants in this study also discussed their values and interests as part of their decision making process. Some participants chose their major because they thought they would enjoy studying the subject. Megan stated, "If I can, I want to enjoy my major, whether or not it leads into a career. I want to enjoy my time here." While Brooklyn knew she wanted to go to law school, she didn't know which major to select and said she took time to consider which majors she liked the best before settling on philosophy. Juliet's dad encouraged her to major in something that made her happy, and she said: "so I went with art, and knowing I could concentrate in photography was exciting for me."

Other participants were interested in picking a major that would lead to a career that aligned with their interests. Sophie stated that when she was deciding on a major, her focus "was not necessarily what would make me most happy in school, but would then lead to something after that I would like a lot." She went on to say:

I guess I picked English because it was my thing. You know, like I've always read books. Always, always read books. English has always been my favorite class, and I kind of just said, screw it. I'm not supposed to do this, but like, why not, right? And so I guess the biggest thing was just like my like heart feeling like this is what I want to do. And then another thing is the linguist part. When I decided I was really interested in linguistics and it just felt like the perfect pair - the perfect major to then declare the minor as linguistics.

Like Sophie, Caroline also considered finding a major that would lead to a career she

would like and stated:

> I didn't want to just pick something just to make a lot of money or just to have a
>
> stable career. I mean, all those things are great, but I want a job that I enjoy and
>
> that I want to go to every day. I don't want it to be work.

While Vanessa stated her initial reason for selecting business as a major was for financial

stability, she went on to explain that she also considered her values and interests in her

decision making process. She stated that she chose business when she started "putting it

all together, like what I like to do and what I could do and had the aptitude for." After

she began coursework in business, she continued to consider her values and interests as

she chose her concentrations in accounting and finance and explained:

> I took Accounting II, and I loved it. Like, it just makes sense. I could do that all
>
> day. I enjoyed the class, and I made the grades for it too. So I was like, I might
>
> as well just switch over to accounting. You know, I'm making good grades, I
>
> understand it, it makes sense. And then finance, I just like it. I think investing is
>
> kind of cool, and I definitely want to learn more about it. So that basically is what
>
> solidified it.

Another finding of note is that all six female participants described wanting to

find a major or career that they liked and thought they would enjoy. In contrast, the two

male participants in the study explained that they would have picked another major if

they thought they would provide more financial stability. While Edward stated he

watched videos to learn more about "a day in the life" of different careers so that he

could "find things I could do and not hate my job," neither of the male participants described linking their major choice to their interests.

In addition to thinking about majors and careers of interest, four of the participants discussed choosing a major based on their values. Some of the values that participants described in making their decision about a major included how long they wanted to be in school, the location of jobs, work environments, working in teams vs. working individually, and work-life balance. Caroline, a commuter student, described a strong desire to stay in the city where she was "born and raised, to be close [to family]." She elaborated, "this is a really good place for business, any sort of business, but specifically marketing. It's also a very good place for jobs and internships." Location was also a factor for Edward, who wanted to live on the east or west coast and factored this in when deciding on computer science.

Vanessa thought about the environment she wanted to work in when deciding on business and stated she was interested in "the business atmosphere. I enjoy dressing professionally." Like several other participants, Vanessa thought about her interests when selecting her major. She stated:

> Imagining myself in five years, I'm like, okay, do you want to be here? And it's like no, I don't want to be sitting listening to people talk about their problems. Like, no, I don't want to put needles in people and draw blood. No, I would not see myself doing that, but I can definitely present to everybody, you know, a business model. So it's like, getting to know myself, definitely eliminated a lot of other choices.

In addition to considering the work environment and interests, Megan said she knew she wanted to have a career that involved helping people but also wanted to have work/life balance. She explained:

> I want to be helpful. So I thought social work, but I was like, that lifestyle, I don't think I have the ability to do that, and come home and wipe it away and leave work at work. I knew I didn't have that capacity. So a lot of it has to do with the lifestyle I knew I wanted. I didn't want some weird competitive job where you're working these long hours. And I was like, I want my job to be my job, leave it there.

Ultimately Megan decided to major in English and plans to go on to study library science where she believes she can help people and "leave it at work."

In addition to career and financial stability and flexibility, most of the participants in this study also considered the fit of the major and future career as part of their decision making process. All six of the female participants in this study said that they wanted to enjoy their major/future career, and that had been an important part of their decision making process. This was not true of the male participants in the study. Additionally, four of the participants thought a great deal about whether or not the major would lead to a career that was aligned with their values in terms of location, work environment, and work/life balance.

Challenge and Growth

A desire for a challenge was described by each of the three participants of color in this study. While each of these participants listed several reasons for selecting their major, each mentioned this element of challenge and professional growth as being

important to them. Vanessa stated that she was able to eliminate some majors because she "wanted a challenge too." She ruled out majors, including psychology and sociology, because the introductory courses were not much of a challenge for her, and this aspect of a major was important to her. When asked about why this was important to her, she stated she felt a lot of FGCS feel they have something to prove.

Brooklyn, who plans to attend law school, also wanted to find a major that would "not only profit me in the future but allow me to grow as a person too." While she has strengths in math and science, she also thought it was important to have a major she could "grow from" and felt that "philosophy allowed that a lot more than math, biology, or chemistry would." She stated she is "not big on reading and writing" and believes philosophy courses would help her to grow in these areas.

Edward explained that after his first year of coursework, he realized computer science had been his most challenging class. He stated:

I didn't know if I was going to graduate. I just knew that I was here, and I wanted to be challenged while I was here. And I felt like computer science would give me a challenge that would be worth it if I were to graduate.

Edward went on to state, "every time I told someone I was considering computer science, they would just look at me like I was crazy." He further explained that he likes to be challenged and that "when somebody tells me something's hard, I want to do it, because I also didn't want to be bored while I was here."

While career and financial stability were important for most of the participants in this study, finding a major that would challenge them and offer an opportunity for growth was also a significant consideration in the decision making process for these participants.

They did not want to pick an "easy" major; rather, they wanted to learn, to push themselves, and perhaps to prove to others that they have what it takes. Not only to be the first in their family to graduate from college but also to graduate with a competitive degree that others may see as too difficult to pursue.

Pressure to decide on a major without extending their time to degree and a lack of confidence was part of the decision making process for many of the participants in this study. Participants described role models, the internet, and coursework as playing pivotal roles in gathering the information and experience they needed to explore and decide on a major. While most of the participants were happy with the major they selected, some expressed uncertainty or feelings of regret. This could be attributed to feeling pushed to decide and to insufficient resources to help make decisions about a major.

Participants wanted to find majors associated with career and financial stability, flexibility, major/career fit, and that offered challenge and growth. While major and career fit was important to all of the female participants in this study, the male participants more highly valued career and financial stability even if that meant sacrificing finding a career that they enjoyed. All of the participants of color in this study wanted to be challenged by their major so they could grow both personally and professionally.

<div align="center">Overarching Themes</div>

Analysis of the data led to the identification of four overarching themes found throughout the three research questions. These four themes include psychological burden, interest in exploration, role of resources, and motivation for majors. Each of

these themes is presented below along with tables to illustrate their variation throughout the journeys of the eight undecided FGCS who participated in this study.

Psychological Burden

Psychological burden describes the feelings of anxiety, inadequacy, isolation, and pressure to declare a major that participants described at different points throughout their journey to major declaration. The psychological burden of being undecided began for at least half of the participants when they were in high school. The following section describes how the psychological burden of being undecided affected the participants in this study from being a factor that contributed to their entering higher education without a major, to their experience as undecided students, and finally, their major and career-related decision making. Table 5 illustrates the ways the theme of psychological burden changed as participants moved through the phases of declaring a major.

TABLE 5

Psychological Burden

Psychological burden	Number of participants who experienced this theme
RQ1: What factors contribute to first-generation college students entering higher education without a major?	
Decision making difficulty	4
RQ 2: How do first-generation college students describe their experience as an undecided major?	
Isolation	5
RQ3: How do first-generation college students describe their decision making process when selecting a major?	
Pressure to decide	3

The psychological burden of being undecided started before entering college for at least half of the participants in this study These participants expressed difficulty with decision making that stemmed from generalized difficulty making decisions, anxiety, and receiving negative feedback on majors and careers of interest from friends and family. Difficulty with decision making contributed to an overall lack of confidence to decide on a major which contributed to their decision to enroll in college as undecided.

Once enrolled, six participants described the psychological burden of being an undecided student in disclosing that they felt a strong sense of isolation. This feeling of isolation began very early for most of these participants. Some said it began as early as summer orientation and the convocation ceremony on the first day of classes when students were separated by their majors. Some said being identified as undecided made them feel "awkward" and "behind." Overall, participants expressed feeling they were "the only one" they knew who was undecided and that they didn't have anyone they could talk to who understood their experience of being undecided or to help them identify a major.

The psychological burden of being undecided also affected the decision making experience of the participants in this study. Three of the participants in this study described at length feeling pressure to decide on a major. This pressure stemmed from a fear that their status as an undecided student would cause delay and added expense to their degree program. The message that students must declare to avoid delays in

graduation came from both university officials and significant others in participants' lives and caused feelings of anxiety and urgency to decide on a major.

Additionally, psychological burden manifested in a lack of confidence and uncertainty for five of the participants in this study. While participants described doing well in the introductory courses, three of the participants said that a lack of confidence was part of their experience as an undecided student. Although their prior experience indicated that they would be successful in a major they were considering, their lack of confidence left them feeling inadequate and worried that they would not be able to succeed. Even after choosing a major, two of the participants were plagued with feelings of uncertainty. They were not certain that they had picked the correct major and some still feel uncertain as to whether they have made the right choice.

Interest in Exploration

While one of the participants had a major in mind, none were ready to commit to a major without having more experience and information about their options. Some participants wanted to solidify that they were making the right choice, others were completely open to numerous options. The common thread among participants was that they were not ready to declare a major when they applied to college and that they wanted to explore the options available to them. This theme was found throughout their college journey, as a factor for entering college undecided, in their experiences as an undecided major, and their decision making process. Table 6 illustrates the ways that the theme of interest in exploration changed as participants moved through the phases of declaring a major.

TABLE 6

Interest in Exploration

Interest in exploration	Number of participants who experienced this theme
RQ1: What factors contribute to first-generation college students entering higher education without a major?	
Desire to explore	8
RQ 2: How do first-generation college students describe their experience as an undecided major?	
Time and space for exploration	4
RQ3: How do first-generation college students describe their decision making process when selecting a major?	
Information and experience	3

Each of the eight participants expressed an interest in exploration as their primary

reason for enrolling in higher education as undecided majors. While some of the

participants wanted to confirm their choice, some had several options in mind, and others

had not given any thought to potential majors, they all said they wanted an opportunity to

learn more about majors and careers before deciding on one. In their experience as

undecided students, participants expressed being grateful for the time and space to

explore majors through coursework and other resources. As FGCS, many of the

participants did not have vicarious experience through role models because many people

in their social circle did not go to college. The participants had a desire to spend some

time gathering information and experience to make the best decision possible about a

major, especially since many of them related majors to future career options.

