

“All Life Events Are Formative”:  
Undergraduate Students’ Career Goals and  
Making Meaning of Career-Related Experiences

by

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*“All life events are formative. All contribute to what we become, year by year, as we go on growing.”* – Mr. Fred Rogers

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## DEDICATION

In loving memory of my late father, Dr. H. Singh, and my late father-in-law, Dr. S. H. Siddiqui, who instilled in me a love of learning and taught me there is no end to learning.

*“Knowledge the wing wherewith we fly to heaven.” – William Shakespeare*

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## **ABSTRACT**

Constructing a career goal is a key developmental task that often generates stress and confusion for students. Participating in career-related experiences during college can help students identify personally meaningful career goals. The purpose of this qualitative study was to explore the relationship between meaning-making capacity and career goal formation through college students' interpretations of their career-related experiences. Two main conceptual frameworks were used to investigate this relationship: career development and self-authorship.

The analytic sample was comprised of the 216 career goal formation experiences that were reported by 73 unique students. These students attended six institutions and were interviewed annually as part of the Wabash National Study of Liberal Arts Education. Sophomore through senior year interviews were used in this study for a total of 168 interviews. Career goal formation experiences are career-related experiences that lead to goal formation and explicitly link with what a student will do after graduation. Based on the nature of these experiences, I identified nine main categories of experiences related to the formation of career goals. The top five types of experiences reported were related to courses, internships, co-curricular/extra-curricular experiences, information seeking, and work. I then collapsed related types of career-related experiences into general categories to reflect the context (i.e., environment or setting) of these experiences. The most frequently reported contexts were work-based followed by

curriculum-based, introductory, and advising contexts. Next, I identified the following six main effects of these experiences on career goal formation (reported from most to least frequent): knowledge of self, exposure to a potential career, knowledge of a specific career, skill development, impact on self-efficacy beliefs, and the impact on graduate school attendance and the job search process.

Finally, I presented three case studies tracing students' career goal formation and self-authorship development over time. In all three cases, these students' career goal formation and self-authorship development journeys were woven together to help them construct personally meaningful career goals. Cross-case themes emphasized the importance of exposure and the impact of advising and counseling on career goal formation. Nearly half (42%) of the career goal formation experiences discussed by students within these case studies facilitated the development of self-authorship, suggesting the importance of career-related experiences on student development.

This study also provides a conceptual model to better understand the cognitive processes underlying the relationship between career goal formation and self-authorship development. Future research can benefit from examining self-authorship development using a career goal formation lens and examining career goal formation using a self-authorship lens to identify career-related high-impact practices that are developmentally effective. Implications for theory, research, and practice are offered.



## Chapter 1: Introduction

As early as preschool, students are exposed to various careers and asked, “What do you want to be when you grow up?” When this question is posed to college students, it often generates pressure and confusion (Russell & Petrie, 1992; Samide, Eliason, & Patrick, 2011). For some students, constructing a career goal may be their first independent decision that not only represents a key developmental task, but also an important part in a student’s college experience (Nauta, 2007a; Russell & Petrie, 1992). For example, beyond influencing occupational choices, career goals can affect the selection of an academic major, related coursework, experiential learning opportunities (e.g., internships, participation in research projects), and co-curricular activities (e.g., membership in major-related organizations).

Traditional-age college students are constructing their career goals during young adulthood (typically from ages 18-25), an important, distinct, and pivotal time in their lives. Several scholars have conceptualized this period of life (Arnett, 2015; Côte, 2019; Hendry & Kloep, 2012; Settersten & Ray, 2010) to depict its uniqueness and importance from a developmental standpoint. Côte (2019), for example, presented the term *youthhood* to emphasize “the parallel importance of the period with *childhood* and *adulthood*” (p. 11; italics in original). Arnett (2015) defined emerging adulthood as a time that is typically from ages 18-25 when most people finish secondary school and transition to commitments structuring their adult lives like marriage, parenthood, and long-term jobs. Based on research over the past 20 years, Arnett (2015) proposed five

distinctive features of emerging adulthood that are not unique to this time in an individual's life, but these features are more prevalent and prominent than in other stages of life: identity exploration, instability, self-focus, feeling in-between, acknowledging many possibilities and feeling optimism about the future. There are also neuro-cognitive changes among traditional-age college students linked with puberty and hormonal development that are tied to these features (Steinberg, 2008). Since this time period is critical, The National Academy of Sciences (2015) did a consensus study, *Investing in the Health and Well-Being of Young Adults* on the transition to adulthood and found that what happens during this time matters in the long run. As noted in this study, from a developmental standpoint, young adults are developmentally different both biologically and psychologically; subsequently, they face challenges related to these differences when making the transition to adulthood.

According to Ronald Dahl (2004), a renowned brain researcher, young adults experience "ignited passions" that can either benefit or harm them. Damon (2008) described "a sudden spurt in neuronal capacity around the time of puberty that supercharges adolescent cognitive and emotional systems" (p. 30). This can lead to choices that can either benefit or harm adolescents. Dahl (2004) noted:

So these igniting passions can be aligned in *healthy* ways—in the service of higher goals. Feelings of passion are rooted in the same deep brain systems as biologic drives and the primitive elements of emotion. Yet passion intertwines with the highest levels of human endeavor: passion for ideas and ideals, passion for beauty, passion to create music or art. And the passion to succeed in a sport, business, or politics, and passion toward a person, activity, object, or pursuit can also inspire transcendent feelings. (p. 21; italics in original)

Educators can play a role in igniting young adults' passions positively towards informed career-decision making.

Another challenge associated with making this transition successfully corresponds with overwhelming decisions (e.g., too many choices) regarding career exploration and development. Côte (2019) described that “youthhood can be an endless loop of choices that do not provide fulfillment and which undermine growth and maturation” (p. 11). Unfortunately, as a consequence of some of these challenges, depression has also been increasing among young adults over the past decade (Twenge, Cooper, Joiner, Duffy, & Binau, 2019).

We live in a diverse and multicultural society with no one-size-fits all approach to career exploration for college students. Students explore and construct career goals through a variety of experiences during college. During the career exploratory process, knowledge and information is gathered about the self (e.g., personal interests, abilities, values, goals) and the environment (e.g., availability of career opportunities, educational requirements for different occupations) to aid in formulating a career goal, choosing an occupation, and helping with the transition from school-to-work (Jordaan, 1963). For example, Chickering and Reisser (1993) identified the following opportunities,

College may be the one time in life when people can sample new fields of knowledge, pursue familiar topics in more depth, test hunches about career possibilities, discover new capabilities through experiential learning, and leave comfort zones to do a novel class assignment or partake of cocurricular options. (p. 217)

Participating in experiential career-related opportunities allows students to partake in the career exploratory process to ideally construct personally meaningful career goals. Emerging adulthood is a time that is full of possibilities, hope, and grand expectations (Arnett, 2015).

Some students benefit from career-related conversations with faculty, advisors, parents, and peers. Others may prefer exposure through experiential learning such as internships, job-shadowing, service learning, undergraduate research and study abroad. Experiential learning is learning through experience or “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combinations of grasping and transforming the experience” (Kolb, 2015, p. 51). In addition to these experiences, sometimes career fairs, first-year seminars, and learning communities introduce students to options they may not have considered. All of these kinds of experiences allow students to “try on” different career hats to check for “fit.” Increasing the consideration of occupational alternatives is a desirable outcome if it leads to better person-career fit for a student (Behrens & Nauta, 2014; Lent, Brown, & Hackett, 2000). If we can better understand the nature of these experiences and how they affect students, it gives us an opportunity to model experiences for other students to promote their growth. The career decision-making skills and exposure to career-related experiences gained during college influence individuals throughout their lives.

### **Statement of the Problem**

Formation of career goals is an important aspect of the complex lifelong process of career development (Brown & Brooks, 1990; Lent, Brown, & Hackett, 1994). During young adulthood, individuals with favorable socioeconomic conditions are expected to successfully complete the tasks associated with the exploration stage of career development that include crystallizing their tentative career goals, making a preliminary career choice, and committing to the appropriate training and education in order to establish themselves in a career that reflects their abilities, interests, and values (Super,

1990). Yet, many college students are not prepared to make well-informed career-related decisions. Career development and human capital development (vocationalism) as a purpose of higher education influences this decision-making for many students. For example, there is a tension between higher education for monetary benefits for individuals and non-monetary benefits for the public good. This tension, sometimes related to an individual's identity, makes it even more difficult for students to make a career decision that aligns with an individual's financial expectation, sense of purpose in life, and pursuit of happiness.

Côte (2019) described a developmental process of proactive identity formation that is relevant to college students' career goal formation:

Only about *one quarter* of young Americans take on the task of choosing their social commitments on the basis of foresight and reflective thought. This is a developmental process of *proactive identity formation* that involves thinking ahead about important life choices—choices made possible by the advances and affluence of Western civilization—such as exploring options and establishing a viable basis for a long-term occupation, deciding on political stands that have a justifiable footing, and choosing what values to abide by as part of a philosophy of life. (p. 6; italics in original)

Tied to the construct of proactive identity formation is engaging in career-related exploration and vocationally-oriented goal formation using “foresight and reflective thought” (Côte, 2019, p.6). Arnett (2015) identified tasks during emerging adulthood; relevant to this study, career decision-making is one developmental task occurring during this time. Identity exploration is particularly important during emerging adulthood, especially as it relates to work and what young adults want out of life. This kind of identity exploration can lead to instability at a time when many young adults are self-focused as they learn to be self-sufficient. Exploration and instability during

emerging adulthood can lead young adults to feel like they are caught in-between adolescence and their transition to adulthood.

Chickering and Reisser (1993) offered the following seven vectors of identity development: Developing competence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity. Although all the vectors are relevant to college students, developing purpose is particularly applicable to formulating meaningful career goals since “developing purpose entails an increasing ability to be intentional, to assess interests and options, to clarify goals, to make plans, and to persist despite obstacles” (Chickering & Reisser, 1993, p. 50).

Several scholars (Damon, 2008; Nash & Murray, 2010; Palmer, 2000; Parks, 2000) including Chickering and Reisser (1993) have examined the influence of purpose on young adults’ lives. McKnight and Kashdan (2009) defined purpose in life as “a central, self-organizing life aim that organizes and stimulates goals, manages behaviors, and provides a sense of meaning” (p. 242). As these researchers have indicated, college is a critical time for students to develop a sense of purpose. However, colleges and universities tend to promote career goal selection without encouraging students to reflect on what these goals mean to them (Damon, 2008; Nash & Murray, 2010). Côte (2019) noted that only “about *one quarter* [of young Americans] has a clear sense of *purpose in life* that they can consciously articulate as the basis of definite future goals that link their inner self to a wider benefit beyond their self” (p. 6; italics in original). What is even more alarming is that “at the other extreme, about 20 percent have no sense of long-term purpose; the remaining majority has an unfocused

sense of purpose in life” (p.6). Parks (2000) has also emphasized the value of engaging in questions about purpose during college as impacting professional aspirations and the long-term development of students. According to Strecher (2016), “people with a strong purpose in life also, on average, do better psychologically and socially than those without” (p. 14). Furthermore, Kelly’s (2016) literature review “demonstrated that purpose in life is both directly and indirectly related to students’ academic success, well-being, and career development” (p. 70).

Sometimes developing purpose relates to choosing an undergraduate major or academic program of study. Even though an academic major is just one component of career decision-making, it is nonetheless an important factor to consider when examining college students’ career goal formation. All students, not just undecided students, can benefit from career exploratory experiences during college. According to a survey of more than 800 students with a declared major at a large public university in the Midwest, the following factors played a role in the selection of their academic major (listed in order of importance): subject matter matching with interests, characteristics of the major, potential job characteristics, financial considerations, psycho/social benefits (including family and peer influence), and information search (Beggs, Bantham, & Taylor, 2008). While these are important considerations in making this decision for undergraduate students, this study implied that many of these students are making these decisions predominantly based on their assumptions and perceptions of a major and job characteristics that may be inaccurate. Therefore, it is crucial for students to engage in career-related experiences to gain information that leads to more informed decisions.

A desired outcome of the exploration process is career maturity, which refers to making informed and age-appropriate career decisions that rely on having adequate information about one's interests and abilities in relation to career opportunities (Savickas, 1984, 2001; Super, 1957, 1969). Young adults need to explore and obtain sufficient information about themselves in relation to career options in order to make career decisions that reflect career maturity (Super, Savickas, & Super, 1996). Participating in career-related experiences during college helps promote decision-making that reflects career maturity. Consequences of inadequate exploration and decisions lacking career maturity include difficulties with transitioning to adult career roles (Super, 1953, 1957; Super et al., 1996) and problems with career adjustment and advancement (Herr, 1993).

Mindset is an important concept related to views about one's abilities that affects career decision making. According to Dweck (2016), thirty years of her "research has shown that the view you adopt for yourself profoundly affects the way you lead your life. It can determine whether you become the person you want to be and whether you accomplish the things you value" (p. 6). Dweck described two different mindsets that influence decisions: a fixed mindset is characterized by "believing that your qualities are carved in stone" (p. 6) and a growth mindset "is based on the belief that your basic qualities are things you can cultivate through your efforts, your strategies, and help from others" (p. 7). Individuals operating from a fixed mindset expend little effort to develop their abilities since they believe they are fixed. On the other hand, people operating from a growth mindset tend to flourish more often since they seek opportunities to learn and grow. Educators can help students develop a growth mindset by "helping them



gain the skills and find the resources to make progress toward their goals” (p. 216).

Encouraging students to participate in career exploratory activities could also promote the development of a growth mindset if these experiences are structured with this objective in mind. This is consistent with Dweck’s conclusion that a commitment to learning can change mindsets and lead to both personal and career growth.

When situating career exploration in broader collegiate outcomes, twenty-first century expectations of higher education include enhancing outcomes such as critical thinking, mature decision making, and interdependent relationships (Baxter Magolda, 2004). Self-authorship development is an important goal of higher education that leads to more complex and informed decision-making (Baxter Magolda, 2004). Self-authored individuals reflect on their own values and beliefs, evaluate multiple perspectives, and utilize an internally grounded approach to their decisions, identity, and relationships. Self-authored individuals have “an ability to construct knowledge in a contextual world, an ability to construct an internal identity separate from external influences, and an ability to engage in relationships without losing one’s internal identity” (Baxter Magolda, 1999a, p. 12). Unfortunately, most traditional aged college students are not self-authored (Baxter Magolda, 1999b). Creamer (2010) notes the “lack of exposure to educational contexts that promote self-authorship is one explanation for why many college students find themselves ill prepared to make important life decisions, like career choice” (p. 207). Engaging in the process of career exploration can promote cognitive complexity by helping students see different views on careers, exposing them to different approaches, and having them make sense of how to choose and interpret their career-related experiences. Career exploration is an essential component of

career development and an important part of career decision-making (Atkinson & Murrell, 1988; Blustein, 1997; Taveira & Moreno, 2003).