In making a final decision to declare a major, three participants expressed they were glad to have gathered information and experience through exploration as college students. Some learned about academic fields and careers of which they did not have prior knowledge. These participants were glad to have had the opportunity to explore because it led to them identifying and declaring a major they felt excited about. Exploration played a large role throughout the phases of each of the participant's journeys as undecided students. Wherever they were on the continuum of decidedness when they enrolled, they were not yet ready to decide on a major without gathering additional information. Upon reflection, they were all glad they had this opportunity.

Role of Resources

While most participants in this study agreed that major exploration was important and that they wanted an opportunity to explore majors while in college, the role of resources also played an enormous role in their exploration of majors both before and during college. Participants discussed the impact that resources, including those provided by their high schools and university and those that were not, had on their major exploration process. While some resources had a positive impact, others were not helpful or had a negative impact on their decision to enter higher education as undecided, their experiences as undecided students, and their decision making process. Table 7 illustrates the way that the overarching theme role of resources changed as participants moved through the phases of declaring a major.

TABLE 7

Role of Resources

Role of resources	Number of participants who experienced this theme
RQ1: What factors contribute to first-generation college students entering higher education without a major?	
High school resources	3
Lack of role models	3
RQ 2: How do first-generation college students describe their experience as an undecided major?	
Advising and career centers	4
Sustained engagement	3
RQ3: How do first-generation college students describe their decision making process when selecting a major?	
Role models	4
Internet	4
Coursework	6

The role of resources was important to participants in this study throughout each phase of their journey to declare a major: as a factor to entering higher education undecided in major, their experience as an undecided student, and as part of their decision making process. For many of the participants, a lack of resources was a significant factor in their entering higher education as an undecided major. Specifically, participants cited a lack of role models with careers that required a college degree as well as a lack of resources in high school to prepare them to select a major as being most significant. As

FGCS, their parents and other important role models had not been to college. This meant that they lacked exposure and vicarious experiences with the majors and their associated careers. Without this experience and information as a guide, participants were left without the necessary information to make decisions. Additionally, participants did not feel high school prepared them to decide on a major. They expressed lacking resources that would give them the information and experience they needed to make this significant decision. They reported a lack of classes that exposed them to majors or career fields and a lack of significant help from guidance counselors and teachers. Additionally, students had not taken career inventories and some had not been exposed to the concept of college majors at all. All of these reasons made them feel ill-equipped to decide on a major when enrolling in college so the participants in this study decided to enroll as undecided. This allowed them to gather information to make a good decision.

Unfortunately, a lack of resources carried over to many of the participants' experiences as undecided students. While a few of the participants had sought out assistance from advising and career centers, most participants did not mention these resources in their decision making process or experience as undecided. This indicates advising centers were rarely utilized or did not make a significant impact. However, two participants listed advisors as barriers in their experience as undecided students and expressed feeling increased anxiety, pressure to decide, and isolation after meeting with their advisors. Conversely, sustained engagement activities including first-year seminar courses and learning communities were seen as positive resources. Participants expressed that these resources helped them to connect with other undecided students. Further, sustained engagement activities connected these participants with their advisors,

who taught the courses they were in. These participants expressed that their advisors had been a source of support and assistance in their major exploration process.

The role of resources was also significant in the major decision making process of participants in this study. While at least one participant still felt the absence of role models during their decision making process, others were able to find role models during their college experience who could offer advice on a major, which helped them to make or solidify their choice. The most referenced resource in the decision making process of participants was coursework. Six of the participants cited the use of coursework as a helpful resource in deciding on a major. Helpful courses included general education classes, which exposed participants to new areas of interest, and electives in which participants could take introductory classes to explore majors and fields of interest. Finally, at least half of the participants in the study relied on the internet for gathering information to help them decide which major would be the best for them. While one participant utilized university resources on the internet, most cited Google searches and YouTube videos as their primary information source in pursuit of a major.

The role of resources was an important theme found in participants entering higher education without a major, experience as undecided students, and in the major decision making process. While some participants cited resources that were helpful in their journeys as undecided students, others pointed to a deficit in resources as a barrier. Either way, it was clear that the role of resources was meaningful for participants in this study.

Motivation for Majors

As shown in Table 8, this overarching theme was not relevant for participants as a factor that contributed to their being undecided or to their experience as undecided students. However, motivation for majors was strongly associated with each participant's decision making process. When reflecting on their current major and how they decided on it, participants described several factors that were important to them. Overall, participants strongly associated picking a major with career prospects and most often discussed a desire for career and financial stability, flexibility, and a good major/career fit as reasons for deciding on their current major. Additionally, three participants discussed a desire to find a major that was challenging and promoted personal growth.

TABLE 8

Motivation for Majors

Motivation for majors	Number of participants who experienced this theme
RQ1: What factors contribute to first-generation college students entering higher education without a major?	
Not applicable	0
RQ 2: How do first-generation college students describe their experience as an undecided major?	
Not applicable	0
RQ3: How do first-generation college students describe their decision making process when selecting a major?	
Career and financial stability	6
Flexibility	4
Major/career fit	7
Challenge and professional growth	3

The motivation for majors was highly correlated with potential careers for all of the participants in this study. Perhaps unsurprisingly, career and financial stability was an important part of the major decision making process for at least six of the participants who wanted to ensure that they would be able to find a well-paying job after graduation. Both of the male participants listed this as the most important factor in their decision making process, even saying that it outweighed their interest in the major. They both expressed that they wanted to be able to provide for a family in the future.

Half of the participants said it was important that their major provides flexibility in the types of jobs they would be able to get when they graduated. Some were unsure of exactly what they wanted to do, so they wanted to pick a major that was more general and offered a variety of options. Ultimately, each of these participants wanted to have options available to them and did not want to feel restricted to only one job possibility.

Finding a good major and career fit was an important aspect of the major decision making process for seven of the participants. They wanted to ensure they would have a career that aligned with their values and interests. Of these seven participants, all six of the female participants expressed that they wanted to enjoy their major as well as their future career. Four of the participants considered their values in deciding on a major, including the importance of work-life balance, location of jobs, and their future work environments.

Finally, all three participants of color described choosing a major that was a challenge as important to them. They did not want to choose an "easy" major. Instead, they expressed a desire to grow personally and professionally and felt it was important to find a major that would challenge them to do so.

Overall, motivation for majors was highly correlated with career prospects for participants in this study. While it is not surprising that six participants said it was important to have career and financial stability, more participants emphasized the importance of major and career fit. Additionally, half wanted to keep their options open, which attracted them to majors that could lead to a variety of careers. A desire for a challenge was also another significant finding under the theme of motivation for majors.

<div align="center">Summary</div>

While each participant's experiences varied, there were commonalities within four themes: psychological burden, interest in exploration, role of resources, and motivation for majors. A lack of resources available to participants in high school, including a lack of role models and opportunities to learn about future majors and careers, left all of the participants in this study with a strong desire to explore. Therefore, they enrolled in higher education as undecided majors. Upon entering college, many expressed that they felt a strong sense of isolation and pressure to decide on a major to avoid potential costs and extended time to degree. Sustained engagement activities including first-year seminar courses and learning communities, helped those enrolled in them to feel less isolated and have increased support. However, overall experiences with advisors and the career center were not helpful in exploring majors, and in some cases, increased frustration and a sense of isolation.

While participants found coursework, internet searches, and role models the most helpful in the process of exploring majors, taking general education and elective courses were the primary resource participants used to explore. Coursework helped some participants to confirm the major they had been considering and helped others to learn

about majors previously unknown to them. Participants in this study strongly associated majors with careers, and therefore, career and financial stability was the strongest motivation for selecting their major. However, many participants said that the flexibility of their major was important, so they did not feel pigeonholed into one career, and major and career fit was also important to participants. Of note, each of the female participants described wanting to find a major and/or career that was a good fit that they would enjoy, while the male participants were more highly motivated by job stability and income potential. Additionally, the three students of color discussed that they wanted to find a major that would both challenge them and allow them an opportunity to grow.

This chapter presented findings from interviews with eight FGCS enrolled at a 4-year public university to address the following research questions: (1) what factors contribute to first-generation college students entering higher education without a major; (2) how do FGCS describe their experience as an undecided major; and (3) how do FGCS describe their decision making process when selecting a major. Four overarching themes emerged from data analysis, including psychological burden, interest in exploration, the role of resources, and motivation for majors. Chapter 5 will include a summary of the study, a discussion of its findings and their connections to the literature, and recommendations for future practice and research.

CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this qualitative study was to explore the experiences of FGCS who entered college undecided about their major to gain insight into how they ultimately chose a major. Three research questions were addressed in this study:

1. What factors contribute to first-generation college students entering higher education without a major?

2. How do first-generation college students describe their experience as an undecided major?

3. How do first-generation college students describe their decision making process when selecting a major?

This chapter includes a summary of the study, a discussion of its findings and their connections to the literature, and recommendations for future practice and research.

Summary

A qualitative research design was selected for this study as it aimed to understand the complex experiences of FCGS who entered college undecided about their major. Interpretative phenomenological analysis which "is concerned with the detailed examination of personal lived experience, the meaning of experience to participants, and how participants make sense of that experience" (Smith, 2015 p. 9), was selected as the methodological framework as little is known about the experience of FGCS being undecided in major or their experience in selecting and declaring a major.

Social Cognitive Career Theory provided the theoretical framework for this study. While three primary tenets serve as the building blocks of SCCT including self-efficacy beliefs, outcome expectations, and goals, this framework also acknowledges other

influences on a student's confidence and willingness to make decisions regarding careers (Lent et al., 1994). These influences include personal characteristics (interests, abilities, values), environmental factors, and behaviors (Lent et al., 1994).

The setting for this study was a large, public research university located in the southeastern United States, in which 25% of first-year students belong to University College (the university's home for undeclared majors), and approximately 42% of all new undergraduate are FGCS. After receiving a waiver of consent from the university's Institutional Review Board (IRB), the researcher utilized the university's reporting system, to which they had access as an employee of the institution, to generate a list of potential participants who met the initial criteria. Purposeful sampling of FGCS who entered the university undecided about their major who were currently enrolled with a declared major was used to select participants based on their ability to contribute to the research questions.

A call for participants was sent via email to 205 students who met the selection criteria. Eight students responded, and each of them was invited to participate in an in-depth interview that lasted approximately 60 minutes in length. The researcher identified 18 factors from these interviews that related to the experiences and decision making processes of FGCS who were undecided in major. These factors were then thematically grouped to identify the way they presented within each research question. Table 9 identifies the factors related to each research question.

TABLE 9

Factors Related to each Research Question

Research Question 1: What factors contribute to first-generation college students entering higher education without a major?	Research Question 2: How dor first-generation college students describe their experience as an undecided major?	Research Question 3: How do first-generation college students describe their decision making process when selecting a major?
Decision making difficulty High-school resources	Isolation Advising and career centers	Pressure to decide Lack of confidence and uncertainty
Lack of role models Desire to explore	Sustained engagement Time and space for exploration	Role models Internet
		Coursework Information and experience Career and financial stability Flexibility Major and career fit Challenge and growth

After examining the factors related to each research question, the researcher

identified four overarching themes based on their prevalence within the data:

psychological burden, interest in exploration, the role of resources, and motivation for

majors. Psychological burden describes the difficulty with decision making, anxiety,

isolation, and pressure to declare that were factors throughout each of the three research

questions. Interest in exploration was also a factor within each of the research questions.

This theme describes the common thread found among all participants who were not yet

ready to declare a major and wanted the time and opportunity to explore majors and

careers so they could make an informed decision. The theme role of resources describes

the large part that resources played in the experiences and decision making process of

participants. This theme was found throughout each of the research questions and encompassed a lack of resources, negative experiences with resources, and resources that were helpful to participants. The motivation for majors was strongly associated with each participant's decision making process and only addressed in the third research question (How do FGCS describe their decision making process when selecting a major?). Findings within this theme indicated that majors were strongly correlated with careers for participants who expressed a desire to select a major that would provide career and financial stability, flexibility, a good fit, and provide a challenge and opportunities for growth.

The stories and experiences shared by these participants have the potential to give university personnel, including advisors, career counselors, and university policymakers, insight into FGCS who are undecided about their major. An understanding of the experiences of undecided FGCS and how they make decisions about their major can aid university personnel in utilizing their available resources to help these students to have the support they need to successfully navigate through their exploration process to select the major that is right for them. In turn, these students are more likely to be successful and persist to graduation.

Discussion

While participants in this study had variations in their experiences and decision making process, 18 factors were identified within the data and thematically grouped to distinguish the way they presented within the research questions. In response to RQ1: what factors contribute to first-generation college students entering higher education without a major, participants described the ways in which decision making difficulty and

a lack of role models and resources in high school led to their desire to explore majors when they got to college. Each of the participants stated they did not feel they had enough information or experience with majors to commit prior to enrolling in higher education. RQ2 asked: How do first-generation college students describe their experience as an undecided major? Participants described feeling isolated in their experience as undecided majors. Advising and career centers were not seen as helpful in decreasing the sense of isolation that participants described. However, sustained engagement, including first-year seminar courses and learning communities increased feelings of support and gave participants an opportunity to meet other undecided students they felt they could relate to. Additionally, participants were glad to have the time and space to explore majors as undecided students. Finally, RQ 3 asked: How do first-generation college students describe their decision making process when selecting a major? Participants described feeling pressure to select a major quickly to avoid adding time and expense to their degree program. Several participants discussed the way their lack of confidence affected their major decision making process, and some described a continued sense of uncertainty around their current major. Role models, the internet, and coursework helped participants to gather the information and experience they needed to decide on a major. Overall, majors were strongly associated with careers. In fact, participants described the most important factors in their decision making process as career and financial stability, flexibility of majors and careers, finding a good major and career fit, and selecting a major that would provide a challenge and growth.

Four overarching themes were found throughout the research questions: psychological burden, interest in exploration, role of resources, and motivation for

majors. These themes have a dynamic dimension to them and changed throughout each participant's major exploration journey. The overarching themes will be used to link the findings of this study to the literature as they present across the research questions and provide a richer understanding of undecided FGCS experiences and decision making processes. Each theme is described in detail in the following sections concluding with a brief discussion on how SCCT, the theoretical framework used in this study, relates to the findings.

Psychological Burden

The psychological burden for participants in this study began as high school students applying to college without a confirmed major and continued throughout their collegiate experiences as undecided students and into their decision making process regarding their academic major and career choices. Psychological burden presented differently throughout the various stages of participant experiences. Isolation, anxiety, and pressure to decide were most commonly discussed among participants.

Isolation

Five of the participants in this study described feelings of isolation related to being undecided. For some of the participants, isolation included feeling a sense of exclusion and embarrassment regarding being undecided. Others expressed feeling that there was nobody they could talk or relate to in regards to being undecided. While this is not a prevalent theme in the literature on undecided students, it has been found in literature focused on FGCS. London (1989) describes FGCS as often feeling isolated in having to navigate the cultural conflicts between home and college. It is possible that FGCS are already feeling a sense of isolation from their families and peers at home, and

these feelings are amplified by not having a declared major. Therefore, FGCS who are undecided, and may already feel out of place in college, may feel even more so by not having an academic "home" within the university.

Pressure to Decide

Several participants in this study described feeling pressure to decide on a major. While Vanessa expressed feeling left behind by her peers, who had already declared a major, Juliet, Edward, and Megan discussed feeling pressure in terms of time to degree. For these participants, the pressure to decide was primarily based on the fact that they wanted to avoid adding time and expense to their degree program. They felt this meant deciding on a major quickly to avoid falling behind.

Pressure to declare is a common theme among the literature on undecided students and has been found to cause anxiety and lead students to make premature commitments and impulsive decisions (Cuseo, 2005; Gordon & Steele, 2015; Lepre, 2007). Degree programs that entail rigid curriculum designs and extensive amounts of sequential requirements often limit a student's ability to explore majors and give urgency to major selection if they want to graduate within four years (Cuseo, 2005; Titley & Titley, 1980). Many of the participants in this study were considering degrees with heavy sequencing and a large number of pre-major courses for their future income potential (e.g., business, computer science, engineering). It is likely that the heavy sequencing and required prerequisites of these majors only added to the pressure they felt to declare and may have led them to declare a major before they were ready. Their status as FGCS may have added to this pressure. Families with more highly educated parents more often have the fiscal resources to pay for their children's education, therefore the expense of adding

time to their degree program may have been especially daunting for participants in this

study (Toutkoushian et al., 2018).

Interest in Exploration

All of the participants in this study shared an interest in exploring majors. While

one of the participants in this study enrolled in college with a major in mind but was not

yet ready to commit, the majority of the participants had not given much thought to

majors before applying to college and expressed a lack of exposure to a variety of majors

and career fields. While every participant expressed that a desire to explore majors was a

factor that caused them to enter higher education as undecided students, the majority also

expressed that they were glad they had an opportunity to explore majors and careers.

They felt the time and space for exploration gave them an opportunity to increase their

knowledge base and therefore make a better decision regarding their academic major.

While there is a lack of research regarding the experiences and attitudes of FGCS

who are undecided majors, there is a significant amount of research regarding the

informational needs of undecided students that aligned with the findings in this study and

likely contribute to an interest in exploration. Kelly and Lee (2002) cite a lack of

information as one of the primary reasons that students enter college as undecided

majors. A lack of information regarding majors is not exclusive to undecided students;

most college students, including those who are undecided in major, have little

information about careers and majors available to them (Cuseo, 2005; Ellis, 2014;

Gaffner & Hazler, 2002; Galilee-Belfer, 2012; Kramer, 1994; Lewallen, 1993; Orndorff

& Herr, 1996). Lewallen (1993) found this lack of knowledge stemmed from high

schools with varying degrees of career and educational planning services and the fact that

majors and careers are a distant concern for many students at the time of college entry. This was true for the majority of the participants in this study.

While informational needs are a common theme among undecided students, FGCS often share several characteristics that would likely increase their informational needs including a lack of access to role models and parents with limited information about education and college (Choy, 2001). In the absence of information and experience with the concept of college majors and a variety of careers, FGCS may have a deficit of information to make decisions. Rather than declaring a major with limited information and experience, the participants in this study made the decision to delay their decision making.

Role of Resources

Resources played an important role in the exploration process of the FGCS in this study who were undecided about their major. A lack of role models and exploration opportunities in high school led to participants in this study enrolling in higher education as undecided students. While in college, participants in this study cited coursework, internet exploration, and sustained engagement activities as most helpful in their exploration process. Advising and career centers were absent from, or cited as barriers, for participants in this study.

Coursework

While participants expressed a lack of course options in high school to identify interests and related majors, coursework was the most commonly discussed resource that participants utilized for exploration once enrolled in college. Both general education and elective coursework gave participants opportunities to explore majors either through

confirming interests or learning about new areas of study. This finding is well supported in the literature regarding undecided students. In fact, Gordon and Steele (2003) cite exploration through coursework as the "most basic advising tool" (p. 30). As most undecided students lack information about majors available to them, the curricula associated with those majors, and their relationships to careers, general education and elective coursework is a good source of information and has been found to encourage exploration of interests (Galilee-Belfer, 2012; Gordon & Steele, 2003). While general education courses can expose students to new areas of interest, access to elective and introductory courses is also important. The FGCS who participated in this study utilized coursework as their primary means of exploration. These courses gave the participants in this study an opportunity to explore majors of interest in a way that was non-threatening and did not require additional time and resources outside of class, which is often a barrier for FGCS. Perhaps most importantly, taking introductory courses, and finding success in these courses, might have helped to shape participant's outcome expectations.

Role Models

Participants in this study discussed a lack of role models as a barrier in their decision making process and one of the primary reasons for coming to college undecided about their major. This finding is aligned with current literature on both FGCS and undecided majors that cite role models, and the lack thereof, as having a tremendous impact on major and career decision making. The literature on undecided students shows that parents play a significant role in career and major selection (Gordon & Steele, 2015; Holland, 1957; Simmons, 2008). Further, families and peers have been found to have greater influence than career research in identifying a major (Beggs et al., 2008). This is

likely because students gain self-efficacy beliefs, one of the primary tenets of SCCT, from the vicarious experiences of those around them (Gibbons et al., 2019; Len et al., 2002). Seeing parents, role-models, and peers have success in a particular major or career impacts a student's belief that they too can accomplish the same goal.

The literature on FGCS shows that continuing generation students are more likely to have interactions with adults who attended college to offer information and serve as role models in forming educational aspirations (O'Connor, Hammack, & Scott, 2010; Perna, 2006; Sandefur, Meier, & Campbell, 2006). While the participants in this study reported feeling supported by their parents who often encouraged them to choose a major that would make them happy, they did not feel choosing a major or career was something they could discuss with them. In short, they did not have the same access to role models to help with major and career exploration as their continuing generation peers. This lack of role models negatively affected their exploration and major decision making process.

Advising and Career Centers

Advising and career centers are resources offered in institutions of higher education that are most often associated with major and career decision making (Choi et al., 2013; Ellis, 2014; Galilee-Belfer, 2012; Garris, 2014; Gordon & Steele, 2015; Ledwith, 2014; Makela & Rooney, 2014). Advising and career centers were rarely mentioned by participants when asked about their experiences as undecided students and the resources they used in their decision making process regarding career and major. This is aligned with the literature on FGCS that shows they are not as likely to live on campus or participate in programs typically linked with college success and that they

work more hours than their continuing-generation peers (Chen & Carroll, 2005; Martinez et al., 2009; Pascarella et al., 2004).