Beyond providing opportunities for exposure and exploration, some career-related experiences have a positive impact on student development and are transformative (see Mezirow, 2000 for further discussion of transformative experiences). Transformative career-related experiences expose students to different career options that sometimes cause dissonance with prior beliefs (e.g., pursuing medicine to appease family and cultural expectations). Reconciling this type of dissonance promotes cognitive complexity and self-authorship when students consider multiple perspectives and make more internally-oriented decisions. In addition to the developmental benefits of transformative career-related experiences, such experiences also help students make personally meaningful career goals. Unfortunately, some students (e.g., students in underserved populations) do not frequently participate in potentially transformative experiences such as internships, service learning, and undergraduate research opportunities (Kuh, 2008; Pascarella & Terenzini, 2005).

Inadequate exposure to career-related experiences is particularly concerning since “choosing a major and setting career goals are often among the most difficult decisions that college students face” (Korschgen & Hageseth, 1997, p. 50). Furthermore, many students report that they are receiving inadequate guidance when selecting their majors and setting career goals. With a lack of career-related experiences and guidance, college students may commit to majors and career goals without an opportunity for adequate exploration (Josselson, 1987; Marcia, 1989). Additional research is needed to examine the influence of developmental processes on

career exploration (Blustein, 1988) and specifically assess developmental differences to better understand the factors influencing career exploration among college students (Bartley & Robitschek, 2000). Using self-authorship theory as a lens examining career goal formation has the potential to better understand developmental differences and factors influencing college students' career exploration. Despite all the benefits of participating in career-related experiences, there is a lack of research examining these experiences using a developmental lens from a student's perspective.

### **Focus of the Current Study**

The way I propose to address this problem is to examine patterns between how students interpret their career-related experiences and their meaning-making capacity. In particular, this study will examine the nature and effect of these experiences from the student's perspective to better understand how students construct and understand their career goals. This study also investigates students' career goal development during college through the lens of their evolving meaning making. By better understanding mechanisms such as career exploration, we can help create experiences that promote developmental growth by helping students become more self-authored.

It is important to study career goal formation during college because of the relationship between career goals and happiness, persistence, academic adjustment, time-to-degree, identity development, and other factors. Although these are all valuable areas for further study, this study focuses on the relationship between career goal formation and self-authorship development. Career goals influence career decisions that are made throughout an individual's life by choice or necessity for many different reasons, including job instability, personal obligations, lack of fit with one's current

career, and evolving career interests. Career decisions are a crucial component for happiness since careers can affect how people spend most of their waking hours in a day, the type of people with whom they socialize, choice of marriage partners, vacations, living arrangements, and retirement prospects (Krumboltz, 1993). Since these decisions can influence so many aspects of an individual's life, it is critical to take the time to adequately explore career options and formulate career goals during college.

Formation of career goals, or lack thereof, can affect time-to-degree since deferred selection of a major can lead to delayed graduation (i.e., for those who persist) and additional debt accrual. For some students, the difficulty in formulating a career goal can lead to attrition (Astin, 1977, 1993), generally defined as departure or delay in successful completion of program requirements. Research on retention indicates that commitment to academic and career goals may be the strongest factor in regards to persistence towards degree completion (Wyckoff, 1999). Within the educational context, student attrition is a process of interactions between students and educational institutions based on *experiences* that occur over time that modify goals that lead to either persistence or dropping out (Tinto, 1975). Experiences students have during college, including exposure to career-related experiences, constitute an important factor leading to persistence or dropping-out. For example, students with career goals are more likely to stay in school (Farmer, Wardrop, Anderson, & Risinger, 1995; Hull-Banks et al., 2005; Tinto, 1993). Not only does student attrition mean that students aren't achieving their goals of earning a college degree, it is costly for both the student and educational institutions in terms of time, money, and resources.

Related to concerns about retention and attrition, many college students are experiencing high levels of stress and feelings of hopelessness (Constantine, Wilton, & Caldwell, 2003; Rice, Leever, Christopher, & Porter, 2006; Solberg, 1988). Research demonstrates that people are happier and experience less psychological issues when they clearly identify a purpose and strong sense of meaning in life (Kosine, Steger, & Duncan, 2008; Ryff & Singer, 1998; Steger, Frazier, Oishi, & Kaler, 2006). Participating in career-related experiences helps students identify career goals that can lead to developing a sense of purpose and meaning in life. Furthermore, engaging in career exploration during college leads to better academic adjustment while in school (Germeijs & Verschueren, 2007; Kracke & Schmitt-Rodermund, 2001) and greater satisfaction with career choices (Dietrich, Kracke, & Nurmi, 2011; Schindler & Tomasik, 2010). After college, successfully making the transition from school-to-work is critical for an individual's psychological well-being (Haase, Heckhausen, & Köller, 2008); interventions designed to promote career awareness and skill development during college lead to a more positive school-to-work transition (Kiener, 2006).

It is important for students to engage in career exploration during college due to globalization, technological advancements, economic constraints, forced transitions, and other changes in the workplace that have caused the nature of work to change (Blustein, 2006; Fouad, 2007; Nauta, 2010). Subsequently, career exploration is a lifelong process triggered during times of crisis and transition (Zikic & Klehe, 2006). The skills and exposure gained by participating in career-related experiences during college are not only useful during college, but also throughout life.

It is important to understand how students make sense of their own career-related experiences since identity development and career exploration are central tasks during young adulthood that rely on individuals interpreting information and experiences that shape their personal identity and career goals. Moreover, identity development and career goal formation are cognitive processes that are influenced by how individuals make sense of their environment. Specifically, career exploration, including finding a career path, is a critical component of identity development (Erikson, 1968) that strengthens an individual's vocational and personal identity development (Blustein, 1997). While engaging in this kind of exploration, individuals not only learn about career options, but also their own interests and abilities (Sickinger, 2012). Specifically, individuals with well-developed career interests embody a stronger sense of identity (Blustein, Devenis, & Kidney, 1989; Wehying, Bartlett, & Howard, 1984). In regards to career goals, premature major choice (if forced too soon) can lead to foreclosure (i.e., commitment without exploration; Marcia, 1966, 1989; Josselson, 1987, 1994). Individuals who have difficulty with their identity development also tend to struggle with their career identity and decision-making (Cohen, Chartrand, & Jowdy, 1995). Career exploration enhances career decision-making (Blustein, 1989) and identity development. The skills gained from engaging in the process of career exploration during college helps individuals adapt and cope with periods of career transition experienced throughout life (Zikic & Hall, 2009).

### **Significance of this Study**

The relationship between career goal formation and self-authorship development is complex and remains largely unexplored. Meaning-making capacity evolves over

time. The idea of meaning making or making sense of experiences captures how an individual interprets (i.e., composes) experiences. These interpretations by college students of career-related experiences have consequences during college when they are in the process of exploring and formulating their career goals and subsequently throughout their lives because of the connection between an individual's career and their psychological well-being and a sense of purpose in life.

Understanding career goal formation from a student's perspective can help educators and administrators to engage students in career-related experiences that are developmentally appropriate so students make more informed career decisions that align with their own personal goals and values. Despite the benefits of career-related experiences on college students in terms of constructing career goals, a paucity of research exists that examines the nature of these experiences from the student's perspective. This study seeks to address this gap by examining how students make sense of their career-related experiences. In doing so, we can better understand the role and influence of these experiences on students' development allowing educators to design experiences that promote a more complex and mature approach to career decisions.

### **My Personal Interest in this Topic**

My interest in this topic is based on my professional and academic experiences as an administrator, educator, and researcher in higher education. For nearly a decade, I served as the Director of Student Services in the College of Science and Technology at Temple University. In this capacity, I managed an advising center for undergraduate students majoring in science, math, and technology. Over the years, I met with

hundreds of students who were in academic jeopardy to determine if they should be dismissed from the university or given another opportunity to continue on a conditional basis. Through my conversations with these students, I discovered that many students were literally failing out of school since they were stuck in majors for a number of reasons that led them to struggle academically and psychologically. I kept a close connection with the career center and counseling center on campus and referred many of these students to one or both of these resources. Since I met with the same students for several semesters, I realized that many students benefited from meetings with faculty advisors, professional advisors, and career counselors. As a part of the probation process, some students were required to meet with a career counselor to formulate new career goals and participate in career-related interventions as identified by the career center. Through these experiences, some students were exposed to majors and careers they never considered. Fortunately, as a result of these kinds of experiences, some students thrived in new majors that were better suited to meet their academic, personal, and professional expectations. Reflecting upon these experiences, I realized that each student's situation is unique and understood the value of hearing each student's story in their own words to offer the best advice and intervention possible.

I also coordinated and taught freshman seminar for several years and helped design the syllabus for this course. While teaching this course, I realized how important a freshman seminar course is for many first semester freshmen, some of whom have prematurely foreclosed on a career goal without exposure to and consideration of other options that might better suit their needs and desires. At the end of each semester, I



thoroughly read the course evaluations and realized that many students benefited from the opportunity to participate in career-related experiences during this course to consider career options. In addition, some students commented on the benefit of having time and space built into the course allowing for career-related reflection.

I realized the importance of using a developmental lens (i.e., self-authorship theory) through my coursework as a doctoral student and as a graduate student research assistant (GSRA) with the Wabash National Study (WNS) at the University of Michigan. During two years as a GSRA with the WNS project, I interviewed study participants to discuss and determine how these college students made sense of experiences that were important to them. I noticed that even though this study did not focus on career-related experiences, many of these students discussed these particular experiences. They described a variety of experiences such as internships, service learning, and undergraduate research as important opportunities that influenced the formation of their career goals. Since assessing self-authorship development was one of the goals of the WNS, I started to contemplate how a student's developmental level affects career goal formation. I intend to take what I learn from this study and apply it in the future as I continue working with college students as an administrator, educator, and researcher in higher education.

### **Summary**

My interest in this study is not only on the influence of career-related experiences on career goal formation, but also on the meaning making associated with this process. Career goal formation is an important part of a student's collegiate experience that influences persistence, academic adjustment, identity development, and psychological

well-being. However, formulating career goals is not an easy task for many college students. One way to help students make informed mature career decisions is through experiences that assist them to shape their career goals.

## **Chapter 2: Literature Review**

What is a career? How do careers develop? What kinds of experiences promote or hinder career development? How do we make sense of our career-related experiences? Words like career, career development, and career-related experiences are used throughout everyday speech and within the literature. It is important to establish a common language and understanding of these constructs when attempting to answer such questions that affect many individuals, particularly college students. I will begin this section by defining major constructs related to career development and show how they relate to each other. Then I examine several theories of career development and career exploration to help answer questions related to college students' career development. I conclude this section with a proposed model integrating elements from various theories and models of career development and career exploration.

### **Career Development**

What is a career? Scholars have defined "career" in many different ways. Definitions of career are fluid and have evolved in light of ways the influence of work is informed by societal shifts (e.g., industrial revolution, technological revolution). Career has often been used interchangeably with terms such as vocation and occupation (McDaniels & Gysbers, 1992). Career entails more than just an occupation or paid employment; it denotes movement of objects and people through time and social space

(Collin, 2006). Herr (1992) stressed that jobs and occupations are created by organizations; by contrast, individuals construct careers. Early definitions of career were criticized for focusing on an individual's professional work life without acknowledgement of vocationally-related activities leading up to and after a person is working in a job, thus not considering other life roles that may have contributed to their career (Patton & McMahon, 2014). Brewer (1922) provides an example of an early definition (reflecting the gendered language of the time) of life career as "the occupation of a person; that which offers him opportunity for progress and satisfaction in his work" (p. 290). During the 1950s, conceptualizations of career became broader as exemplified by McDaniels' (1965) pairing of leisure with work in his formula: Vocation = Work + Leisure. By the 1970s, the term career was used more frequently in place of vocation (McDaniels & Gysbers, 1992). In 1973, the American Vocational Association and the National Vocational Guidance Association published a joint position paper that defined career as "a time-extended working out a purposeful life pattern through work undertaken by the individual" (p.7). As reflected in this definition, work is necessary to help individuals figure out a purposeful life pattern.

Using a broader and developmental view of occupational choice, from Super's (1976) perspective, career is "the sequence of major positions occupied by a person throughout his [*sic*] preoccupational, occupational and postoccupational life; includes work related roles such as those of student, employee, and pensioner, together with complementary vocational, familial, and civic roles" (p. 20). As indicated in this definition, "student" is one of the roles affecting an individual's career. Through this definition, Super addressed earlier concerns by acknowledging the importance of pre

and post occupational experiences and multiple interdependent roles affecting career development. Along the same vein, Hall (1987) proposed that career represents “a long-term ‘bundle’ of socialization experiences as the person moves in, through, and out of various work-related roles over the span of his or her work life” (p. 301). He also stated that a career can be viewed as “a series of interdependent decisions, each affecting the process by which sets of opportunities unfold later in the person’s life” (p. 307). The decisions made by students to engage in opportunities during college (such as internships, service learning, and undergraduate research) can affect the development and course of their careers. Careers are influenced by a broad range of factors including, but not limited to, educational attainment, family, culture, and geographic location (Brown & Brooks, 1990).

The role of an individual became crucial to understanding what career means as exemplified by Tyler’s (1959) urging to focus on the “psychology of the *development of the human individual*” (p. 81; italics in original). This shift in thinking is reflected in Nicholson and West’s (1989) recommendation of the “use of the more neutral term ‘work histories’ to denote sequences of job experiences and reserve the term ‘career’ for the sense people make of them” (p. 181). This definition of career highlights the unique and personalized nature of a career based on how individuals make sense of their own vocationally-oriented experiences. Newer descriptions of career have emerged such as a protean career (Hall, 1996) and a boundaryless career (Arthur & Rousseau, 1996) to reflect the shift from focusing on organizations to individuals. According to Hall and Mirvas (1996), “rather than focusing outward on some ideal generalized career path, the protean career is unique to each person—a sort of career

fingerprint” (p. 21). Similarly, a boundaryless career is the opposite of a bounded or traditional career tied to a particular organization (Arthur & Rousseau, 1996). The concepts of protean and boundaryless careers are particularly relevant today with many individuals facing job insecurity causing a need for flexibility and adaptability to survive and thrive in the current labor market.

Using a developmental constructivist perspective, a more recent conceptualization of career offered by Savickas (2005) denotes career as “a subjective construction that imposes personal meaning on past memories, present experiences, and future aspirations by weaving them into a life theme that patterns the individual’s work life” (p. 43). Patton and McMahon (2014) define career as “a lifelong process with patterns and relationships between work and other areas of life being constructed within the learner in an ongoing way” (p. 265). These definitions collectively depict career as a dynamic lifelong process that is subjectively constructed by individuals based on their past and present experiences and future aspirations.

Here is a definition I offer drawing from Brown & Brooks, 1990; Hall, 1987; Patton & McMahon, 2014; Savickas, 2005; Super, 1976: Career is a subjective construction (i.e., involves personalized meaning-making) of a dynamic lifelong process related to an individual’s vocation that encompasses various life roles and experiences that are affected by and affect various contextual factors such as family, culture, and geographic location. Before discussing career development theories specifically, it is important to establish what career development means.