Additionally, some of the participants listed advising and career centers as a barrier in their experience as an undecided student. Those participants who did seek out help stated they did not feel they received it when they met with advisors and career counselors. In fact, two of the participants who discussed their experiences with their academic advisor said the advisor added to the pressure they already felt to "figure out" their major. Ellis' (2014) study on the academic advising experiences of undecided students found that advising for this population should be specific to the individual student and developmentally appropriate. Additionally, many of the participants in this study expressed having limited interactions with guidance counselors in high school. During their first year of college, they may have had limited one-on-one interactions with faculty or staff members. It is important for advisors and career centers to meet undecided FGCS where they are and to understand this may be their first interaction of this kind with a counselor or advisor. Advisors should take the time to get to know the student and their expectations so they can best meet them where they are. Undecided students will be less likely to seek help from their advisors in the future if they cannot recognize and meet the student's changing expectations (Alexitch, 2002).

Sustained Engagement

Those participants who did enroll in programs of sustained engagement, including first-year seminar courses and learning communities, reported positive experiences that provided support, connections to academic advisors, and information helpful in major exploration. Conversely, participants who did not take part in sustained engagement

activities either had negative experiences in utilizing these resources or did not discuss

them at all as part of their experience and exploration process.

Previous research has shown positive associations with sustained engagement

programs (Cuseo, 2005; Gordon & Steele, 2015; Jurgens, 2000; Ledwith, 2014; Reese &

Miller, 2006; Thompson & Feldman, 2010). First-year seminar courses, often led by

academic advisors, career center staff, or university faculty have proven their value in

promoting student growth in self-awareness, students' understanding of vocation and

how it fits into their lives, and aiding student identification of majors and careers of

interest in previous studies (Thompson & Feldman, 2010). Additionally, learning-

communities have been successful in helping with adjustment concerns as well as major

exploration and academic planning within a supportive environment (Gordon & Steele,

2015). Sustained engagement activities connected participants in this study to supportive

staff members as well as other students who were exploring majors, decreasing feelings

of isolation. These programs gave participants, who expressed a lack of opportunities to

explore majors and careers in high school, the resources and opportunity to learn about

themselves and the options available to them. In addition to feeling a decreased sense of

isolation, these activities also likely increased participant's self-efficacy and outcome

expectations.

Internet

Half of the participants in this study reported that their main source of information

regarding majors and careers came from the utilization of the internet as a resource.

Specifically, participants conducted career-related internet searches and watched

YouTube videos to learn more about a variety of careers. While utilizing the internet as a

primary resource in major and career exploration is not consistent with existing literature, it does align with some of the literature on FGCS. SCCT indicates that individuals gain self-efficacy through their own experiences or the vicarious experiences of those around them (Lent et al., 2002). Prior literature shows that FGCS are less likely to have relationships with adults who have attended college and typically have less time to utilize campus resources because they are more likely to live off-campus and work more hours (Chen & Carroll, 2005; Martinez et al., 2009; O'Connor, Hammack, & Scott, 2010; Pascarella et al., 2004; Perna, 2006; Sandefur, Meier, & Campbell, 2006). Internet research allows FGCS to access information about majors and careers they do not have in role-models at a time and place convenient to their often busy schedules. However, it is often difficult to assess the accuracy of information found online, and in social media in particular, as it often lacks contextual information and may be plagued with bias, out-of-date information, and a restricted range of experience (Makela, 2015).

Motivation for Majors

Participants in this study often associated majors with careers. Finding a major that would lead to a future career that was both a good fit for their values and offered financial stability was most important to participants. Participants also desired to find majors that had flexibility in terms of career options and that challenged them both personally and academically. Findings within this theme offered interesting variations for both gender and race. While all of the female participants in this study wanted to find a major that would lead to a good fit for their values and interests, the male participants indicated that financial stability was most important, even if that meant they had a career in which they were not as interested. Additionally, the three students of color who

participated in this study all stated that finding a major that would challenge them was an important priority in their selection of a major.

Selecting a major that would lead to a good career fit in terms of values and financial stability are common findings within the literature on major choice (Beggs et al., 2008; Bui, 2002). Previous research found that the primary motivation for attending college for both FGCS and continuing generation students was to achieve their career goals, and major selection is often based on this desire (Cuseo, 2005). However, Beggs et al., (2008) found that career match with interests was the primary reason for selecting a major and that financial considerations ranked fourth. Participants in this study listed financial stability higher than this and their status as FGCS could play a significant role in this variation. Bui's (2002) study found that unlike their continuing generation peers, FGCS ranked helping their family financially after college as a major motivation in their decision to attend. This desire to help parents and loved ones financially could influence FGCS's placing a stronger value on financial stability than career fit.

The differences in the value placed on financial stability and career fit based on gender are also found within previous literature. Beggs et al. (2008) found that men viewed financial success as more important than women. Morgan, Isaac, and Sansone (2001) found that women placed more importance on interpersonal work goals and less importance on high pay. This difference is likely because men more often see themselves as the primary breadwinners in their families (Beggs et al., 2008). This finding was consistent with the current literature and showed no variation between FGCS and continuing generation students. The final variation of students of color reporting that

finding a major that would both challenge them and help them to grow was not found in the literature but may be an area for future research.

Overall, the findings in this study supported the tenets of SCCT including self-efficacy, outcome expectations, and goals. Self-efficacy was supported in that participants in this study reported not declaring a major at college entry due to a lack of experience with major and careers. This included a lack of experience by the participants themselves as well as a lack of vicarious experiences from role models in their lives who had careers that required post-secondary education. Once enrolled in college, many of the participants expressed that they had considered their strengths and interests in deciding on a college major. Further, many of the participants gained the self-efficacy necessary to declare a major through successful experiences in the introductory coursework for that major. Outcome expectations were particularly dominant in the participants' motivation for majors. Many of the participants in this study expressed they wanted a major that "would be worth it" in that it would lead to career and financial stability or a job they would enjoy. They selected their major because they thought it would lead to a positive outcome. The final tenet, goals, was also supported in the findings of this study. Lent et al. (2002) stated that students often create goals they believe they can achieve based on the outcomes they want to gain in reaching their goals. Each of the participants in this study had a desire to explore majors. Their initial success in these majors, combined with their career goals helped them to decide on and declare their eventual major.

Recommendations for Future Practice

The results of this study have the ability to shape the way advisors, student support communities, and university policymakers engage with and increase the success of FGCS who are undecided about their major. Drawn from the findings of this study, recommendations for practice include increased sustained engagement and online resources, FGCS support programs, and increased time for exploration. Each of the recommendations for practice is presented below.

Opportunities for Sustained Engagement

Sustained engagement programs including first-year seminar courses, career-exploration courses, and learning communities for undecided students have found to be an effective way to both improve career decision making self-efficacy and help students with adjustment concerns (Cuseo, 2005; Gordon & Steele, 2015; Jurgens, 2000; Ledwith, 2014; Reese & Miller, 2006; Thompson & Feldman, 2010). Another advantage of sustained engagement activities found in the literature is that they encourage relationships and continuity of contact between the student and university official (Cuseo, 2005). All of the participants in this study reported that participation in sustained engagement activities decreased their sense of isolation and connected them to the resources they needed, including a supportive staff member, to help them effectively explore majors. Conversely, participants who had one-time interactions with advisors and career centers reported increased feelings of isolation and negative experiences with these services. Many of the students who did not participate in sustained engagement activities instead turned to the internet and other sources to gather information on major and career options. These findings support increasing sustained engagement opportunities for FGCS

who are undecided about their major, particularly in light of the isolation expressed by many of the participants in this study. Increased interactions with a staff member and other students would serve as a significant resource for FGCS who are undecided about their major in that it would let them know they do not have to undergo exploration and decision making on their own.

As FGCS are less likely to live on campus or participate in sustained engagement programs, and more inclined to focus their college experiences on academics rather than social interactions, it is important to embed first-year seminar courses into the first-year curriculum and offer non-residential options for learning community participation (Chen & Carroll, 2005; Martinez et al., 2009; Pascarella et al., 2004; Terenzini, Pascarella, & Blimling, 1996). Findings from this study show that undecided FGCS have a strong desire to explore majors and careers and are looking for opportunities to do this. First-year seminar courses, in particular, have an opportunity to provide academic major and career exploration, decision making strategies, and explore relationships between majors and careers in a safe, structured environment (Gordon & Steele, 2015). Further, courses that involve experiential learning opportunities, including informational interviews, job shadowing, service learning, and peer mentoring that links FGCS with undecided majors to role models, would be ideal for this population as it would give them opportunities to gain experience that would increase their career decision making self-efficacy and outcome expectations.

Online Resources

Findings from this study showed that undecided FGCS often turn to the internet as their primary source of information in career and major exploration. As FGCS often

live at home and work more hours than their continuing generation peers, increasing university-sponsored online resources would provide information for students in a way that is both convenient and easily accessible (Chen & Carroll, 2005; Martinez et al., 2009; O'Connor, Hammack, & Scott, 2010; Pascarella et al., 2004; Perna, 2006; Sandefur, Meier, & Campbell, 2006). Increasing internet-based resources sponsored by institutions of higher education would ensure that students are receiving accurate and unbiased information.

Online resources should be easy for students to find and access and provide opportunities for vicarious experiences to increase self-efficacy in students. These vicarious experiences would offer a glimpse into many careers and majors for FGCS undecided students who may not have role models in careers that require a college education. Many participants in this study expressed reservations to declare a major without more experience and information about the major and its associated careers. Online videos that showcased "a day in the life" of various careers provided insight for some of the participants. Opportunities to watch informational interviews and gain insight into the daily experiences of people in various careers would provide information and eliminate barriers of time and discomfort of seeking out information in person. Online resources could also include assessments with links to more in-depth information about corresponding careers, majors, and the coursework required so students can get the information they need to explore majors in one convenient location.

FGCS Support Programs

This study took place at an institution that lacked programming specifically designed for FGCS, including TRIO programs. Other than participation in sustained

engagement activities such as learning communities and first-year seminar courses, participants did not have positive interactions with campus resources and support programs, including advising and career centers. While participants had a strong desire to explore, they were not able to establish connections on campus to have the support they needed in this process. Therefore, many of the participants turned to the internet for information and, although they had selected a major, some participants still felt uncertain about that choice.

Prior studies show that FGCS are best assisted by advisors who utilize proactive strategies to help students create degree plans, build career and social networks, locate academic resources, and navigate the opinions of parents and friends who may have their own ideas about a student's major selection (Darling & Smith, 2007; Stickles, 2004). Additionally, FGCS often look to build trusting relationships with their advisors based on the advisor's knowledge and understanding of their background. While it is important for all advisors on campus who work with FGCS to have a comprehensive understanding of this population of students and the resources available to help (Stickle, 2004), large caseloads often prevent proactive advising due to time limitations for multiple appointments and establishing meaningful relationships.

TRIO programs, and other programs that provide advising and resources specific to FGCS, would greatly benefit these students. Programs geared specifically for FGCS that feature an advising component would allow the advisors who work with this population of students the training and time needed to build relationships. As many of the participants in this study expressed they did not have role models or opportunities to meet with counselors before college, programming that targeted these students and

featured the tools and resources required to successfully engage them, could be a great

benefit.

Time for Exploration

Each of the participants in this study expressed a desire to explore majors to

gather information so they could make an informed decision. Only one of the

participants had the opportunity to take courses in high school to explore some major and

career fields. The others lacked the experience and resources to know much about majors

before entering college. Once enrolled in college, they worried that not declaring a major

quickly enough would cause them to be behind and waste time and money. This

produced anxiety for some of the participants in this study and can cause students to

declare prematurely before they are developmentally ready to do so.

Due to the sequential nature of some majors, students do not have much time to

explore. In order to graduate in four years, some majors require that students begin

taking courses within the curriculum from their first semester in college. The findings of

this study suggest that, given the significance of choosing a major, and the fact that many

students are not developmentally ready to do so at college entry and lack the experience

and information to do so, universities should make programmatic changes that allow the

choice of major to be delayed until at least after the first year. A required delay in

decision making, coupled with sustained engagement activities that promote major

exploration would reduce anxiety, decrease premature decisions about majors and careers

that often lead to changing majors later in the college experience, and allow students to

make decisions informed by experience and information.

Recommendations for Future Research

While this study examined the experiences of FGCS as undecided majors and their decision making process, a majority of the research on FGCS is focused on middle and high school experiences and their transition to college (Chen, 2005; Gibbons & Borders; 2010; Ishitani, 2004). Much of the literature on undecided students has been quantitative and has lacked a focus on student experiences (Beggs et al., 2008; Cebula & Lopes, 1982; Chung, Loeb, & Gonzo, 1996; Malgwi, Howe, & Burnaby, 2005). Additional research is needed that focuses on the experiences of FGCS who are undecided about their academic major. Areas of particular focus should be (1) advising and career centers as a resource, (2) the intersection of gender and undecided FGCS, (3) the desire of students to declare a major that challenges them, (4) advanced undecided students, and (5) characteristics that contribute to the success of FGCS.

Although previous literature demonstrates advising and career centers to be two of the most important resources for undecided students, participants in this study rarely mentioned advising and career centers (Cuseo, 2005; Gordon & Steele, 2015). The lack of discussion around these two resources suggests they were not utilized. Rather, participants identified these resources as barriers when they were discussed at all. Based on these findings, further qualitative study to understand the experiences of FGCS with advising and career centers when deciding on a major is warranted to understand whether or not these resources are reaching FGCS and how they could better serve this population.

With six female and two male participants, the sample for this study was predominantly female. Future research would benefit from a more balanced sample that

enabled researchers to draw comparisons on the role of gender, if any, in the experiences and decision making process of undecided FGCS. The role of gender may be of particular importance in understanding the motivation of students in regards to major selection.

The desire to find a major that would provide both challenge and growth by FGCS of color in this study is another area for further research. One participant in this study who said they wanted a challenge described this in the context of feeling they had something to prove as a FGCS, while another discussed wanting to find a major that would help them grow in their skills. A desire for a major that would provide a challenge is absent from the literature; further qualitative studies could examine potential connections among FGCS or the intersection of FGCS from underrepresented racial groups.

Another area for future research is with advanced FGCS who are undecided in major, or those with more than 60 credit hours. While this study focused on those FGCS who started as undecided students and declared a major within the first two years, it would be interesting to understand the experiences of FGCS with more than 60 credits who have not yet declared a major. As all of the participants in this study have declared a major, future qualitative study of students who have not been able to declare might provide insight into additional experiences and potential barriers.

Finally, much of the current research on FGCS examines this population of students from a deficit perspective. Viewing FGCS from this lens shows them as outsiders and can lead the students themselves to internalize feelings that they do not belong in college (Ilett, 2019). In light of this, future research on FGCS should examine

this population of students from an asset perspective. While not dismissing differences, future studies should identify some of the many positive characteristics that contribute to the success of FGCS.

Conclusion

This qualitative study examined the experiences of eight FGCS who entered college undecided about their major. Four themes were identified: psychological burden, interest in exploration, role of resources, and motivation for majors. This chapter included a discussion of these themes and their connections to the literature. Additionally, this chapter included recommendations for future practice and research based on the findings of this study. As much of previous literature has focused on the characteristics as well as graduation and retention rates of this population, this study began to address the gap in the literature on the experiences of FGCS as undecided majors and their experiences in deciding on a major. It is the hope of this researcher that the findings of this study contribute to the body of knowledge of this student population so that they can be better served by university personnel, including academic advisors and career counselors, and policymakers. The perspectives and experiences that these students shared certainly provide insight into their strengths as well as the barriers and facilitators in their journey as undecided students.

REFERENCES

Alexitch, L. R. (2002). The role of help-seeking attitudes and tendencies in students'
    preferences for academic advising. *Journal of College Student Development*,
    43(1), 5–18.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*.
    Englewood Cliffs, NJ: Prentice Hall, Inc.

Barefoot, B. O. (2003). *Second national survey of first-year academic practices, 2002*.
    Retrieved from http://www.jngi.org/wordpress/wp-
    content/uploads/2011/12/2002_2nd_Nat_Survey_Responses_ALL.pdf.

Becker, G. (1975). *Human capital: A theoretical and empirical analysis, with special
    reference to education*. Chicago, IL: University of Chicago Press.

Beggs, J. M., Bantham, J. H., & Taylor, S. (2008). Distinguishing the factors influencing
    college students' choice of major. *College Student Journal, 42*(2), 381-394.

Billson, J., & Terry, M. (1982). In search of the silken purse: Factors in attrition among
    first-generation students. *College and University*, *58*, 57-75.

Bloom, A. J., Tripp, P. R., & Shaffer, L. S. (2011). Academic and career advising of
    scanners. *NACADA Journal, 31*(2), 55-61. doi:10.12930/0271-9517-31.2.55.

Brooks-Terry, M. (1988). Tracing the disadvantages of first-generation college students:
    An application of Sussman's option sequence model. In S. K.Steinmetz (Ed.),
    Family and suppor systems across the life span (pp. 121-134). New York, NY:
    Plenum Press.

Brown, S. D., & Lent, R. W. (1996). A social cognitive framework for career choice counseling. *Career Development Quarterly, 44*(4), 354-366. doi:10.1002/j.2161-0045.1996.tb00451.x.

Bryan, E., & Simmons, L. (2009). Family involvement: Impacts on post-secondary educational success for first-generation Appalachian college students. *Journal of College Student Development, 50*(4), 391-406. doi:10.1353/csd.0.0081.

Bui, K. V. T. (2002). First-generation college students at a four-year university: Background characteristics, reasons for pursuing higher education, and first-year experiences. *College Student Journal, 36*(1), 3-11.

Bullock-Yowell, E., McConnell, A. E., & Schedin, E. A. (2014). Decided and undecided students: Career self-efficacy, negative thinking, and decision making difficulties. *NACADA Journal, 34*(1), 22-34.

Byrd, K. L., & MacDonald, G. (2005). Defining college readiness from the inside out: First-generation college student perspectives. *Community College Review, 33*(1), 22-37. doi:10.1177/009155210503300102.

Cardoza, K. (2016). First-generation college students are not succeeding in college, and money isn't the problem. *The Washington Post*, *1*, 20.

Carduner, J., Padak, G. M., & Reynolds, J. (2011). Exploratory honors students: Academic major and career decision making. *NACADA Journal, 31*(1), 14-28. doi:10.12930/0271-9517-31.1.14.

Cebula, R., & Lopes, J. (1982). Determinants of student choice of undergraduate major field.*, 92*(2), 303-312.

Chen, X., & Carroll, C. D. (2005). *First-generation students in postsecondary education: A look at their college transcripts* (NCES 2001-171). Washington, DC: U.S. Department of Education, National Center for Education Statistics, U.S. Government Printing Office. Retrieved from https://nces.ed.gov/pubs2005/2005171.pdf.

Cho, S.-J., Hudley, C., Lee, S., Barry, L., & Kelly, M. (2008). Roles of gender, race, and ses in the college choice process among first-generation and nonfirst-generation students. *Journal of Diversity in Higher Education, 1*(2), 95-107. doi:10.1037/1938-8926.1.2.95.

Choi, B. Y., Lee, J. H., Kim, A., Kim, B., Cho, D., & Lee, S. M. (2013). The economic value of career counseling services for college students in South Korea. *Career Development Quarterly, 61*(2), 168-178. doi:10.1002/j.2161-0045.2013.00045.x.

Choy, S. P. (2001). *Students whose parents did not go to college: Post-secondary access, persistence, and attainment*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Chung, Y. B., Loeb, J. W., & Gonzo, S. T. (1996). Factors predicting the educational and career aspirations of Black college freshmen. *Journal of Career Development, 23*(2), 127-135. doi:10.1177/089484539602300203.

Cohen, M. Z., & Omery, A. (1994). Schools of phenomenology: Implications for research. In J. A. Morse (Ed.), *Critical Issues in Qualitative Research Methods* (pp. 136-156). Thousand Oaks, CA: Sage Publications.

College Board. (2012). National survey of school counselors and administrators report on survey findings: Barriers and supports to school counselor success. New York,

NY: Retrieved from

https://securemedia.collegeboard.org/digitalServices/pdf/nosca/Barriers-

Supports_TechReport_Final.pdf

Conklin, A. M., Dahling, J. J., & Garcia, P. A. (2013). Linking affective commitment,

career self-efficacy, and outcome expectations: A test of social cognitive career

theory. *Journal of Career Development, 40*(1), 68-83.

doi:10.1177/0894845311423534.

Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry.

Theory into Practice, 39(3), 124-130. doi:10.1207/s15430421tip3903_2.

Creswell, J. (2013). *Qualitative inquiry & research design : Choosing among five

approaches.* (3rd ed.). Los Angeles: SAGE Publications.

Cuseo, J. (2005). Decided, undecided, and in transition: Implications for academic

advisement, career counseling, and student retention. *Improving the First Year of

College: Research and Practice* (pp. 27-48). Mahwah, NJ: Lawrence Erlbaum

Associates, Inc.

D'Amico, M. M., & Dika, S. L. (2013). Using data known at the time of admission to

predict first-generation college student success. *Journal of College Student

Retention: Research, Theory & Practice, 15*(2), 173-192. doi:10.2190/CS.15.2.c.

Darling, R. A., & Smith, M. S. (2007). First-generation college students: First-year

challenges. *Academic advising: New insights for teaching and learning in the first

year*, *14*, 203-211.