Egan, Upton, and Lynham (2006) examined 1500 sources using the term “career development” and distilled this to 30 definitions of career development; this

demonstrates that numerous definitions of career development are currently in use. These definitions highlight key elements of the career development process, such as its dynamic and developmental nature and how it is influenced by different environmental conditions and contextual factors. Career development is a psycho-social process occurring throughout an individual's lifetime. Interestingly, with no reference to career, Super (1957) describes career development as "a lifelong, continuous process of developing and implementing a self concept, testing it against reality, with satisfaction to self and benefit to society" (p. 282). Super (1951) defined self-concept as a product of the interaction between inherited aptitudes and opportunities to observe and competitively try out different experiences while being judged by others. Building upon Super's conceptualization, Brown and Brooks' (1990) definition specifies that "career development is, for most people, a lifelong process of getting ready to choose, choosing, and typically continuing to make choices from among the many occupations available in our society" (p. xvii). Based on these definitions, career development promotes lifelong learning, self-concept/personal agency development, and a capacity to inquire utilizing critical thinking skills. Although Super's (1957) definition specifically emphasizes civic responsibility and benefiting others, this idea appears to be absent in more contemporary definitions despite its societal importance. Overall, definitions of career development do not specify what is meant by career; this is particularly concerning given the many different definitions of this construct introduced above.

In order to better understand the process of career development, the construct of career needs to be clearly defined and carefully examined. Clearly defining the constructs of career and career development provides a common language and

stronger foundation when developing, evaluating, and implementing theories of career development. These theories grew out of the authors' understanding and conceptualization of what careers are and how they unfold, and sought to reflect this in their theoretical descriptions.

**Career Development Theories.** Interested readers can refer to robust literature reviews providing an extensive review of career development theories (e.g., Egan, Upton, Lynham, 2006; Hackett & Lent, 1992; Hackett, Lent, & Greenhaus, 1991). Instead of providing an exhaustive review of these theories, I offer a brief overview of major career development theories that best inform college student development research. To do so, I will focus on developmental and social learning approaches. The combination of these two approaches, reviewed below, provides a better understanding of college student career development by examining underlying developmental processes (i.e., focus of developmental theories) and contextual factors (i.e., focus of social learning theories). In light of his huge contribution to the field, I present one notable theory of career choice since any comprehensive review of career theories is incomplete without acknowledging Holland's influence and contributions to career development. The order in which these theories are presented reflects how they influenced subsequent theories and research.

***Holland's Theory of Vocational Personalities and Work Environments.*** Most career theorists credit Frank Parsons as providing a foundation for the development of career theories based on his work in the early twentieth century using a trait-factor approach. Parsons' (1909) Matching Model of Career Choice described three steps for optimal career choice: (1) knowledge of yourself (e.g., your abilities, interests, and



limitations), (2) knowledge of work environments, and (3) matching the two to find a good fit. Building on Frank Parsons' work, Holland's (1959, 1973, 1997) highly cited and widely applied career theory uses a cognitive approach for career planning. Holland's theory was renamed Holland's Theory of Vocational Personalities and Work Environments (1984); as noted by Patton & McMahon, 2006, the new title better reflects theoretical refinements. Holland's theory rests on the following three assumptions: (1) People's interests and personalities can be categorized by six groups or types organized within a hexagon; (2) Work environments can also be categorized by the same six types; (3) People and environments can be matched through this categorization. This categorization is an adapted version of Parsons' Matching Model of Career Choice described above. What follows is a brief overview of Holland's (1997) theory; interested readers can refer to Gottfredson (1999) for a more thorough review and evaluation of Holland's contributions to vocational psychology.

Holland's Career Typology emphasizes the importance of matching personality and work environments (i.e., person-environment correspondence). Holland (1997) described six personality types and work environment combinations as realistic, investigative, artistic, social, enterprising, and conventional (summarized in the acronym RIASEC; see Figure 2.1).

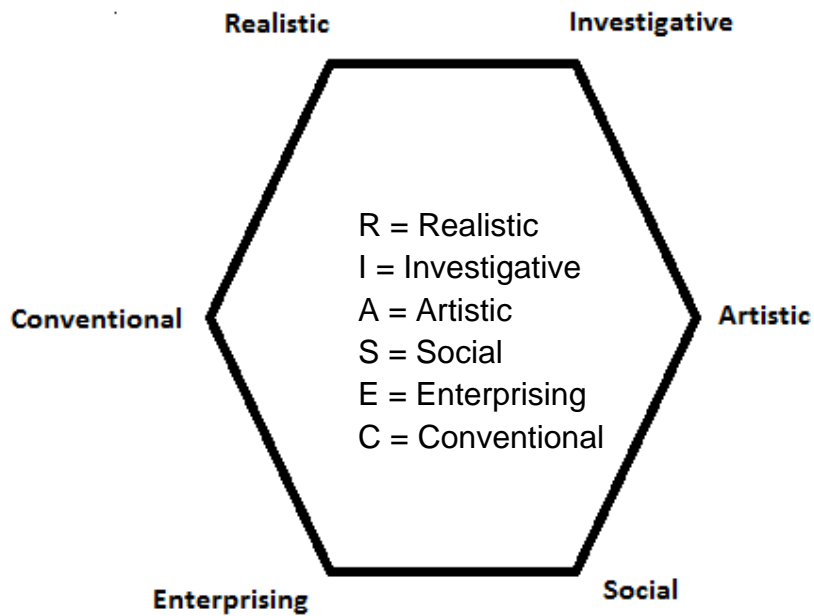


Figure 2.1. Holland's Hexagonal Model Defining Relationships Among Personality Types and Work Environments.

Adapted from Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources, p.6.

The interrelationships among the types help predict career choices, how easy these choices are made, how satisfied people are with these choices, and how well they will perform in their careers (Nauta, 2013). Table 2.1 below describes Holland's RIASEC personality and environmental types.

**Table 2.1 Characteristics of Holland's RIASEC Personality and Environment Types**

<p><b>Realistic</b></p> <p><i>Preference for working with:</i> things</p> <p><i>Personality characteristics:</i> frank, practical, focused, mechanical, determined, rugged</p> <p><i>Preferred/typical activities and skills:</i> abstract mechanical, manual, physical, and athletic tasks</p> <p><i>Sample careers:</i> Fitness trainer, firefighter, mechanic, builder, farmer, landscaper</p> <p><i>Sample majors:</i> criminal justice studies, athletic training, construction management</p> <p><i>Values:</i> tradition, freedom, independence achievement</p>	<p><b>Investigative</b></p> <p><i>Preference for working with:</i> things and ideas</p> <p><i>Personality characteristics:</i> analytical, intellectual, reserved, independent, ambitious</p> <p><i>Preferred/typical activities and skills:</i> working with ideas, solving intellectual problems tasks, collecting data</p> <p><i>Sample careers:</i> biologist, researcher, physician, mathematician, computer systems analyst</p> <p><i>Sample majors:</i> botany, engineering, mathematics, premed, food technology</p> <p><i>Values:</i> independence, logic, scholarly</p>
<p><b>Artistic</b></p> <p><i>Preference for working with:</i> ideas and people</p> <p><i>Personality characteristics:</i> complicated, original, independent, expressive, creative, independent, expressive, creative</p> <p><i>Preferred/typical activities and skills:</i> using imagination, creative expression</p> <p><i>Sample careers:</i> artist, musician, actor, creative writer, photographer</p> <p><i>Sample majors:</i> art, theater, graphic design, music</p> <p><i>Values:</i> aesthetic experience, self-expression, imagination, nonconformity</p>	<p><b>Social</b></p> <p><i>Preference for working with:</i> people</p> <p><i>Personality characteristics:</i> cooperative, impulsive, helpful, emphatic, kind, tactful, warm, sociable, generous</p> <p><i>Preferred/typical activities and skills:</i> interacting with and helping people, teaching, guiding</p> <p><i>Sample careers:</i> teacher, clergy, counselor, nurse, school bus monitor</p> <p><i>Sample majors:</i> nursing, education, counseling, social work</p> <p><i>Values:</i> altruism, ethics, equality</p>
<p><b>Enterprising</b></p> <p><i>Preference for working with:</i> data and people</p> <p><i>Personality characteristics:</i> complicated, original, sociable, adventurous, ambitious, assertive</p> <p><i>Preferred/typical activities and skills:</i> leading, managing, persuading, and organizing people</p> <p><i>Sample careers:</i> manager, lawyer, business administrator, politician</p> <p><i>Sample majors:</i> prelaw, business management, political science</p> <p><i>Values:</i> tradition, economic achievement, ambition</p>	<p><b>Conventional</b></p> <p><i>Preference for working with:</i> data and things</p> <p><i>Personality characteristics:</i> careful, conforming, conservative, responsible, controlled</p> <p><i>Preferred/typical activities and skills:</i> ordering, attending to details</p> <p><i>Sample careers:</i> accountant, banker, actuary, editor, office manager, librarian</p> <p><i>Sample majors:</i> business, accounting</p> <p><i>Values:</i> tradition, ambition, obedience, economic achievement, comfort</p>

Source: Adapted from Gottfredson & Holland (1996), Holland (1997a, 1997b), Nauta, 2013, Prediger (1982)

The descriptions and relationships among the different types are used in the Self-Directed Search (SDS) that measures Holland's six personality types by providing a score for type, leading to a profile for the individual with characteristics from all of the types. A three letter code represents subtypes comprised of the three most dominant types; the order of the letters reflects relative dominance among the types in an individual's profile. For example, a code of SAR indicates that the most dominant type for this individual is social followed by artistic and then realistic. (For an informative description of Holland's personality and environmental typologies, see Holland, 1996.)

There are four diagnostic indicators: consistency, differentiation, identity, and congruence. *Congruence* is the degree of fit between an individual's personality and work environment based on Holland's RIASEC codes described above. Personality and environments that are more similar to each other are also more congruent. *Consistency* refers to some types being more similar. Types that are adjacent to each other in the hexagon (e.g., Conventional and Realistic) are more similar than types that are opposite each other (e.g., Enterprising and Investigative). Individuals with types that are not adjacent or opposite on the hexagon (e.g., Social and Realistic) may have more difficulty finding employment that accommodates different facets of their personality. *Differentiation* describes the degree of distinctness among the RIASEC types in an individual's personality profile. For example, an individual showing a strong resemblance to only one type and no others is considered highly differentiated and an individual resembling many types equally is considered to be relatively undifferentiated. According to Holland (1997), people with more highly differentiated profiles make career

choices and career-related decisions more easily. High levels of consistency, differentiation and identity are positively associated with stability of career aspirations and jobs throughout an individual's life (Holland, 1997c). *Identity* is the degree to which an individual has "a clear and stable picture of one's goals, interests, and talents" (Holland, 1997c, p. 5).

There is much empirical support (hundreds of studies) for Holland's theory, including support for the RIASEC types and their application within the U. S. Several meta-analyses have been conducted (e.g., Assouline & Meir, 1987; Spokane, Meir, & Catalano, 2000; Tracey & Rounds, 1993; Tsabari, Tziner, & Meir, 2005) as well as reviews of Holland's empirical work (e.g., Carson & Mowesian, 1993; Holland, 1997c; Nauta, 2010; Spokane, 1985). According to Nauta (2010), there is strong empirical support for Holland's congruence hypotheses and mixed empirical support for Holland's hypotheses regarding his secondary constructs of consistency, differentiation, and vocational identity. Many meta-analyses examining Holland's theory focus on his congruence construct. For example, Tsabari, Tziner, & Meir (2005) conducted a replication meta-analysis of Holland's congruence theory (i.e., the relationship between vocational interests/environments and satisfaction) based on 26 studies between 1988 and 2003 representing 53 samples with 6,557 respondents. They found a very weak correlation (i.e., ranging from .16 to .17) between congruence and satisfaction with substantial variation among individual studies (partly based on the moderating variables examined). Meta-analyses have also supported positive outcomes when there is better person-environment congruence based on RIASEC types leading to job satisfaction

(e.g., Assouline & Meir, 1987; Spokane, Meir, & Catalano, 2000; Tsabari, Tziner, & Meir, 2005).

Even though Holland's theory has been researched in every continent it is criticized for its inadequate consideration of and applicability to issues related to women, ethnic groups, and other minorities (Fouad, 2007). Additional studies are needed that are longitudinal, cross-cultural, and qualitative (Tsabari, Tziner, & Meir, 2005) that use diverse samples including women and minorities. Specifically, more research is needed examining Holland's congruence hypotheses emphasizing experimental rather than correlational designs with greater influence from person-environment psychology (Spokane, Meir, & Catalano, 2000).

In addition to these critiques, although Holland provides detailed descriptions of six personality and environmental types, he does not provide any insight on how these six types develop (Nauta, 2013). Moreover, he does not address personality development and changes as well as psychological processes underlying career choice within his theory (Brown, 1990). Brown (1987) was concerned that Holland's theory does not consider other life roles and relationships (a criticism addressed by Super, 1980). As pointed out by Zunker (2006), Holland's theory is "primarily descriptive, with little emphasis on explaining the causes and timing of the development of hierarchies of the personal modal styles" (p. 35). Generally, Holland focuses more on the factors influencing career choice rather than the developmental process of career choice (Brown, 1990; Zunker, 2006). Since Holland's theory is mostly descriptive with an emphasis on factors influencing career choice, pairing it with other theories with a

different focus (such as Super's emphasis on developmental processes) provides a more comprehensive understanding of career development.

Nonetheless, Holland provided an extremely influential model for career counseling (Leung, 2008; Spokane, 1996) that "revolutionized the delivery of vocational assistance worldwide" (Gottfredson, 1999, p. 15). Many practical, easily understood, and user friendly career assessment tools are based on Holland's work such as My Vocational Situation (Holland, Daiger, & Power, 1980), the Strong Interest Inventory (Strong & Campbell, 1981), Vocational Preference Inventory (Holland, 1985), and the Self Directed Search (Holland, Fritzsche, & Powell, 1994). Within higher education, the Strong-Campbell tool is considered more relevant and salient than the K-12 focus of the Self-Directed Search (SDS). Many other career development materials such as books and computer programs are based on Holland's theoretical and empirical work. Some practical applications of this theory include using RIASEC scores to help students select a major or career path (Porter & Umbach, 2006; Trusty, Ng, & Plata, 2000). Beyond these practical influences, Holland's work influenced many career theorists including developmental career theorists such as Donald Super, whose work I will discuss next.

***Super's Life-span, Life-space Theory.*** Using a developmental approach, Super (1953, 1957, 1990, 1994) was the first to acknowledge that career development goes beyond early adulthood and continues through an individual's life span. As noted by Savickas (1997), Super's theory changed from being called "career development theory" to "developmental self-concept theory" to "life-span, life-space theory," reflecting the evolution of his theory. He created a life stage developmental framework with the following five stages: growth, exploration, establishment, maintenance, and

disengagement (previously called decline) corresponding with the life stages of childhood, adolescence, adulthood, middle adulthood, and old age. Within each stage, an individual must successfully manage the career-related developmental tasks that are socially expected of people within that chronological age group. The life-stages are named to reflect “the nature of its principal life-stage task” (Super, Savickas, & Super, 1996, p. 131). Of particular interest to the study of traditional aged undergraduate college students is the Exploration stage (15-24) when people are “trying it out” through classes, work experiences, etc. During this stage, tentative career choice and skill development occurs through the following three sequential tasks: crystallizing preferences, specifying a choice, and implementing the choice.