DeAngelo, L., Franke, R., Hurtado, S., Pryor, J., & Tran, S. (2011). *Completing College: Assessing Graduation Rates at Four-year Institutions*. Los Angeles: Higher Education Research Institute, UCLA.

Dennis, J. M., Phinney, J. S., & Chuateco, L. I. (2005). The role of motivation, parental support, and peer support in the academic success of ethnic minority first-generation college students. *Journal of College Student Development, 46*(3), 223-236. doi:10.1353/csd.2005.0023.

Dika, S.L., Siarzynski-Ferrer, K., Galloway, K, & D'Amico, M.M. (2015). Predicting the persistence of undeclared first-year and transfer students. *Journal of College Orientation and Transition, 22*(2), 23-39.

Duffy, R. D., & Dik, B. J. (2012). Research on work as a calling. *Journal of Career Assessment, 20*(3), 239-241. doi:10.1177/1069072711434409.

Duffy, R. D., & Sedlacek, W. E. (2007). The presence of and search for a calling: Connections to career development. *Journal of Vocational Behavior, 70*(3), 590-601. doi:10.1016/j.jvb.2007.03.007.

Eagan, K., Lozano, J.B., Hurtado, S., & Case, M.H. (2013). *The American freshman: National norms fall 2013.* Retrieved from Los Angeles, CA: https://www.heri.ucla.edu/monographs/TheAmericanFreshman2013.pdf.

Ellis, K. C. (2014). Academic advising experiences of first-year undecided students: A qualitative study. *NACADA Journal, 34*(2), 42-50.

Engle, J. (2007). Postsecondary access and success for first-generation college students. *American Academic, 3*, 25-48.

Engle, J. T., V. (2008). *Moving beyond access: College success for low-income, first-generation students*. Retrieved from https://files.eric.ed.gov/fulltext/ED504448.pdf.

Feldt, R. C., & Woelfel, C. (2009). Five-factor personality domains, self-efficacy, career-outcome expectations, and career indecision. *College Student Journal, 43*(2), 429-437.

Fuqua, D. R., & Hartman, B. W. (1983). Differential diagnosis and treatment of career indecision. *Personnel and Guidance Journal, 62*(1), 27-29.

Gaffner, D. C., & Hazler, R. J. (2002). Factors related to indecisiveness and career indecision in undecided college students. *Journal of College Student Development, 43*(3), 317-326.

Galilee-Belfer, M. (2012). In practice: Using the 'developing competency' vector to prepare students for competent academic major exploration. *About Campus, 17*(3), 23-27. doi:10.1002/abc.21083.

Galotti, K. M., Ciner, E., Altenbaumer, H. E., Geerts, H. J., Rupp, A., & Woulfe, J. (2006). Decision making styles in a real-life decision: Choosing a college major. *Personality & Individual Differences, 41*(4), 629-639. doi:10.1016/j.paid.2006.03.003.

Garis, J. (2014). Value-added career services: Creating college/university-wide systems. *New Directions for Student Services*148, 19-34.

Garriott, P. O., Flores, L. Y., & Martens, M. P. (2013). Predicting the math/science career goals of low-income prospective first-generation college students. *Journal of Counseling Psychology, 60*(2), 200-209.

Gibbons, M. M., & Borders, L.D. (2010). Prospective first-generation college students: A social-cognitive perspective. *The Career Development Quarterly*, 58, 194-208.

Gibbons, M. M., Rhinehart, A., & Hardin, E. (2019). How first-generation college students adjust to college. *Journal of College Student Retention.: Research, Theory & Practice*, 20(4), 488-510.

Gibbons, M. M., & Shoffner, M. F. (2004). Prospective first-generation college students: Meeting their needs through social cognitive career theory. *Professional School Counseling, 8*(1), 91.

Goldstein, L. (1965). Behavior theoretical views of counseling. In B. Stefflre (Ed.), *Theories of Counseling* (pp. 140-192). New York: McGraw-Hill.

Gordon, V. (1998). Career decidedness types: A literature review. *The Career Development Quarterly, 46*(4), 386-403. doi:10.1002/j.2161-0045.1998.tb00715.x.

Gordon, V. N. (2007). The undecided college student: An academic and career advising challenge. Springfield, Illinois: Charles C. Thomas Publishers, Ltd.

Gordon, V. N., & Steele, G. E. (1992). Advising major-changers: Students in transition. *NACADA Journal, 12*(1), 22-27.

Gordon, V. N., & Steele, G. E. (2003). Undecided first-year students: A 25-year longitudinal study. *Journal of The First-Year Experience & Students in Transition, 15*(1), 19-38.

Gordon, V. N., & Steele, G. E. (2015). *The Undecided College Student: An Academic and Career Advising Challenge* (Fourth edition. ed.). Springfield, Illinois: Charles C. Thomas Publishers, Ltd.

Guay, F., Senecal, C., Gauthier, L., & Fernet, C. (2003). Predicting career indecision: A self-determination theory perspective. *Journal of Counseling Psychology, 50*(2), 165-177. doi:10.1037/0022-0167.50.2.165.

Holland, J. (1957). Undergraduate origins of American scientists. *Science, 126*(3271), 433-437.

Horn, L., & Nunez, A. (2000). Mapping the road to college: First-generation students' math track, planning strategies, and context of support. *Education Statistics Quarterly*, *2*(1), 81-86.

Ilett, D. (2019). A critical review of LIS literature on first-generation students. *portal: Libraries and the Academy*, *19*(1), 177-196.

Inkelas, K. K., Daver, Z. E., Vogt, K. E., & Leonard, J. B. (2007). Living-learning programs and first-generation college students' academic and social transition to college. *Research in Higher Education, 48*(4), 403-434. doi:10.1007/s11162-006-9031-6.

Ishitani, T. (2003). A longitudinal approach to assessing attrition behavior among first-generation students: Time-varying effects of pre-college characteristics. *Research in Higher Education, 44*(4), 433-449. doi:10.1023/A:1024284932709.

Jin, L., Watkins, D., & Yuen, M. (2009). Personality, career decision self-efficacy, and commitment to the career choices process among Chinese graduate students. *Journal of Vocational Behavior, 74*(1), 47-52. doi:10.1016/j.jvb.2008.10.002.

Jurgens, J. C. (2000). The undecided student: Effects of combining levels of treatment parameters on career certainty, career indecision, and client satisfaction. *Career Development Quarterly, 48*(3), 237-250.

Kelly, K. R., & Lee, W. C. (2002). Mapping the domain of career decision problems. *Journal of Vocational Behavior*, *61*(2), 302-326.

Kramer, G. L., Higley, H. B., Olsen, D. (1994). Changes in academic major among undergraduate students. *College and University, 69*(2), 88-96.

Ledwith, K. E. (2014). Academic advising and career services: A collaborative approach. *New Directions for Student Services, 2014,* 148, 49-63. doi:10.1002/ss.20108.

Lent, R. W., & Brown, S. D. (1996). Social cognitive approach to career development: An overview. *Career Development Quarterly, 44*(4), 310-321. doi:10.1002/j.2161-0045.1996.tb00448.x.

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*(1), 79-122. doi:10.1006/jvbe.1994.1027.

Lent, R. W., Brown, S. D., & Hackett, G. (2002). Social cognitive career theory. In *Career Choice and Development* (pp. 255-311). San Francisco: Jossey-Bass.

Lent, R. W., Miller, M. J., Smith, P. E., Watford, B. A., Lim, R. H., Hui, K., Williams, K. (2013). Social cognitive predictors of adjustment to engineering majors across gender and race/ethnicity. *Journal of Vocational Behavior, 83*(1), 22-30. doi:10.1016/j.jvb.2013.02.006.

Leppel, K. (2001). The impact of major on college persistence among freshmen. *Higher Education, 41*(3), 327-342.

Lepre, C. R. (2007). Getting through to them: Reaching students who need career counseling. *Career Development Quarterly, 56*(1), 74-84. doi:10.1002/j.2161-0045.2007.tb00021.x.

Lewallen, W. (1993). The impact of being "undecided" on college-student persistence. *Journal of College Student Development, 34*(2), 103-112.

Lewallen, W. (1995). Students decided and undecided about career choice: A comparison of college achievement and student involvement. *NACADA Journal, 15*(1), 22-30.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Newbury Park, CA: Sage Publications.

Lindley, L. D. (2005). Perceived barriers to career development in the context of social cognitive career theory. *Journal of Career Assessment, 13*(3), 271-287. doi:10.1177/1069072705274953.

London, H. B. (1989). Breaking away: A study of first-generation college students and their families. *American Journal of Education, 97*(1), 144-170.

Longwell-Grice, R. (2003). Get a job: Working class students discuss the purpose of college. *College Student Affairs Journal, 23*, 40-53.

Longwell-Grice, R., & Longwell-Grice, H. (2008). Testing Tinto: How do retention theories work for first-generation, working-class students? *Journal of College Student Retention, 9*(4), 407-420. doi:10.2190/CS.9.4.a.

Luzzo, D. A., & McWhirter, E. H. (2001). Sex and ethnic differences in the perception of educational and career-related barriers and levels of coping efficacy. *Journal of Counseling & Development, 79*(1), 61-67. doi:10.1002/j.1556-6676.2001.tb01944.x.

Makela, J. P., & Rooney, G. S. (2014). Framing assessment for career services: Telling our story. *New Directions for Student Services, 2014,* 148, 65-80. doi:10.1002/ss.20109.

Makela, J. P. (2018). The validity of social media-based career information. *The Career Development Quarterly, 66*(2), 121-134. doi:http://dx.doi.org/10.1002/cdq.12127/.

Malgwi, C. A., Howe, M. A., & Burnaby, P. A. (2005). Influences on students' choice of college major. *Journal of Education for Business, 80*(5), 275-282. doi:10.3200/JOEB.80.5.275-282.

Martinez, J. A., Sher, K. J., Krull, J. L., & Wood, P. K. (2009). Blue-collar scholars?: Mediators and moderators of university attrition in first-generation college students. *Journal of College Student Development, 50*(1), 87-103.

McDaniels, R., Carter, J., Heinzen, C., Candrl, K., & Wieberg, A. (1994). Undecided/undeclared: Working with "deciding" students. *Journal of Career Development, 21*(2), 135-139. doi:10.1007/BF02117437.

McLean, C., & Hauschild, K.. (2007). Advising special populations - Exemplary program for advising undecided students. In L. Huff, & Gordon, V. (Ed.), *National Academic Advising Association: Advising Special Populations.* (pp. 209-218).

Montag, T., Campo, J., Weissman, J., Walmsley, A., & Snell, A. (2012). In their own words: Best practices for advising millennial students about majors. *NACADA Journal, 32*(2), 26-35.

Morgan, C., Isaac, J. D., & Sansone, C. (2001). The role of interest in understanding the career choices of female and male college students. *Sex Roles, 44*(5-6), 295-320.

Nguyen, T.-H., & Nguyen, B. M. D. (2018). Is the "first-generation student" term useful for understanding inequality? The role of intersectionality in illuminating the

implications of an accepted—yet unchallenged—term. *Review of Research in Education, 42*(1), 146-176. doi:10.3102/0091732X18759280

Nichols, L., & Islas, Á. (2016). Pushing and pulling emerging adults through college: College generational status and the influence of parents and others in the first year. *Journal of Adolescent Research, 31*(1), 59-95. doi:10.1177/0743558415586255.

Niles, S. G., & Harris-Bowlsbey, J. (2009). *Career Development Interventions in the 21st century* (3rd ed.). Upper Saddle River, NJ: Merrill/Pearson.

O'Brien, K. M., Bikos, L. H., Epstein, K. L., Flores, L. Y., Dukstein, R. D., & Kamatuka, N. A. (2000). Enhancing the career decision making self-efficacy of Upward Bound students. *Journal of Career Development*, *26*, 277-293.

O'Connor, N., Hammack, F., & Scott, M. (2010). Social capital, financial knowledge, and Hispanic student college choices. *Research in Higher Education, 51*, 195–219.

Olenchak, F. R., & Hebert, T. P. (2002). Endangered academic talent: Lessons learned from gifted first-generation college males. *Journal of College Student Development, 43*(2), 195-212.

Olsen, J. S. (2014). Opportunities, obstacles, and options: First-generation college graduates and social cognitive career theory. *Journal of Career Development*, *41*(3), 199-217.

Orndorff, R. M., & Herr, E. L. (1996). A comparative study of declared and undeclared college students on career uncertainty and involvement in career development activities. *Journal of Counseling & Development, 74*(6), 632-639.

Pascarella, E. T., Pierson, C. T., Wolniak, G. C., & Terenzini, P. T. (2004). First-generation college students: Additional evidence on college experiences and outcomes. *The Journal of Higher Education, 75*(3), 249-284. doi:10.1080/00221546.2004.11772256

Pascarella, E., & Terenzini, P. (2005). *How college affects students: A third decade of research* (2nd edition.). San Francisco: Jossey-Bass.

Perna, L. (2006). Studying college access and choice: A proposed conceptual model. In J. Smart (Ed.), *Higher Education: Handbook of Theory and Research* (Vol. 21, pp. 99–157). Dordrecht, Netherlands: Springer.

Próspero, M., & Vohra-Gupta, S. (2007). First-generation college students: Motivation, integration, and academic achievement. *Community College Journal of Research and Practice, 31*(12), 963-975. doi:10.1080/10668920600902051

Pryor, J. H., Hurtado, S., DeAngelo, L., Palucki Blake, L., & Tran, S. (2010). *The American Freshman: National Norms Fall 2009*. Los Angeles: University of California, Los Angeles, Higher Education Research Institute.

Ramos-Sanchez, L., & Nichols, L. (2007). Self-efficacy of first-generation and non-first-generation college students: The relationship with academic performance and college adjustment. *Journal of College Counseling*, *10*, 6-10.

Raque-Bogdan, T. L., & Lucas, M. S. (2016). Career aspirations and the first generation student: Unraveling the layers with social cognitive career theory. *Journal of College Student Development*, *57*(3), 248-262.

Redford, J., & Hoyer, K. M. (2017). First-generation and continuing-generation college students: A comparison of high school and postsecondary experiences (NCES

2018-009). Washington, DC: National Center for Education Statistics, U.S. Department of Education.

Reese, R. J., & Miller, C. D. (2006). Effects of a university career development course on career decision making self-efficacy. *Journal of Career Assessment*, *14*(2), 252-266.

Reynolds, P. J., Gross, J. P. K., Millard, B., & Pattengale, J. (2010). Using longitudinal mixed-methods research to look at undeclared students. *New Directions for Institutional Research,* (2), 53-66.

Roe, A. (1957). Early determinants of vocational choice. *Journal of Counseling Psychology, 4*(3), 212-217. doi:10.1037/h0045950

Rogers, M. E., Creed, P. A., & Glendon, A. I. (2008). The role of personality in adolescent career planning and exploration: A social cognitive perspective. *Journal of Vocational Behavior, 73*(1), 132-142. doi:10.1016/j.jvb.2008.02.002

Rossman, G. B., & Rallis, S. F. (2003). *Learning in the Field: An Introduction to Qualitative Research* (2nd ed.). Thousand Oaks, CA: Sage Publishing.

Sandefur, G., Meier, A., & Campbell, M. (2006). Family resources, social capital, and college attendance. *Social Science Research*, *35*, 525–553.

Santos, P. J. (2001). Predictors of generalized indecision among Portuguese secondary school students. *Journal of Career Assessment, 9*(4), 381-396. doi:10.1177/106907270100900405

Scheuermann, T. S., Tokar, D. M., & Hall, R. J. (2014). An investigation of African-American women's prestige domain interests and choice goals using social

cognitive career theory. *Journal of Vocational Behavior, 84*(3), 273-282. doi:10.1016/j.jvb.2014.01.010

Simmons, A. N. (2008). A reliable sounding board: Parent involvement in students' academic and career decision making. *NACADA Journal, 28*(2), 33-43.

Simon, C. C. (2012, November 2). Major decisions. *New York Times*. Retrieved from https://www.nytimes.com/2012/11/04/education/edlife/choosing-one-college-major-out-of-hundreds.html.

Skomsvold, P. (2015). Web Tables—Profile of Undergraduate Students: 2011–12 (NCES 2015-167). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved May 14, 2019, from https://nces.ed.gov/pubs2015/2015167.pdf.

Smith, J. (2015). *Qualitative Psychology : A Practical Guide to Research Methods* (3rd edition.). London: SAGE.

Smith, J. A., & Osborn, M. (2008). Interpretative phenomenological analysis. In J. A. Smith 175 (Ed.), *Qualitative Psychology: A Practical Guide to Research Methods* (2nd ed.) (pp. 53- 80). London: Sage Publications.

Spiegler, T., & Bednarek, A. (2013). First-generation students: What we ask, what we know and what it means: An international review of the state of research. *International Studies in Sociology of Education, 23*(4), 318-337. doi:10.1080/09620214.2013.815441

St. John, E. (2000). Do majors matter? *Black Issues in Higher Education*. 17(4), 20.

St. John, E. P., Hu, S., Simmons, A., Carter, D. F., & Weber, J. (2004). What difference does a major make? The influence of college major field on persistence by

African American and White Students. *Research in Higher Education, 45*(3), 209-232.

Stater, M. (2011). Financial aid, student background, and the choice of first-year college major. *Eastern Economic Journal, 37*(3), 321-343. doi:10.1057/eej.2009.41

Steele, G. S. (2003). A research-based approach to working with undecided students: A case study illustration. *NACADA Journal*, 23(1&2), 10–20.

Sickles, A.R. (2004). Advising first-generation students. Retrieved from the NACADA Clearinghouse of Academic Advising Resources web site: https://nacada.ksu.edu/Resources/Clearinghouse/View-Articles/First-generation-students.aspx

Swanson, J. L., & et al. (1996). Assessing perceptions of career-related barriers: The career barriers inventory. *Journal of Career Assessment, 4*(2), 219-244.

Tang, M., Fouad, N. A., & Smith, P. L. (1999). Asian Americans' career choices: A path model to examine factors influencing their career choices. *Journal of Vocational Behavior, 54*(1), 142-157. doi:10.1006/jvbe.1998.1651

Taylor, S. J., Bogdan, R., & DeVault, M. L. (2016). *Introduction to Qualitative Research Methods: A Guidebook and Resource*. Hoboken, NJ: Wiley.

Taylor, P., Fry, R., & Oates, R. (2014). *The rising cost of not going to college*. Pew Research Center. https://www.pewsocialtrends.org/2014/02/11/the-rising-cost-of-not-going-to-college/

Terenzini, P. T., Pascarella, E. T., & Blimling, G. S. (1996). Students' out-of-class experiences and their influence on learning and cognitive development: A literature review. *Journal of College Student Development, 37*(2), 149–162.

Thomas, S. P., & Pollio, H. R. (2002). *Listening to patients: A phenomenological approach to nursing research and practice*. Springer Publishing Company.

Thompson, E., & Feldman, D. (2010). Let your life speak: Assessing the effectiveness of a program to explore meaning, purpose, and calling with college students. *Journal of Employment Counseling, 47*(1), 12-19. doi:10.1002/j.2161-1920.2010.tb00086.x.

Ting, S.-M. R. (2003). A longitudinal study of non-cognitive variables in predicting academic success of first-generation college students. *College and University, 78*(4), 27-31.

Tinto, V. (1993). *Leaving College: Rethinking the Causes and Cures for Student Attrition* (2nd ed.). Chicago: University of Chicago Press.

Titley, R. W., & Titley, B. S. (1980). Initial choice of college major: Are only the "undecided" undecided? *Journal of College Student Personnel, 21*(4), 293-298.

Titus, M. A. (2006). Understanding college degree completion of students with low socioeconomic status: The influence of the institutional financial context. *Research in Higher Education*, *47*(4), 371-398.

Toutkoushian, R. K., May-Trifiletti, J. A., & Clayton, A. B. (2019). From "first in family" to "first to finish": Does college graduation vary by how first-generation college status is defined? *Educational Policy*. doi:10.1177/0895904818823753

Toutkoushian, R. K., Stollberg, R. A., & Slaton, K. A. (2018). Talking 'bout my generation: Defining "first-generation college students" in higher education research. *Teachers College Record*, *120*(4), 1-38.

Twenge, J. M., & Campbell, S. M. (2008). Generational differences in psychological

traits and their impact on the workplace. *Journal of Managerial Psychology,*
23(8), 862-877. doi:10.1108/02683940810904367

Tyler, L. (1953). *The Works of the Counselor*. New York: Appleton-Century-Crofts.

U.S. Department of Education. (1998). Higher Education Act of 1965, 1998 Higher

Education Act Amendments, Subpart 2—Federal Early Outreach and Student

Services Programs (Chapter 1—Federal Trio Programs, SEC. 402A. 20 U.S.C.

1070a–11). Retrieved from https://www2.ed.gov/policy/highered/leg/hea98/

sec402.html

U.S. Department of Education, National Center for Education Statistics. (2014). Table

311.60 Enrollment in postsecondary education, by level of enrollment, level of

institution, student age, and major field of study: 2011-12. In U.S. Department of

Education, National Center for Education Statistics (Ed.), *Digest of Education*

Statistics (2013 ed.). Retrieved from

http://nces.ed.gov/programs/digest/d13/tables/dt13_311.60.asp.

Upcraft, M. L. (1995). *First-year Academic Advising: Patterns in the Present, Pathways*

to the Future. South Carolina: National Resource Center for the Freshman Year

Experience & Students in Transition.

Vargas, J. H. (2004). *College knowledge: Addressing information barriers to college*.

Retrieved from Boston, MA: Education Research Institute.