Super stressed that career is much more than just work, as illustrated in his life-career rainbow (see Figure 2.2), which portrays career as the sum total of all the roles (e.g., parent, student) people play in their lives and the concept of life space (i.e., the four major life theatres of home, community, school [college and university], and work). Zunker (2016) noted the following two observations about Super’s (1990) life-stage model/life rainbow: (1) People are normally involved in two or more roles simultaneously within different theatres, and success in one role affects another; and (2) all roles affect other roles within various theatres. Subsequently, there is an increased interest in the interrelationship of life roles (e.g., life-career balance). Usually, some roles are more central to an individual’s life at a particular time; Super (1990) used the term *role salience* to describe the importance ascribed by individuals to their life roles. He also noted that the life-career rainbow can be used to “focus on the concept and measurement of role salience” (p. 218) and depict the importance of various life roles to



an individual, particularly the work role in relation to other life roles. Interactions, including conflicts, occur among the different life roles. All of the elements in this model were identified previously by other researchers; however, the novelty of this model was providing a graphical representation of a career over an individual's lifespan while identifying six life roles during different life stages and ages (Super, 1990). Similar to Super's conceptualization of life roles, Levinson, Darrow, Klein, Levinson, and McKee (1978) described the concept of life structures as "the underlying pattern or design of a man's life at a given time" (p. 41). Life roles and life structures can influence career decisions. For example, a teenage single mother (i.e., a life role) might decide to attend college or become a homemaker depending on her circumstances.

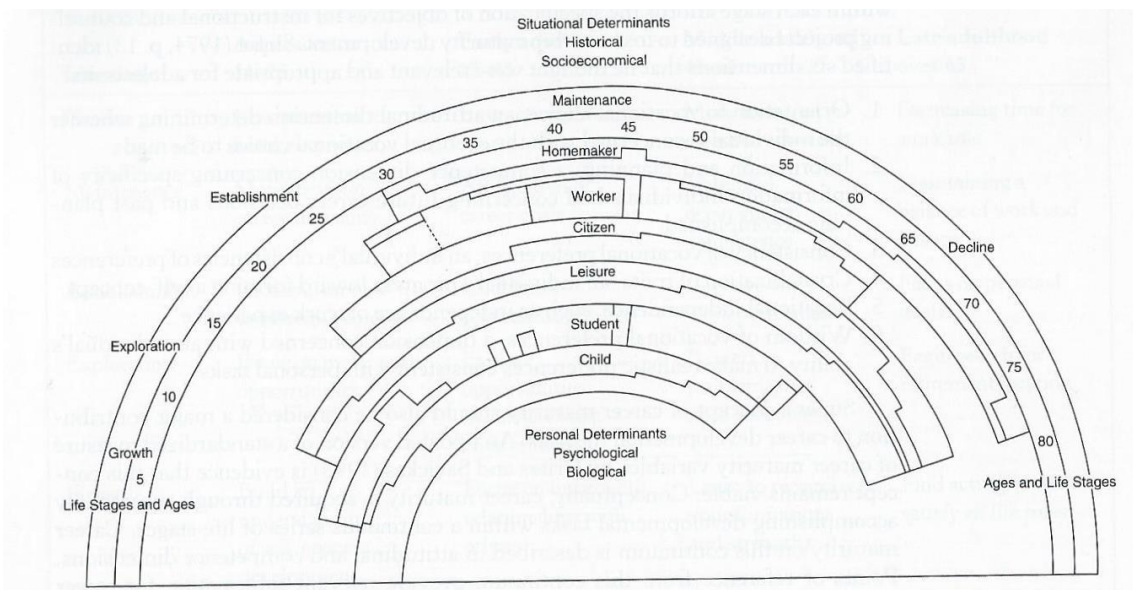


Figure 2.2 Life-Career Rainbow: Six Life Roles in Schematic Life Space. From *The Life-Career Rainbow: Six Life Roles in Schematic Life Space* by D. E. Super (1990). A life-span, life-space approach to career development. In D. Brown (Ed.), *Career Choice and Development* (2<sup>nd</sup> ed., p. 212). San Francisco, CA: Jossey-Bass.

The outer arches represent the dimension of longitudinal time as reflected in Super's (1990) stages of development corresponding with different life stages and the inner arches represent the psycho-social roles. The life-career rainbow also depicts situational and personal determinants (i.e., factors affecting career decisions). According to Super (1994), since this depiction "merely suggests" (p. 67) the determinants, he presented a "second attempt" at this model (Super, 1992, p. 38) by representing personal and situational determinants individually as stones in the Archway of Career Determinants (see Figure 2.3).

In this model, the left column of the arch represents personal factors (e.g., needs, interests, intelligence, and aptitudes) while the right side column represents contextual factors (e.g., the economy, peer group, school, family, and society). The person or *self* is the keystone in this model with developmental stages and role self-concepts included on each side of the *self*. As noted by Super (1990), the base of the model represents "the biological-geographical foundations of human development as the doorstep" (201). He proposed that the "cement" that holds the stones (i.e., segments) together is learning theory (p. 204).

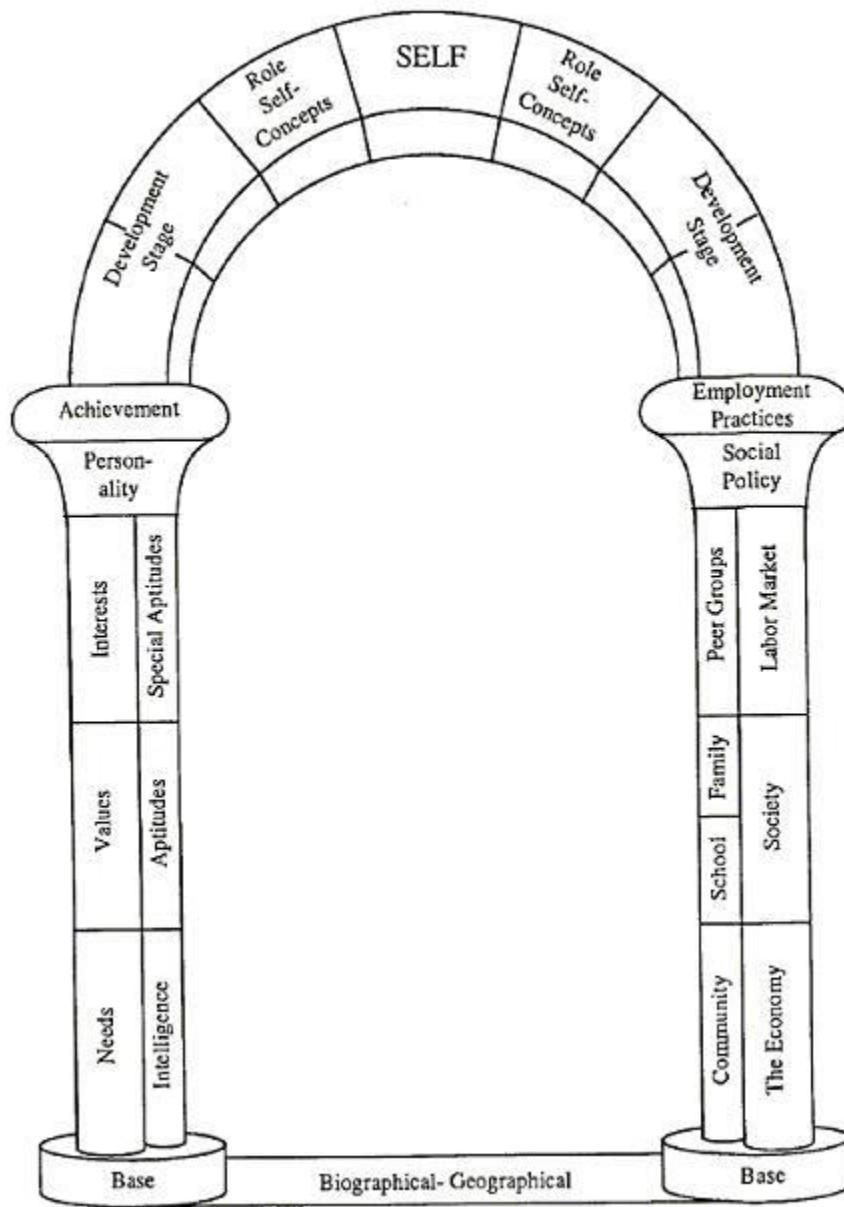


Figure 2.3. The Archway of Career Determinants.  
 From A Segmental Model of Development, by D. E. Super (1990). A life-span, life-space approach to career development. In D. Brown (Ed.), *Career Choice and Development* (2<sup>nd</sup> ed., p. 200). San Francisco, CA: Jossey-Bass.

Super's theory, "ranked among the dominant theories of career choice and development for over 60 years" (Hartung, 2013, p. 101), has been widely studied

including several reviews of this theory and the body of studies it generated (e.g., Betz, 2008, Hackett, Lent, & Greenhaus, 1991; Osipow & Fitzgerald, 1996). Based on Betz's (2008) review, Super is credited with the following three contributions about career development: shifting beliefs about a vocation as a decision made at one time to a developmental process occurring throughout an individual's lifetime; career development involves various life roles that change salience throughout life; and career development involves implementation of a self-concept.

A major contribution of Super's theory is an emphasis on the development of self-concept. After reviewing numerous studies investigating the relationship between self-concept and career choice, Osipow and Fitzgerald (1996) concluded that there is considerable evidence to support the notion that Super's formulations about self-concept play an important role in occupational preferences. Super (1963) explained that "the concept of self is generally a picture of the self in some role, some situation, in a position, performing some set of functions, or in some web of relationships" (p. 18). Self-concepts are mental representations of the self (Super et al., 1996) that change over time and develop based on experience. The concept of self is the product of the interaction between an individual and his/her environment, which he describes in his concept of career maturity as "the degree of success in coping with the demands of earlier stages and sub-stages of career development, and especially with the most recent" (Super, 1990, p. 207). In other words, career maturity is:

the individual's readiness to cope with the developmental tasks with which he or she is confronted because of his or her biological and social developments and because of society's expectations of people who have reached that stage of development. This readiness is both affective and cognitive. (Super, 1990, p. 213)

Career maturity involves affective variables such as career exploration and career planning. It also involves cognitive characteristics such as knowledge about the nature of careers and the principles of career decision-making.

A major criticism of Super's theory is its segmented nature that prevented Super from integrating his theory (Brown, 1990; Hackett, Lent, Greenhaus, 1991; Patton & McMahon, 2006, 2014), a claim that Super (1990) acknowledged when he said,

What I have contributed is not an integrated, comprehensive, and testable theory, but rather a "segmental theory" (Super, 1969, pp. 8-9), a loosely unified set of theories dealing with specific aspects of career development, taken from developmental, differential, social, personality, and phenomenological psychology and held together by self-concept and learning theory. Each of these segments provides testable hypotheses, and in due course I expect the tested and refined segments to yield an integrated theory. (p.199)

Super (1969) calls his work a "segmental" (pp. 8-9) theory to acknowledge the influence of research by other career theorists. He went as far as saying, "there is no 'Super's theory'; there is just the assemblage of theories that I have sought to synthesize" (Super, 1990, p. 199).

Another criticism stems from Super's theory generally and his Archway of Career Determinants Model specifically since it presents many factors influencing career development; however, it does not capture this complex and dynamic interaction of individuals with their environments over time (Patton & McMahon, 2014; Vondracek & Porfeli, 2002). Admittedly, it is tricky to do this using two dimensional models. Although Super (1990) supports a "dynamic interaction of individual and society" (p. 203) as depicted by the union of the two pillars at the top of his Archway of Career Determinants Model, he felt that lines (i.e., vectors as he referred to them) should be drawn in this model in an attempt to capture the dynamic and complex nature of the interaction

between an individual and society over time. However, his explanation for not including these vectors was that he did not want to clutter this model (Super, 1990). Super's theory has also been criticized for being linear and normative (Juntunen & Even, 2012; Vondracek & Porfeli, 2002) despite incorporating the idea of recycling through stages (Patton & McMahon, 2014). It also lacks focus on economic and social factors (Osipow, 1973) influencing careers and career development. Nonetheless, Super's contributions helped move vocational psychologists from focusing on how people choose vocations to how people develop their careers (Savickas, 2001). Super's work has generated a great deal of research interest and provided a building block for theoretical and empirical research, including Savickas' Career Construction Theory.

***Career Construction Theory.*** Savickas (2002, 2005) updated and further developed Super's (1957) theory on vocational development and published his own theory of career construction focusing on meaning making and social construction. Savickas was also influenced by McAdams' (1995, 1996) framework describing three levels of personality as dispositional traits, characteristic adaptations, and life stories. Dispositional traits are people's tendencies, including what a person is generally like, how a person usually acts, and how others typically describe the person (e.g., extraverted, open, depressive). Characteristic adaptations are particular aspects of people's personalities such as goals, interests, beliefs, values, and coping mechanisms. Life stories, also known as narrative identity, are the internal, integrated, and evolving narratives that people construct to make sense of their own lives. These psychosocial narratives (i.e., life stories) are co-authored by individuals and influenced by contextual factors such as culture and gender. Savickas adapted elements of McAdams' theory

and applied it to career development. Career construction theory “asserts that individuals construct their careers by imposing meaning on their vocational behavior and occupational experiences” (Savickas, 2005, p. 43). This theory draws from differential, developmental, and dynamic views of career as reflected in its three main components of vocational personality types, career adaptability, and life themes (Savickas, 2005).

Vocational personality, the first component, is an individual’s career-related abilities, needs, values and interests. This component incorporates Holland’s (1997c) taxonomy by using the RIASEC types to describe an individual’s abilities, needs, values and interests. Career adaptability, the second component, “deals with *how* an individual constructs a career whereas vocational personality deals with *what* career they construct” (Savickas, 2005, p.48, italics in original). He defined career adaptability as “a psychosocial construct that denotes an individual’s readiness and resources for coping with current and imminent vocational developmental tasks, occupational transitions, and personal traumas” (p. 51). Savickas (2005) claims that Super’s concept of career maturity is not as relevant today as his concept of career adaptability since Super’s hierarchical and orderly view of development is not as applicable in today’s turbulent society. Fundamentally, adaptability as a term and concept incorporates a more dynamic and flexible view of career development than maturity. Career adaptability resonates well with newer conceptualizations of career such as protean and boundaryless careers described above. Using a narrative approach, life themes, the third component, focuses on why an individual’s career behavior develops. From this perspective, career is viewed as a story told by individuals with themes or patterns (i.e.,

their life themes). Savickas (2005) suggested that career interventions (e.g., counseling sessions) benefit most when applying all three components of his theory.

Building upon Super's work, Savickas incorporates the concept of development in different ways within his theory. For example, he retains Super's conceptualization of life stages with associated developmental tasks (described above). His theory is grounded in the assumption that career development is a developmental process as evidenced in the progression of individuals who "begin self-construction as *actors*, later become *agents* that direct the action, and then develop into *authors* who explain the action" (Savickas, 2013, p. 148; McAdams & Olson, 2010; italics in original). As Savickas (2005) noted, "career construction is prompted by developmental tasks, occupational transitions, and personal traumas and then produced by responses to these life changes" (p. 46). This theory focuses on how people author their own career/life stories. Watson (2013) suggests that career narratives need to recognize that some individuals have *no* career in their narratives and for some individuals living in underdeveloped countries, adaptation for survival might be their major developmental task. Watson provides this critique specifically in regards to the narrative approach; however, this consideration should apply to career development theories generally.