Vuong, M., Brown-Weltly, S., & Tracz, S. (2010). The effects of self-efficacy on

academic success of first-generation college sophomore students. *Journal of*

College Student Development, *51*, 60-64.

Ward, L., Siegel, M., & Davenport, Z. (2012). *First-generation College Students: Understanding and Improving the Experience from Recruitment to Commencement*. San Francisco, CA: John Wiley.

Wright, S. L., Jenkins-Guarnieri, M. A., & Murdock, J. L. (2013). Career development among first-year college students: College self-efficacy, student persistence, and academic success. *Journal of Career Development, 40*(4), 292-310. doi:10.1177/0894845312455509

Wykoff, S. C. (1999). The academic advising process in higher education: History, research, and improvement. *Recruitment & Retention in Higher Education, 13*(1), 1-3. 2

APPENDIX A: RECRUITMENT EMAIL

Dear _____,

You are invited to participate in a research study exploring the experiences of first-generation students who enter college undecided about their major. For the purpose of this research, first-generation students will be defined as those whose parents did not complete a baccalaureate degree or in the case of any individual who regularly resided with and received support from only one parent, an individual whose only such parent did not complete a baccalaureate degree. **Participation in this study is entirely voluntary and may be stopped at any time.**

Students participating in this study will take part in an individual, face-to-face interview with Kristen Siarzynski, a doctoral student in the College of Education. I am conducting this study under the supervision of Dr. Mark D'Amico, Associate Professor in the Department of Educational Leadership. The interview (60-90 minutes) will take place on campus. If necessary, you will be asked to participate in an additional (30 minute) interview. Participants will also be invited to review the study findings and offer feedback or additional insight.

All information about your participation in this study is strictly confidential, and interview data will be managed by the researcher. Your name and other identifying information will be removed from interview transcripts and pseudonyms will be assigned instead. Any report or publication produced as a result of this study will contain only those pseudonyms.

Participants in this study will receive a $20 Amazon gift card at the conclusion of their first interview and a $10 Amazon gift card at the conclusion of a second interview (if required).

Please email Kristen Siarzynski at K.Siarzynski@uncc.edu if you agree to take participate in this study. Selected volunteers will be contacted to schedule an initial on-campus interview at a time convenient to them.

Thanks for your consideration!
Kristen Siarzynski
K.Siarzynski@uncc.edu
Dr. Mark D'Amico
mmdamico@uncc.edu

IRB# 19-0265

APPENDIX B: FOLLOW-UP RECRUITMENT EMAIL

Seeking Participants in a Research Study

Are you a first-generation college student?

Did you enter college undecided about your major?

If the answer is yes, I would like to talk with you!
I am conducting a study to learn about the experiences of undecided students. For your participation in a 60-90 minute interview, you will receive a $20 Amazon gift card. If a 30-60 minute follow-up interview is needed, you will receive an additional $10 Amazon gift card for your participation.

Interested?
Contact Kristen Siarzynski
K.Siarzynski@uncc.edu
704-806-1448

Faculty Advisor: Dr. Mark D'Amico
IRB# 19-0265

APPENDIX C: INFORMED CONSENT

UNC CHARLOTTE
Department of Educational Leadership
9201 University City Boulevard, Charlotte, NC 28223-0001

Consent to Participate in a Research Study

Title of the Project: A Qualitative Study of First-Generation Undecided College Students.
Principal Investigator: Kristen Siarzynski, MSW, Educational Leadership, UNC Charlotte
Faculty Advisor: Dr. Mark D'Amico, Ph.D., Educational Leadership, UNC Charlotte.

You are invited to participate in a research study. Participation in this research study is voluntary. The information provided is to help you decide whether or not to participate. If you have any questions, please ask.

Important Information You Need to Know
- The purpose of this study is to explore the experiences of first-generation students who enter college undecided about their major. For the purpose of this research, first-generation students will be defined as those whose parents did not complete a baccalaureate degree or in the case of any individual who regularly resided with and received support from only one parent, an individual whose only such parent did not complete a baccalaureate degree
- You will be asked to participate in an in-person, 60 – 90-minute individual interview. If necessary, you will be asked to participate in a follow-up interview, which will last 30-60 minutes. You will receive a $20 Amazon gift card at the conclusion of the first interview and a $10 Amazon gift card at the conclusion of a second interview.
- Risks or discomforts from this research could come from discussing the process of deciding on a major and the barriers and facilitators to this process. You will not personally benefit from taking part in this research, but our study results may help us better understand how first-generation college students make decisions about their major.
- If you choose not to participate, you may inform the Principal Investigator of your plan not to participate. All data collected will be destroyed at that time.

Please read this form and ask any questions you may have before you decide whether to participate in this research study.

Why are we doing this study?
The purpose of this study is to explore the experiences of first-generation students who enter college undecided about their major to gain insight as to how these students chose a major.

Why are you being asked to be in this research study?
You are being asked to be in this study because you identify as a first-generation college student who entered the university undecided about a major and have now declared. The researcher seeks to better understand the experiences of this specific student group.

What will happen if I take part in this study?
By taking part in this study, you will set up a one on one interview with the primary researcher. During this interview, you will be asked questions pertaining to your experience at UNC Charlotte.

If you choose to participate in this study, you will be asked to participate in a 60-90 minute interview with a possible follow up interview that may last 30-60 minutes. During the interview, you will be asked questions about how you decided on a major. The interview will take place on campus, in the library, or an education space agreed upon by the researcher and the participant.

Your time commitment will be one 60-90 minute interview based on the amount of time it takes to do the initial interview, and a potential 30-60 minute follow up interview.

We will also collect information by recording the interview. You will be given a pseudonym and all information collected will not be connected to any other identifying information. The data will be stored on a UNCC cloud serve and will only be shared with the researcher's dissertation committee.

What benefits might I experience?
You will not benefit directly from being in this study. However, others might benefit because/by participating in this study, you will help provide a better understanding of how first-generation college students decide on their major. This study can then be used to help advisors and student support communities in assisting first-generation college students through their exploration process.

What risks might I experience?
I do not believe there will be any risk to you by participating in this study. The interview will be held on campus in a private location. All information will remain confidential and will not be shared with anyone outside of the study.

How will my information be protected?
Participant data will be recorded and transcribed by a third party. To protect the participant's identity, all identifying information will be coded and the participants will be given a pseudonym to protect their identity. The research data will be stored on university cloud services Google Drive, and Dropbox. At no time will the participant's name be accessible outside of the research study.

We plan to publish the results of this study. To protect your privacy, we will not include any information that could identify you. We will protect the confidentiality of the research data by keeping all identifying documents in a locked office on campus. The data with your identifying information will be stored on university cloud servers. Immediately After capturing the research, data information will be transcribed and coded to remove any personally identifying material to ensure participant privacy.

The audio recording will be kept until the completion of this study. Once the study is complete, all digital recordings will be deleted. Only the transcript of the recording with non-identifying information will remain for further research.

How will my information be used after the study is over?
After completing this study, your research data will be kept for use in future research studies. Study data will not be shared with other researchers for use in other studies. Your data may be needed as part of publishing our results; the data we share will NOT include information that could identify you.

Will I receive an incentive for taking part in this study?
You will receive a $20 Amazon gift at the conclusion of the first interview and a $10 Amazon gift card at the conclusion of a second interview (if a second interview is deemed necessary). Incentive payments are considered taxable income. Therefore, we are required to give the University's Financial Services division a log/tracking sheet with the names of all individuals who received a gift card. This sheet is for tax purposes only and is separate from the research data, which means the names will not be linked to (survey or interview) responses.

What are my rights if I take part in this study?
It is up to you to decide to be in this research study. Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time. You do not have to

answer any questions you do not want to answer. If you withdraw from the study, the data collected at the time of your withdrawal may still be used, in the study, unless you state that you do not want any of your answers to be used in the completion of this research study.

Who can answer my questions about this study and my rights as a participant?
For questions about this research, you may contact:
Primary Investigator: Kristen Siarzynski, k.Siarzynski@uncc.edu, 704-806-1448
Faculty Advisor: Dr. Mark D'Amico, mmdamico@uncc.edu, 704-687-8539 ext. 3

If you have questions about your rights as a research participant or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Office of Research Compliance at 704-687-1871 or uncc-irb@uncc.edu.

Consent to be audio recorded
To assist with the accurate recording of participant responses, assessment, and follow-up appointments may be audio recorded. Participants have the right to refuse to allow such recording without penalty. Please select one of the following options:

_____I consent to the use of audio recordings for research purposes.
_____I do not consent to the use audio recordings for research purposes

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will receive a copy of this document for your records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I understand what the study is about and my questions so far have been answered. I agree to take part in this study.

_____
Name (PRINT)

_____
Signature   Date

_____
Name and Signature of the person obtaining consent   Date

APPENDIX D: INITIAL INTERVIEW PROTOCOL

Procedure

1. The researcher will introduce the interview procedure.

2. The participant will be asked if the interview may be audio recorded.

3. If the participant verbally provides his/her consent, the recording will begin.

4. The researcher will ask the interview questions.

Interview Guidelines

Thank you for participating in this study. My name is Kristen Siarzynski. The purpose of this study is to explore the experiences of first-generation students who enter college undecided about their major to understand how they chose a major. I am going to ask you a series of questions. Your name will not be reported. There are no wrong answers, so please answer as freely as you can. You do not need to answer any questions that you do not feel comfortable with. You may stop at any time for any reason. Would you still like to proceed?

- If no, the researcher will stop the interview and ask whether the participant is willing to be interviewed at another time.

- If yes, the researcher will continue the interview.

Interview Questions

Establishing Rapport

1. Tell me a little bit about yourself.

   a. Tell me a little about where you grew up, your family, and the importance of college.

Factors that contributed to enrolling in higher education without a major

2. What majors did you consider before you applied to college?

      a.   Where did you receive information about these majors?

      b.   What messages did you receive regarding majors from your family?

3. What did you do to explore college majors before you came to the university?

4. What led you to apply to college without a major?

Experience as an undecided major

5. When you came to college, you had not decided on a major. What was like to come to college as an undecided student?

6. Do you think that being an undecided major had an impact on your college experience? Tell me about that.

      a.   Were there any things that were difficult about being an undecided student? Tell me about that.

Decision making process when selecting a major

7. Tell me about your current major and why you chose this major.

8. What were the sources of information you used as you worked through your decision about a major? How did they contribute to your decision?

9. Think about the things that most influenced your decision about a major and tell me about them. Try to be specific.

      a.   What most helped you in your process of selecting a major?

      b.   What barriers, if any, did you encounter in your process of selecting a major?

10. Describe how you eliminated any other majors you were considering.

      a.   Tell me about why you ruled out each potential major or career choice.

Conclusion

11. The university considers you a first-generation college student. I wonder if being

    FGCS matters in your college experience. If so, how?

    a. Do you think being a first-generation college student had an impact on

        being undecided or your decision making process? If so, how?

12. Is there anything else you would like to share with me about being an undecided

    student?