Career construction theory has primarily been applied to practical situations (e.g., counseling sessions) and has not been the focus of much empirical investigation (Juntunen & Even, 2012). More research is necessary examining various aspects and components of career construction theory (Zunker, 2016). Specifically, "more treatment outcome data and research studies directed toward theory validation are needed—



especially with regard to diverse client populations” (Niles & Harris-Bowlsbey, 2013, p. 109).

Savickas provides a particularly interesting theory because of its focus on the meaning imposed upon career experiences by individuals. This theory uses a constructivist worldview and a developmental perspective. Being a newer theory, it helps pave the way towards a closer connection between theories of career development and human development. While Super’s Life-span, Life-space Theory, Savickas’ Career Construction Theory, and other developmental theories acknowledge contextual influences and experiences, they focus on the person as opposed to the environmental conditions that influence career development. Therefore, it is necessary to examine the complimentary combination of developmental and learning theories to better understand career development holistically.

***Social Learning Theory of Career Decision-Making.*** Mitchell, Jones, and Krumboltz (1979) adapted Bandura’s (1977) Social Learning Theory to the study of careers. Specifically, Krumboltz’s (1979) Social Learning Theory of Career Decision-Making (SLTCDM) uses Bandura’s Social Learning Theory with an emphasis on learning in the career development process to understand how people develop vocational preferences and choose their occupations. The following four types of factors influence an individual’s career decision-making process: genetic endowment and special abilities, environmental conditions and events, learning experiences and task approach skills (Mitchell & Krumboltz, 1990).

The first set of factors, “genetic endowment and special abilities,” include gender, ethnicity, ability or disability, appearance, and other qualities. The second set of factors

is specified in a list of twelve environmental conditions and events including the number and nature of job opportunities, technological developments, and the educational system. Learning experiences, the third category of factors, are derived from social learning theory and are divided into two different types (i.e., instrumental and associative). Instrumental learning experiences are direct learning experiences based on the principle of operant conditioning in which the individual acts on the environment to obtain a certain response. For example, a person who plays soccer on a team and is praised for an outstanding performance will form a more positive response to playing soccer than someone who doesn't receive this kind of praise. Associative learning experiences, based on classical conditioning, occur when individuals respond to external stimuli with a prevailing response pattern (Krumboltz, Mitchell, & Jones, 1976), such as, learning by observing others (Krumboltz, 1996). For example, watching soccer matches, listening to interviews with famous soccer players, and reading intriguing facts about soccer can all potentially affect whether someone becomes interested in pursuing professional sports as an occupation (e.g., athlete, sportscaster). The fourth influence, task approach skills, is produced by an interaction of the other three factors and includes performance standards, cognitive processes, and emotional responses.

As Krumboltz (1996) explained, the SLTCDM helps explain an individual's career path after it occurs; however, it does not provide guidance (e.g., strategies) to career counselors advising people with existing career concerns. Building upon SLTCDM, Krumboltz (1996) proposed a learning theory of career counseling espousing that learning about the world of work comes from direct and indirect learning experiences that are synthesized to guide career decisions and actions. As articulated by Mitchell

and Krumboltz (1990), the SLTCDM “suggests that maximum career development of all individuals requires each individual to have the opportunity to be exposed to the widest array of learning experiences, regardless of race, gender or ethnic origin” (pp. 167-168). Taken within a college context, this statement expresses the importance and value of providing students with a diverse and ample set of career-related experiences (i.e., learning experiences within the career realm).

An important addition in Krumboltz’s theory is the role of chance or the idea of happenstance in career development (Mitchell, Levin, & Krumboltz, 1999). In the words of Mitchell, Levin, and Krumboltz (1999),

Humans are born with different characteristics and predispositions at a given time and place to parents not of their choosing. They grow up in an environment where innumerable unpredictable events occur that provide opportunities for learning both of a positive and negative nature. Individuals do not plan any of these circumstances nor do they control the learning experiences that are open to them. (p. 16)

Career development generally, and task approach skills specifically, are affected by chance events. The career development process is not necessarily all rational and that emerging adulthood is a time when people tend to take more risks as they find their way. From an educational standpoint, chance events can affect exposure to and selection of schools, career-related experiences, and majors. For example, growing up in a particular geographic location can affect the schools/universities attended by students from primary through post-secondary education. These institutions offer certain programs/majors and other educational opportunities affecting students’ career paths.

Krumboltz's theory has not been fully tested (Zunker, 2016). Specifically, many propositions have yet to be researched; for example, studies are needed using this theory with culturally diverse populations (Gelso & Fretz, 2001). Nonetheless, Krumboltz's theory contributes to the study of career development through its focus on learning experiences and recognition of chance events influencing this process. Career-related experiences, a type of learning experience, are examined in this dissertation. Some of these experiences are instrumental (e.g., participating in an internship) and others are associative (e.g., remotely watching a career-related panel discussion). As a result of his focus on learning experiences, Krumboltz's work significantly affected the development of the Social Cognitive Career Theory, which I will discuss next.

***Social Cognitive Career Theory.*** The Social Cognitive Career Theory (SCCT) (Lent, Brown & Hackett, 1994, 2000, 2002) provides a valuable lens for describing the career choice process with particular attention to vocational interest development and career goal formation. As Brown and Associates (2002) noted, SCCT incorporates and builds upon various career development theories by focusing on experiential/learning experiences and cognitive processes that help answer questions such as “how types develop in Holland's scheme, what factors are responsible for differential role salience in Super's theory” and how learning experiences affect interests in Krumboltz's theory (p. 257). It builds on Bandura's (1986) Social Cognitive Theory's Model of Triadic Reciprocity that examines the mutual influence among personal, behavioral, and environmental factors that influence interactions such as learning. Major career development theories present vocational outcomes as a result of the interaction

between persons and environments (e.g.,  $B = f(P, E)$  Lewin's (1936) famous equation). Behavior is seen as a bi-product of this interaction instead of a co-determinant as depicted by Bandura in his model of triadic reciprocity (see Figure 2.4). Hackett and Betz's (1981) self-efficacy theory and Krumboltz's (1979, 1996) learning theory have both informed SCCT. SCCT provides an explanation for how individuals make career choices while focusing on career-related interest, choice, performance processes, and learning experiences.

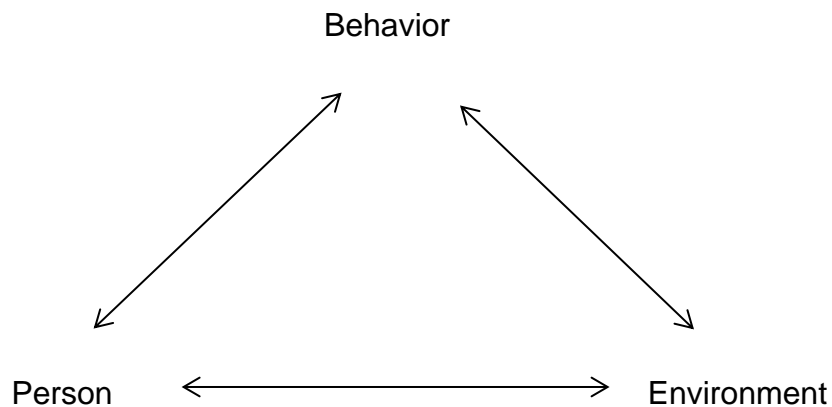


Figure 2.4. Bandura's Model of Triadic Reciprocity.

Adapted from Bandura, A. (1989). Social cognitive theory. In R. Vasta (Ed.), *Annals of child development. Vol. 6. Six theories of child development* (p. 3). Greenwich, CT: JAI Press.

This theory proposes a mutual influence and interplay among three social cognitive variables: self-efficacy beliefs, outcome expectations, and personal goals. Using Bandura's (1986) definition, self-efficacy beliefs are "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391). In other words, self-efficacy refers to the beliefs and confidence individuals have about their own ability to successfully perform a specific

task or behavior (Bandura, 1977). Bandura categorized four sources of self-efficacy: mastery, modeling, social persuasion, and physiological state. Mastery, as defined by Bandura (1986), is an individual's actual successes and failures, and has the greatest impact on a person's self-efficacy beliefs. Modeling, the second most influential source of self-efficacy, is watching a peer (or someone an individual relates to in regards to a particular task) succeed or fail. Social persuasion is when someone else gives an opinion to an individual about his ability to succeed. Finally, physiological state is the amount of anxiety an individual feels when performing a specific task. Self-efficacy is not the same as actual ability; it's a dynamic construct that adapts with time and different tasks as influenced by the environment and other personal factors (Lent et al., 1994). For example, an individual might have strong self-efficacy beliefs about being an excellent writer as a teenager while feeling much less competent at doing math. However, these beliefs can change over time with exposure to different environmental and behavioral influences such as an excellent math teacher in college. This same individual may theoretically choose to become an engineer instead of an English teacher because of her dynamic self-efficacy beliefs shaped by her experiences.

Outcome expectations are the consequences or expected results from performing certain behaviors. Self-efficacy beliefs are concerned with abilities (e.g., am I able to do this?), whereas outcome expectations focus on anticipated outcomes or consequences of actions (e.g., what happens if I do this?). An outcome expectation is not the same thing as a completed act; rather, it is what is expected after a completed action (i.e., the consequence of the behavior). Bandura (1986) described three types of outcome expectations: physical, social, and self-evaluative. Learning experiences

influence the outcome expectations related to different academic and career paths (e.g., observations and work-related conversations with family members). Based on Bandura's (1986) work, goals are defined as "one's intention to engage in a certain activity or to produce a particular outcome" (Lent & Brown, 1996, p. 312). SCCT theory posits that self-efficacy beliefs and outcome expectations affect people's personal goals (e.g., what am I choosing to do?).

SCCT consists of four distinct yet overlapping models: the development of interests (i.e., interest model); the making of choices (i.e., choice model); the influences on and results of performance (i.e., performance model); and the experience of satisfaction, or well-being, in educational and occupational spheres (i.e., satisfaction model). In all of these models, self-efficacy, outcome expectations, and goals work in tandem with personal (e.g., gender, race/ethnicity, intelligence), environmental (e.g., technological developments, labor laws), and experiential factors to affect an individual's academic and career development. Of the four SCCT models, the Choice Model is the only one that specifically accounts for and visually depicts the role of learning experiences (e.g., career-related experiences) in the career development process, as shown in the SCCT Choice Model in Figure 2.5.

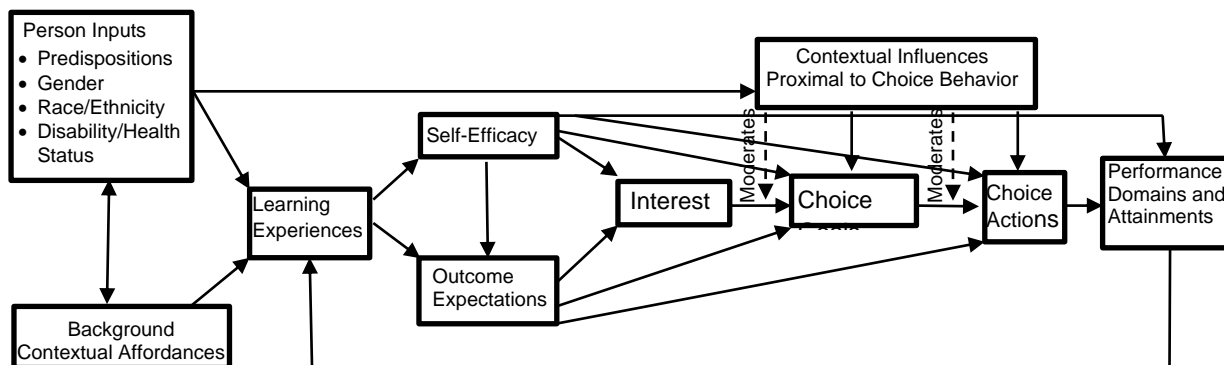


Figure 2.5. Social Cognitive Career Theory Model of Person, Contextual, and Experiential Factors Affecting Career-Related Choice Behavior. From Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying sociocognitive theory of career and academic interest, choice, and performance [Monograph]. *Journal of Vocational Behavior*, 45, p. 93.

This figure provides an overview of how person, contextual, and experiential variables interact and affect interest development and other career-related choice behaviors. Specifically, self-efficacy and outcome expectations are affected by learning experiences that are influenced by person and environmental factors like gender, race/ethnicity, disability, socioeconomic status, and educational systems. Learning experiences can change an individual's self-efficacy beliefs and outcome expectations, causing students to revise their interests and goals (e.g., choosing another major or career). Sometimes choice can be constrained by many factors such as cultural/familial expectations, poor educational opportunities, and economic realities necessitating immediate income (Lent, 2013). In cases such as these, interests might have little to no impact on career choice. The SCCT accounts for this by noting that contextual influences proximal to choice behavior moderate interests, choice goals and choice



actions. SCCT acknowledges the significance of learning experiences and focuses on the cognitive mediators that influence these experiences.

There is a substantial body of empirical work including several meta-analyses (e.g., Brown, et al., 2008, 2011; Rottinghaus, Larson, & Borgen, 2003; Sheu et al., 2010; Stajkovic & Luthans, 1998) examining and validating SCCT's variables, processes, and propositions. Meta-analyses have predominantly focused on self-efficacy beliefs (Brown & Lent, 2013) while excluding other key variables such as outcome expectations and choice goals (Sheu et al., 2010). These studies indicate that "self-efficacy and outcome expectations each are good predictors of occupational interests and that, as predicted, the relation of ability to interests appears to operate through (or be mediated by) self-efficacy" (Brown & Lent, 2013, p. 130; Lent et al., 1994). Rottinghaus, Larson, and Borgen (2003), based on a meta-analysis of 53 samples, confirmed that there is a moderate relationship between self-efficacy and interests that is "consistently strong across the RIASEC domains, ranging from 25 to 46% of the variance shared" (p. 231). In regards to the nature of the linkage between these two variables, the relationship between career interests and self-efficacy beliefs in elementary, middle school, and college students is bi-directional and reciprocal (Nauta, Kahn, Angell, & Cantarelli, 2002; Tracey, 2002). Moreover, Sheu et al.'s (2010) meta-analysis found that interests, self-efficacy, and outcome expectations collectively strongly predicted choice goals across the six RIASEC domains.

Patton and McMahon (2006) highlight the importance of SCCT as a theoretical framework since it identifies the individual as actively shaping his or her life, acknowledges various personal and environmental factors/constraints, and describes

mechanisms (lacking in other models) for more thoroughly understanding interest development and career choice. In contrast with developmental theories, SCCT is not as concerned about the age and stage of individuals as it is about promoting or hindering career-related behavior across developmental periods and tasks (Lent, 2013). Consequently, SCCT may help answer questions that other developmental theorists ask, for example, “how work and other life roles become more or less salient for particular individuals (Super)...and how people are able to affect their own developmental progress (Savickas)” (Lent, 2013, p. 117).

***Kolb’s Experiential Learning Theory.*** When creating his model of experiential learning, Kolb drew upon Dewey’s (1938) emphasis on experience in the learning process, Lewin’s (1936) emphasis on learning through active participatory research, and Piaget’s (1936) conception of intelligence being shaped by experience through the interaction of the individual with the environment. Kolb described learning as a four-step cycle with the following two continuums of cognitive growth and learning: the concrete-abstract continuum and the reflective-active continuum (see Figure 2.6). The concrete-abstract continuum describes peoples’ preference with gathering or grasping information from their environment that ranges from involvement to detachment with palpable events. The reflective-active continuum represents how people process information that they gather that ranges from being an observer to an active participant in the learning process. Individuals constantly choose how to gather and process information related to different learning situations. As Kolb (2015) described,

this process is portrayed as an idealized learning cycle or spiral where the learner “touches all the bases” – experiencing (CE), reflecting (RO), thinking

(AC), and acting (AE) – in a recursive process that is sensitive to the learning situation and what is being learned (p. 51).

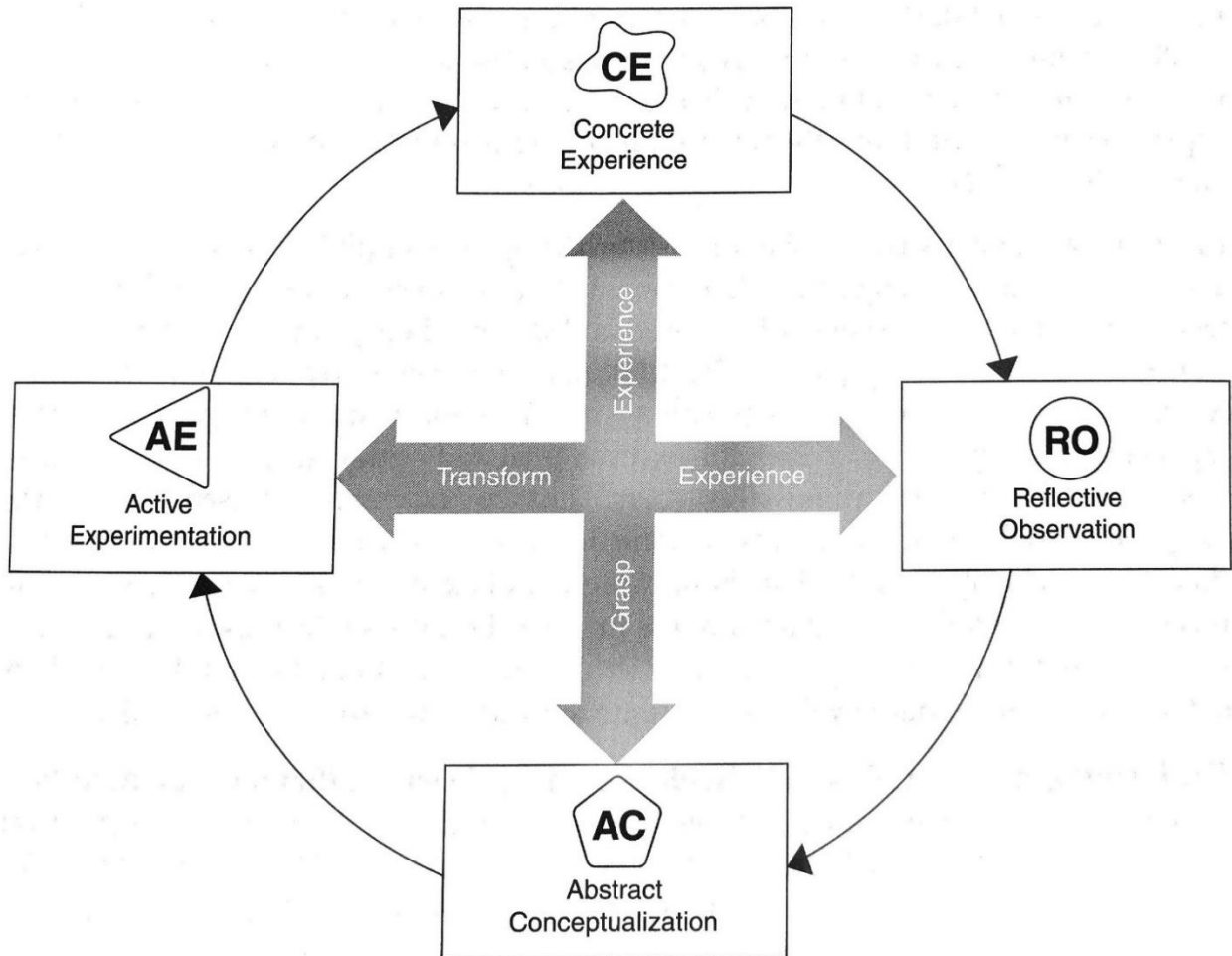


Figure 2.6. Kolb's Model of Experiential Learning.  
From Kolb, D. A (2015). *Experiential learning: Experience as the source of learning and development* (2<sup>nd</sup> ed.). Upper Saddle River, NJ: Pearson Education, p. 68.

Kolb's theory is important when trying to better understand situations in which the process is at least as important as the product (e.g., career exploration and career counseling). This theory is particularly applicable to career exploration since this

process involves an emphasis on learning about an individual in relation to their work. According to Kolb (2015), Figure 2.7 below “pictures the workplace as a learning environment that can enhance and supplement formal education and can foster personal development through meaningful work and career-development opportunities” (p. 4). Kolb’s model “stresses the role of formal education in lifelong learning and the development of individuals to their full potential as citizens, family members, and human beings.

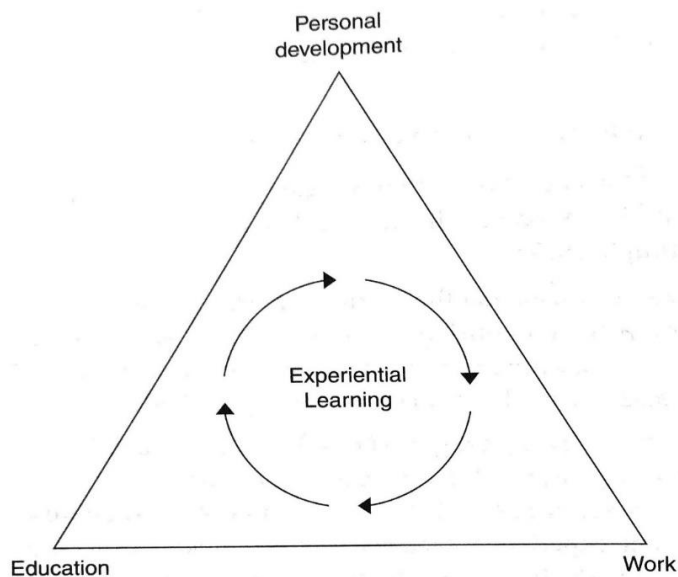


Figure 2.7. Experiential Learning as the Process that Links Education, Work, and Personal Development.

From Kolb, D. A (2015). *Experiential learning: Experience as the source of learning and development* (2<sup>nd</sup> ed.). Upper Saddle River, NJ: Pearson Education, p. 4.

**Integrating Developmental and Social Learning Approaches.** Focusing on developmental and social learning career theories provides a better understanding of career development by examining the relationship between social learning experiences (i.e., career-related experiences) and student development. Developmental theories

examine career choice as part of a dynamic developmental process. Some of these theories emphasize the stages or cycles of human development while acknowledging various roles (e.g., student, worker, parent) portrayed by individuals throughout life. Learning theories extend the work of Holland and Super by describing how learning experiences influence ability and interest development (Patton & McMahon, 2014). Social learning theories examine the influence of genetics, environmental conditions, and learning experiences in the career development process. Although many developmental theories *acknowledge* the influence of various contextual factors, social learning theories *examine* these influences. Similarly, although social learning theories tend to *acknowledge* developmental processes, developmental theories *examine* these processes. The combination of developmental and social learning theories allows for a more complete understanding of career development.

**Unifying Theories of Career Development.** Theorists have highlighted specific aspects of career development and approached this from different perspectives within their theories (Savickas, 2005). Many of these theories offer depth by examining component parts of career development within a field that is broad, complex, and multi-faceted (Patton & McMahon, 2014). There might never be one overarching theory of career development because of the breadth of this field (Hesketh, 1985, Super, 1990). The two frameworks of career development discussed next, the Developmental-Contextual Approach and the Systems Theory Framework of Career Development, have presented unifying models. Interestingly, both of these models use a modified form of Bronfenbrenner's depiction of contextual influences.

***Developmental-Contextual Approach.*** Focusing on both developmental and contextual factors, Vondracek, Lerner and Schulenberg (1986) presented the Dynamic Interactional Model of Career Development (see Figure 2.8) to depict the interactions between people and their changing environments. As noted by Vondracek and Fouad (1994), “the developmental-contextual approach to life-span career development is not a theory. It is a general conceptual model, a way of thinking of human development in general, and career development in particular, that is intended to help guide theory development” (p. 211).

Vondracek et al. (1986) believed that career development theories overemphasized personal factors like values, interests, and abilities, while lacking attention to contextual factors like family issues and organizational constraints. Building upon Lerner’s (1979) work, they identified the three key elements of career development as the individual, the context, and the interaction between the two. Embeddedness, emphasizing multiple levels of life (e.g., biological, psychological, social, organizational, cultural) is an important part of the developmental-contextual model (Vondracek & Fouad, 1994). Bronfenbrenner’s (1979) ecology of human development that depicted embedded contextual influences from the microsystem (e.g., family, school) to the macrosystem (e.g., the labor market, global economy) influenced the design and presentation of the developmental-contextual model.

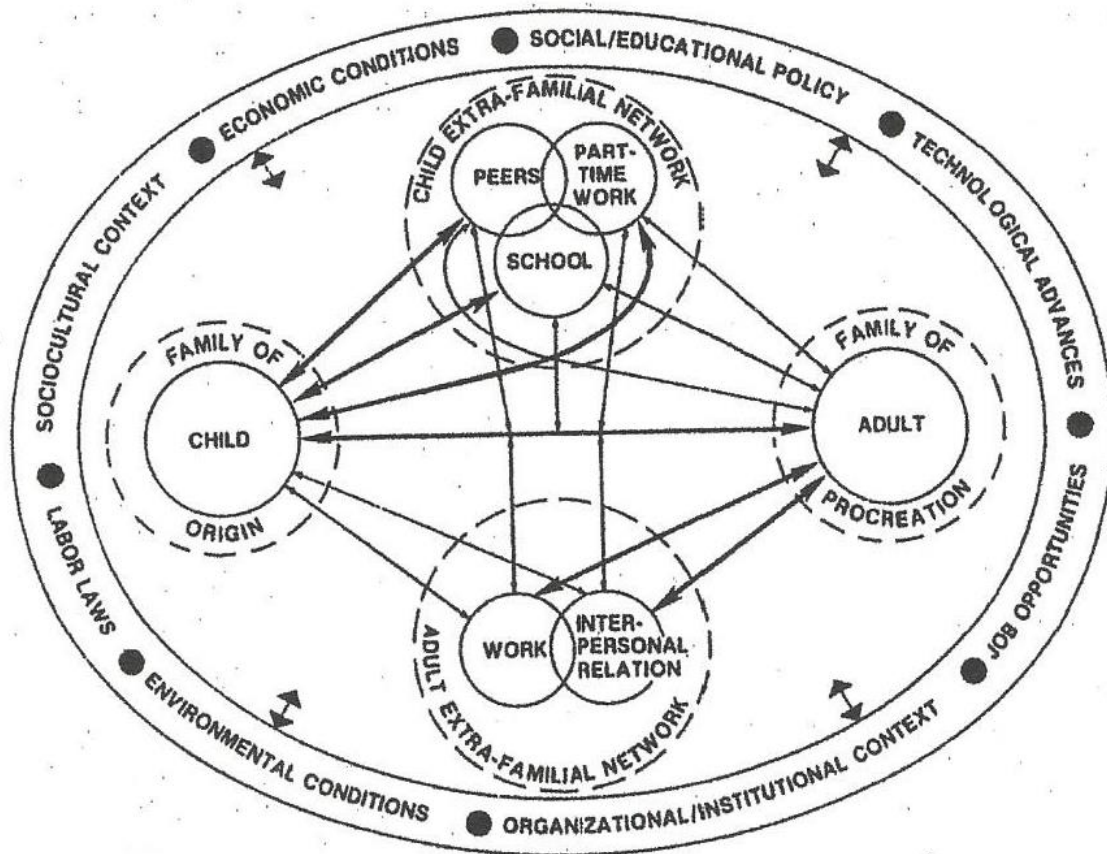


Figure 2.8. A Dynamic Interactional Model of Career Development.  
 From Vondracek, F. W., Lerner, R. M., & Schulenberg, J. E. (1986). *Career development: A life-span developmental approach*. Hillsdale, NJ: Erlbaum, p.79.

This model has a temporal component reflecting changes in individuals and the environment over time. Dynamic interactions are described in this model by “the fact that complex, multidirectional relations exist between an individual and his/her context and that changes in one of the multiple sources of development...will influence changes in all others” (Vondracek et al., 1986, p. 187). Both individuals and their environments change interdependently over time (Vondracek et al., 1986).

Using a lifespan approach is a strength of this model since it accounts for and is applicable to issues such as midlife career changes, a rapidly aging population, and retirement issues (Vondracek & Fouad, 1994). Patton & McMahon (2014) commented that, “the developmental-contextual model was one of the first approaches to effectively integrate person and context factors in career development theory” (p. 111). This model’s lifespan orientation and application of the concepts of embeddedness and dynamic interaction are helpful in designing interventions that may lead to integrating theory with practice (Patton & McMahon, 2014). From an empirical standpoint, “as a metamodel it is not sufficiently explicit, especially about process, to produce precise and testable hypotheses, although it has been useful as a guide for the design and formulation of overall approaches to career development research” (Vondracek & Kawasaki, 1995, p. 118). This framework firmly places career development in the field of human development (Vondracek & Fouad, 1994).

***Systems Theory Framework of Career Development.*** Patton and McMahon’s (1999, 2006, 2014) Systems Theory Framework of Career Development (STF; see Figure 2.9) is an attempt to synthesize the existing career development related literature and research. This model is not another theory of career development; rather it is designed to be an overarching framework that incorporates elements from a variety of theories using a systems theory approach (Patton & McMahon, 2014). There is no one fixed version of this model. Each individual has a unique adaptation of the STF that changes over time. For example, a STF for a student entering college looks very different than a STF for the same person at the time of retirement. While many dominant influences exist throughout an individual’s lifetime, the way they influence an



individual typically changes through a variety of factors such as evolving identities, adapting relationships, and experiencing new opportunities.

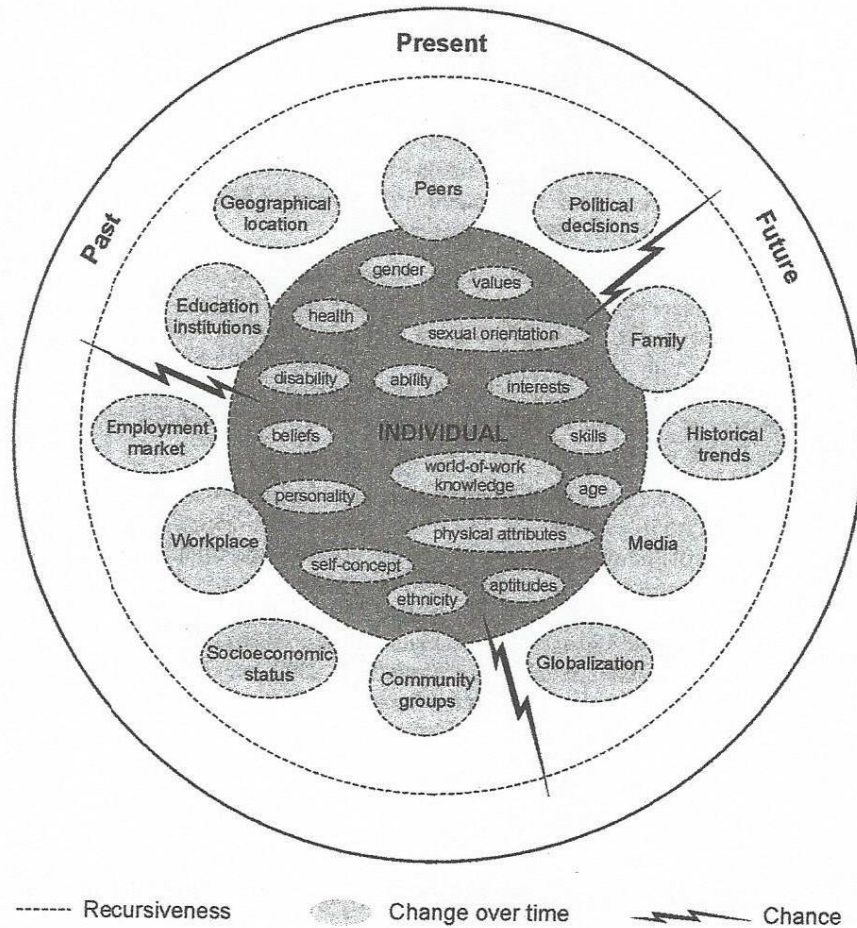


Figure 2.9. The Systems Theory Framework of Career Development. From Patton, W. & McMahon, M. (2014). *Career development and systems theory: Connecting theory and practice*. Rotterdam, The Netherlands: Sense Publishers, p. 257.

The individual is at the center of this model both theoretically and literally, reflecting the importance of focusing on the individual from a career development perspective as reflected in work by different career theorists (Ginzberg, 1972; Parsons, 1909; Patton & McMahon, 1999, 2006, 2014; Savickas, 2005; Super, 1990). This

framework can be adapted to reflect every individual's unique career-related experience over time. Patton and McMahon (2014) prefer using the term "individual" over the term "self" because it reflects the "uniqueness of a person and his or her situation and to reflect the concept of personal agency which is embedded in current theoretical perspectives that are informed by the constructivist worldview" (p. 245). The word "influence" was chosen over the word "factors" to describe intrapersonal and contextual factors related to career development processes since the word "influence" is less static and more dynamic (Patton & McMahon, 2014).

This framework incorporates influences that have been traditionally underrepresented in career theories and research such as ethnicity, gender, health, sexual orientation, and disability. Per Patton & McMahon (2014), this model is inclusive of different cultures that are both western and non-western. They note that "in many ethnic groups, we acknowledge that the family is a major focal group in development, not the individual" (p. 247). This model takes an individual in context perspective. Contextual influences are presented in this framework inspired by Bronfenbrenner's (1977, 1979) layered approach with two subsystems representing the social system (i.e., microsystem) and the environmental-societal system (i.e., exosystem and mesosystem). STF incorporates Jepsen's (1989) categorization that "an adolescent's social environment is comprised of several primary social groups to which most adolescents belong, especially the family of origin, the several subgroups in schools such as classes and activity groups, and the peer friend group" (p. 73). Even though this comment refers to adolescents, these groups influence individuals throughout life as reflected in Super's (1990) Archway of Career Determinants Model (Patton &

McMahon, 2014) and are applicable to college students as well. Although career theorists tend not to consider the media, Jepsen (1989) is a notable exception; Patton and McMahon (2014) acknowledge the influence of the media generally, and social media particularly.

A key feature of this model is the use of the concept of recursiveness as defined by Plas (1986):

A recursive phenomenon is the product of multidirectional feedback, which occurs as functional and arbitrarily identifiable parts of a system emerge in transaction across time and space. A recursion is nonlinear; there is mutuality of influence. Any event that can be identified within a recursive human network can be viewed as the product of experience and anticipation. That is, any isolated movement or moment can be seen to be influenced by events in the past, present, and future. (p. 62)

Several important points are made in Plas' conceptualization of recursiveness as applied to the STF. A recursion is nonlinear as represented by the circular presentation of the STF. Although there is a mutuality of influence that exists among the different influences, Patton and McMahon (2014) note that not all influences are mutually influential. Also, events from the past, present, and future influence any particular moment in time. Within this model, recursion is represented by dotted circles throughout this figure (see Figure 2.9). This framework also acknowledges the role of chance, defined as "an unplanned event that measurably alters one's behavior" (Miller, 1983, p. 17), within career development. Chance is depicted in this figure as random lightning bolts.

A key utility of the STF is that it can be used to map an individual's career story as it unfolds throughout their career development journey. As noted by Patton and McMahon (2014),

The Systems Theory Framework is not designed to compete with or devalue existing career theories. Rather, its significance is in its capacity to focus on individuals and their own career construction, and to unite the contributions of the various extant theories under one framework. (pp. 263-264)

However, every depiction of the STF has the individual firmly placed in the middle of the model, without acknowledging other configurations of the individual placed somewhere else in the model. For example, what if the family was the focal point for certain cultural subgroups? The current model doesn't reflect this possibility. Accordingly, how should the family be depicted in the middle of the diagrammatic representation of the STF for these kinds of individuals? Also, this model doesn't represent the salience of particular influences for individuals. Nonetheless, this framework holds the potential to help college students visually depict and better understand their career development at various points in time through different versions of the STF representing a snapshot of particular times within this process.

**Critique of Career Development Theories and Research.** Collin and Young's (1986) review of career theory (more than 30 years ago) found there is no clear definition of the term career. Interestingly, today there is still no consensus when defining this term. This lack of clarity affects research and practice in many different ways. For example, instruments designed to help students clarify their career goals could benefit from having a clear definition of the term career, especially when students compare results from different instruments serving a similar purpose. Career-related research methods, content, and results are all influenced by this lack of definitional clarity (Collin & Young, 1986). Furthermore, when there is ambiguity when defining the

term career, researchers examining career-related issues in various disciplines might not realize opportunities for interdisciplinary collaboration.

Certain influences such as culture, ethnicity, disability, gender, health, spirituality, and sexual orientation have traditionally been underrepresented in career development theories. Moreover, context has historically been left out of career development theories (Niles & Harris-Bowlsbey, 2013) with some notable exceptions like the Developmental-Contextual Approach and Social Cognitive Career Theory (SCCT). Newer theories, such as the Systems Theory Framework (STF) of Career Development emphasizes context and acknowledges influences that have typically been overlooked or underrepresented such as health, spirituality, and sexual orientation.

Researchers have criticized career development theory for not incorporating research from and collaborating with other disciplines (Arthur, 2008; McMahon, 2014). Some career development theories, particularly newer ones, cross disciplinary borders by referencing other theories and building upon theoretical and empirical work in many different fields. For example, The System's Theory Framework (STF) of Career Development was designed to recognize and incorporate contributions to career development from other disciplines such as sociology, political science, and economics when investigating different elements of this model such as the environmental-societal system (Patton & McMahon, 2014).

Savickas (2002) proposed the following three recommendations to reinvigorate the study of careers: "(1) rethink the meaning of career and research on career development, (2) adopt prospective longitudinal research designs, (3) concentrate first on processes of development and then on the content of careers" (p. 381). He stressed

observing and understanding the differences with studying career development, occupational roles, and vocational behavior. He argued that much of the research labeled as career development is actually examining vocational behavior since it is not capturing development due to the scarcity of longitudinal studies and focus on individual differences. I agree with Savickas' recommendations and that additional longitudinal prospective studies examining development within the career domain are needed.

**Summary of Career Development Theories.** Career development theories enhance our understanding of various aspects of the career development process. Interestingly, various definitions of career appear to build upon each other in a way that is reflective of the evolution of career development theories. As career development theories started paying more attention to contextual factors and environmental influences, the conceptualizations of career reflected this as well. Since “development never takes place in a vacuum; it is always embedded and expressed through behavior in a particular environmental context” (Bronfenbrenner, 1979, p. 27), the combination of developmental and social learning career theories is necessary to better understand college students' career development. No one theory is adequate to understand this complex process. The multiple perspectives provided by various theories have strengthened the study and field of career development (Niles & Harris-Bowlsbey, 2013). Strides are being made towards an integrated theory of career development, particularly with refinements to the STF. An integrated theory such as STF provides an organizing framework to synthesize contributions from other theories. Next, I address some of the questions posed in the beginning of this section (i.e., “How do careers

develop?” and “What kinds of experiences promote or hinder career development?”).

To examine this, I will focus the next section on career exploration.

### **Career Exploration Theories**

Many career development theories (the most prominent of which are Holland, 1985 and Super, 1990) describe the crucial role of exploration. Specifically, “the diversity of models applied to career development share in common the notion that career exploration is an important ingredient in identifying, evaluating, and deciding upon vocational alternatives” (Blustein et al., 1995, p. 424). This portion of the literature review focuses on this important component in the career development process. First, I provide a description of this construct with an emphasis on college students. Then I review relevant research and several models of career exploration. I conclude this section with a proposed model I constructed by incorporating elements from various career development and career exploration theories.

**Definition.** Most commonly referred to as career exploration, this concept has also been called vocational exploratory behavior (Jordaan, 1963), vocational exploration (e.g., Flum & Blustein, 2000), and information-seeking activities or behavior (e.g., Kracke, 2002; Nolan, 1973). Jordaan’s 1963 definition is noteworthy because he emphasized that information is gathered about the self and environment during the career exploratory process, as follows:

activities, mental or physical, undertaken with the more or less conscious purpose or hope of eliciting information about oneself or one’s environment, or of verifying or arriving at a basis for a conclusion or hypothesis which will aid one in choosing, preparing for, entering, adjusting to, or progressing in, an occupation.  
(p. 59)

Information is gathered about the self and the environment during the career exploratory process (Jordaan, 1963). Furthermore, Jordaan (1963) claimed that while exploratory activities do not have to take place in a vocational setting to be vocationally-oriented, they involve “experimentation, investigation, trial, search, or hypothesis-testing” (p. 56). As noted by Cheung (2015) and substantiated by my literature review, Jordaan’s highly cited conceptualization of career exploration has strongly affected and continues to influence further research related to this construct.

**Types of Career Exploration.** Scholars have categorized various types of career exploration. For example, Dietrich, Kracke, and Nurmi (2011) described different types of career exploration based on a variety of studies that focus on the self (e.g., personal interests, goals, abilities), the environment (e.g., job market, educational options), breadth (i.e., information gathering on broad vocationally-related options) and depth (i.e., thorough look at specific options while considering person-occupational fit).

Dykeman et al. (2001) with The National Research Center for Career and Technical Education conducted research examining career development interventions (also known as career exploratory activities) to identify comprehensive lists of career development interventions that occur in America’s secondary schools and created a taxonomy of the identified interventions. They identified 44 interventions and rated each on the following five variables: time, mode, control, place, and size. Using cluster analysis to empirically group these ratings, the following four types of career interventions were identified: (a) introductory interventions (e.g., career fairs, field trips, aptitude assessment); (b) advising interventions (e.g., academic and career counseling, information interviewing); (c) curriculum-based interventions (e.g., courses infused with



career information and skills, career/technical education courses); and (d) work-based interventions (cooperative education, internships, mentoring, work study). These categories were defined by the study as follows:

Introductory interventions...are designed to awaken a student's interest in their own personal and professional growth. Advising interventions...are designed to provide direction, resolve impediments, or sustain planfulness in students about their goals for the future. Curriculum-based interventions...are designed to promote career and academic knowledge and skills through means and content relevant to the world of work. Work-based interventions...are designed to promote both career and academic self-efficacy and motivation through sustained and meaningful interactions with work sites in the community. (p. 18)

Even though this classification is intended for secondary schools, these 4 categories of interventions seem to apply to post-secondary settings as well.

Johnston (2006) identified examples of career exploratory activities including career-information sessions, career-interest inventories, externships, internships, informational interviews, job shadowing, library and Internet searches, professional panels, mentorship, tours on a job site, and volunteer opportunities. Part-time employment, service-learning, and career advising with faculty and staff are additional examples of these types of activities. These lists are not exhaustive; rather, they are representative of some typical career exploratory activities. Career exploration does not have to exist in a vocational setting to be vocationally-oriented. For example, some career exploratory activities occur in the classroom and others in co-curricular activities. Some career exploratory activities are purposefully designed to promote career exploration (e.g., career fairs, career-interest inventories). Conversely, students may benefit from an experience that promotes career exploration even though it wasn't

originally designed or intended for that outcome (e.g., non-vocationally oriented volunteering, service-learning).

**Career Exploration and College Students.** According to Super (1957, 1963), career exploration is presumed to primarily take place during adolescence (which he defined as ages 14 to 25) even though it can occur throughout life. Considering potential career options and preparing for the transition from school to work is a central developmental task during adolescence (Erikson, 1968; Kracke & Schmitt-Rodermund, 2001). During this time, college students are in the process of making career-related choices and commitments (Blustein, 1989; Jepsen & Dickson, 2003). Providing career exploratory activities and interventions during college is particularly important to allow students exposure to and development of exploratory skills during a critical time in their development. Career development for college students includes crystallizing a self-concept, obtaining information about the world of work, and developing problem-solving and decision-making skills used to make a career choice (Jordaan, 1974). Students further along in their educational journey (e.g., those who have already declared majors) are expected to participate more in environmental exploration (Blustein & Phillips, 1988). Inadequate career exploration during adolescence can lead to difficulties with career adjustment later in life (Herr, 1993). Sometimes career exploration is triggered as a coping mechanism during crises or transitions (Blustein, 1997; Savickas, 1997; Zikic & Klehe, 2006).

**Models of Career Exploration.** An extensive body of literature including several frameworks examining career exploration exist. Some models discuss the antecedents and consequences of career exploration (e.g., Solberg, 1998), while others focus on

facilitating and enhancing career interventions (e.g., Cheung, 2015). For example, Stumpf, Collarelli, and Hartman's (1983) framework (see Figure 2.10) includes three domains of career exploration (i.e., beliefs, process, and reactions).

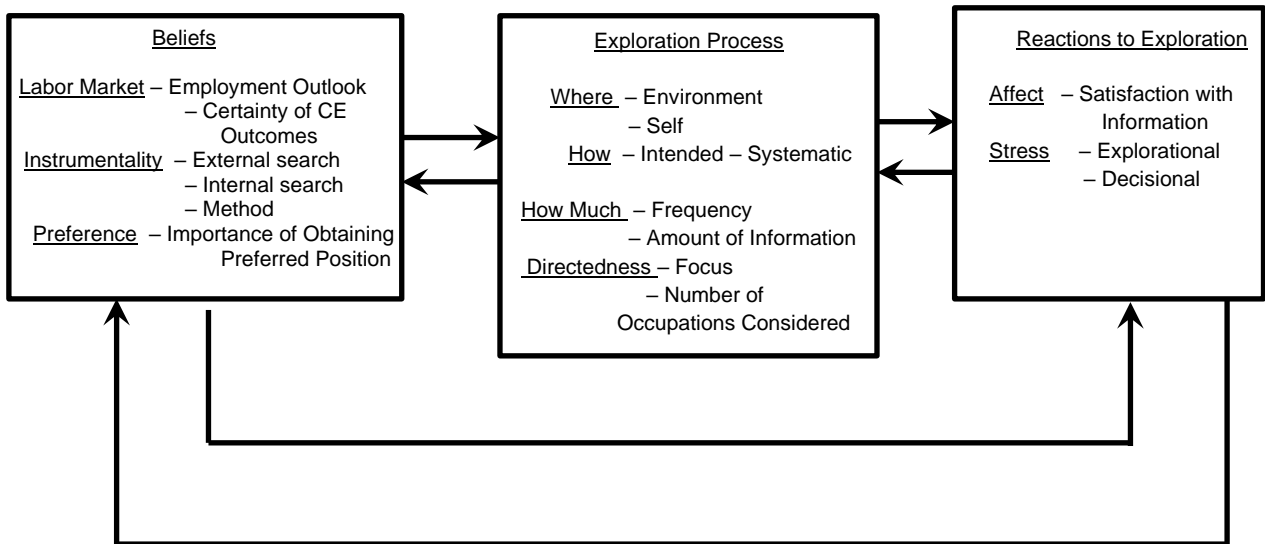


Figure 2.10. A Process Model of Career Exploration.

From Stumpf, S. A., Colarelli, S. M., & Hartman, K. (1983). Development of the career exploration survey. *Journal of Vocational Behavior*, 22, p. 194.

Stumpf et al. (1983) described four key components of career exploration: (1) where one explores (i.e., self vs. environment) (2) how one explores (i.e., randomly vs. systematically), (3) how much one explores (i.e., frequency), and (4) what one explores (i.e., focus of exploration). Individuals can explore through themselves (e.g., reflection) and through the environment (e.g., career exploratory activities). They identified some beliefs that affect career exploration, including perceptions about the labor market (i.e., general economic conditions), expectations about the certainty of career exploratory

outcomes (i.e., varies based on an individual's skills, experience, and networks), and the importance of obtaining certain career-related outcomes. Finally, they discussed two different reactions to the results of the exploratory process (i.e., satisfaction and stress). Table 2.2 provides a description of the various dimensions of career exploration identified in Stumpf et al.'s model.

Table 2.2. Dimensions of Career Exploration

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<b>Exploration Process</b>
<i>Environment Exploration.</i> The extent of career exploration regarding occupations, jobs, and organizations within the last 3 months.
<i>Self-Exploration.</i> The extent of career exploration involving self-assessment and retrospection within the last 3 months.
<i>Number of Occupations Considered.</i> The number of different occupational areas on which one is acquiring information.
<i>Intended-Systematic Exploration.</i> The extent to which one acquires information on oneself and the environment in an intended or systematic manner (e.g., experimented with different career activities).
<i>Frequency.</i> The average number of times per week that one seeks career information over a 2-month period.
<i>Amount of Information.</i> The amount of information acquired on occupations, jobs, organizations, and oneself.
<i>Focus.</i> How sure one feels in his/her preference for a particular occupation, job, and organization.

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<b>Reactions to Exploration</b>
<i>Satisfaction with Information.</i> The satisfaction one feels with the information obtained regarding occupations, jobs, and organizations relative to one's interests, abilities, and needs.
<i>Explorational Stress.</i> The amount of undesirable stress, relative to other significant life events, with which one has to contend, felt as a function of the career exploration process.
<i>Decisional Stress.</i> The amount of undesirable stress, relative to other significant life events, with which one has to contend, felt as a function of the career decision making process.

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<b>Beliefs</b>
<i>Employment Outlook.</i> How favorable the employment possibilities look in one's career area.
<i>Certainty of Career Exploration Outcomes.</i> The degree of certainty one feels that he/she will attain a desired position.
<i>External Search Instrumentality.</i> The probability that exploring the environment for career opportunities will lead to obtaining career goals.
<i>Internal Search Instrumentality.</i> The probability that reflection on past career behavior and retrospection will lead to obtaining career goals.
<i>Method Instrumentality.</i> The probability that being intended and systematic in one's career exploration will lead to obtaining career goals.
<i>Importance of Obtaining Preferred Position.</i> The degree of importance placed on obtaining one's career preference.

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Source: Adapted from Stumpf, S. A., Colarelli, S. M., & Hartman, K. (1983). Development of the career exploration survey. *Journal of Vocational Behavior*, 22, p. 196.

Stumpf et al. used their model to create a Career Exploratory Survey (CES), which is designed to generate theoretical and empirical research examining how exploration influences career decisions, career development, and job outcomes. The conceptual framework for the CES draws from theories of exploration (Berlyne, 1965; Jordaan, 1963), career preference (Holland, 1973), motivation (Vroom, 1964), and stress (Schuler, 1980).

Building on the work of Stumpf et al. (1983) and others, Flum and Blustein (2000) presented a framework of vocational exploration based on the following four perspectives: ego-identity and human motivation literatures and sociocultural and historical contexts. They advanced our thinking about career exploration by describing it as a lifelong and adaptive process as opposed to a stage as previously conceptualized. They also built upon Jordaan's definition of career exploration by adding an attitudinal component, the individual's motivation to engage in and sustain exploratory behavior. People may choose to participate in exploratory activities or avoid them altogether (Blustein, Ellis, & Devenis, 1989). According to Flum and Blustein's conceptualization, exploration can produce two types of feedback: cognitive and affective. The cognitive component deals with the knowledge obtained from the exploratory process, whereas the affective component examines a person's feelings about the information obtained as a result of exploration. Some situations yield both cognitive and affective feedback; for example, gaining knowledge and information about potential occupational alternatives can increase an individual's motivation for degree completion leading to a more positive disposition and overall mood.

Another contribution of this framework is viewing self-construction, defined as “the process of developing a coherent and meaningful identity and implementing that identity in a life plan” (p. 382) in tandem with vocational exploration. Self-construction is a recursive process since identity development resulting from career exploration can stimulate further exploration. The concept of self-construction represents a reconstruction of identity throughout the lifespan in various life roles.

Solberg (1998) proposed a model (see Figure 2.11) examining both the sources and effects of career search self-efficacy. Career search self-efficacy refers to a belief about one’s ability to successfully perform career exploration activities (Solberg, 1998). Potential sources of career search self-efficacy include agency, family, self-identity, and the environment. Career search self-efficacy affects career exploration and other career outcomes identified in the model as depicted below. Career search self-efficacy is an integral part of the career exploration process. This model is particularly useful in identifying outcomes resulting from career exploration as influenced by an individual’s beliefs (i.e., career search self-efficacy).

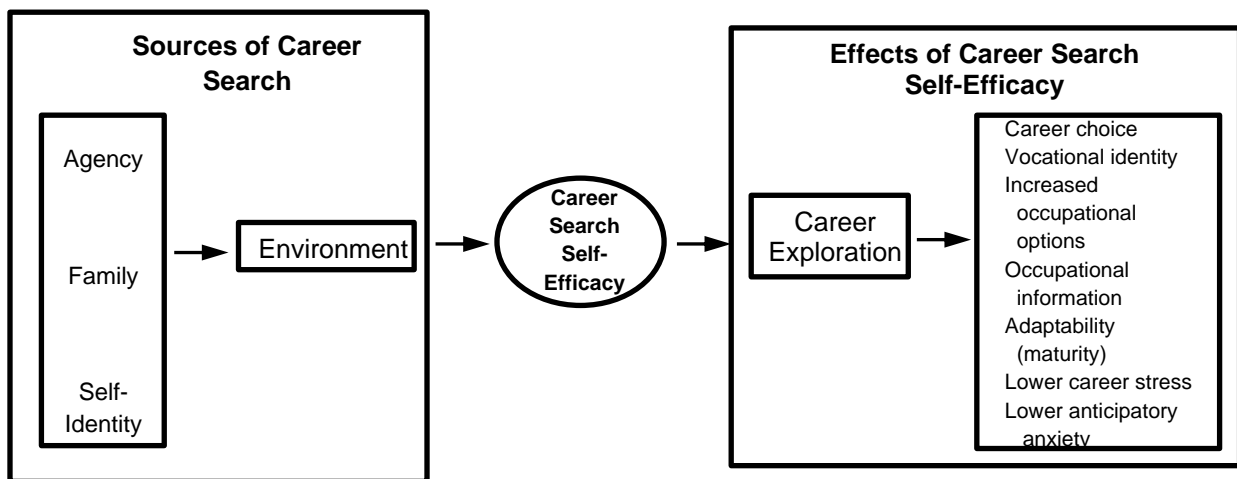


Figure 2.11. Proposed Model for Sources of Career Search Self-efficacy and Effect of Career Search Self-efficacy on Career Exploration and Career Outcomes.

Adapted from Solberg, V. C. (1998). Assessing career search self-efficacy: Construct evidence and developmental antecedents. *Journal of Career Assessment*, 6(2), p. 189.

Solberg's model can be used in conjunction with other career development models. For example, SCCT's Choice Model (described above) depicts self-efficacy's influence on outcome expectations, interests, and goal formation. However, this model doesn't specify career-related outcomes (e.g., career choice refinement, lower career-related stress), since SCCT focuses on variables influencing career choice behaviors. Thus, Solberg's model can be used in conjunction with SCCT's Choice Model to better understand the sources, influence, and effects of self-efficacy within the career choice process.

Some models of career exploration are designed specifically to provide a practical application. For example, Cheung (2015) created a model (see Figure 2.12) to facilitate career exploratory behavior. This framework identifies antecedent conditions influencing and outcomes resulting from the career exploratory process. Specifically, this model offers assistance with designing career exploration interventions. A key feature of this model is the identification of both immediate and subsequent outcomes. It visually depicts and specifies the influence of immediate outcomes on subsequent outcomes. Typically, outcomes in career exploration models, when specified, do not differentiate between immediate and subsequent outcomes.



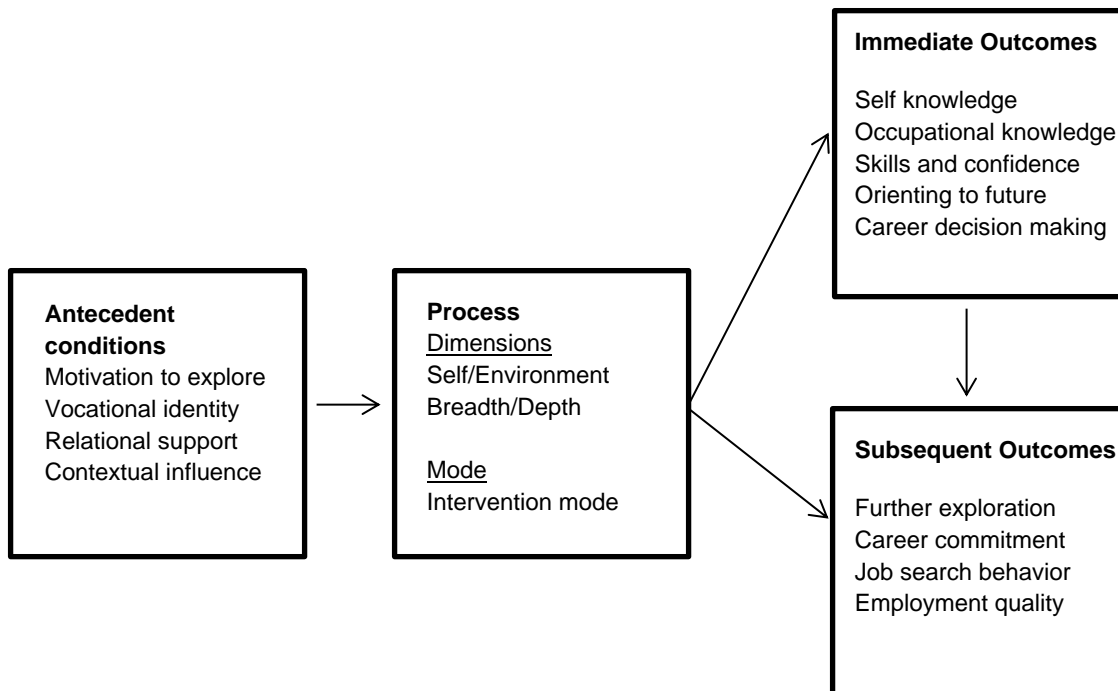


Figure 2.12. A Model for Facilitating Career Exploration.

Adapted from Cheung, R. (2015). Fostering career exploration. In P. J. Hartung, M. L. Savickas & W. B. Walsh (Eds.), *APA Handbook of Career Intervention*. Washington, DC: American Psychological Association, p. 159.

All of these models offer ways to better understand career development by presenting a version of the interaction of antecedent conditions with beliefs and various process dimensions that result in reactions/outcomes of career exploration. Each of the different models presented here serve a different purpose: Stumpf et al.'s model focuses broadly on the process of career exploration; Solberg's model highlights and focuses on the role of career search self-efficacy beliefs in the process of career exploration; and Cheung's model provides a practical application to facilitate career exploration. By examining different models together, a more complete picture of the

career exploration process emerges by identifying beliefs and antecedent conditions, examining the process itself, and anticipating potential outcomes resulting from this process. Some of these models have directly influenced research as discussed below.

**Career Exploration Research.** Jordaan (1963, 1974), Stumpf and colleagues (1983), Blustein (1988, 1989, 1992, 1997), and other researchers have operationalized the construct of career exploration (Taveira & Moreno, 2003). Several empirical studies examine different aspects of the career exploratory process typically sampling three groups of participants, high school students (mostly seniors), college students, and post-graduates. Career exploratory studies attempt to answer various questions related to career exploration. For example, what fosters or inhibits career exploration? In his study examining goal instability and self-efficacy beliefs of college students in the career exploratory process, Blustein (1989) found self-efficacy beliefs to be the most important predictor of exploratory activity.

Self-efficacy beliefs influence people's thoughts, feelings, motivation, and behavior (Bandura, 1993). Bandura (1977, 1986) describes self-efficacy as resulting from an individual's cumulative learning experiences (e.g., career-related experiences). These experiences can either have a positive or negative influence on self-efficacy formation leading people to believe they can or cannot successfully perform a certain activity or fulfill a particular goal (Bandura, 1977, 1986). Researchers have noted the importance of considering self-efficacy in order to understand why students engage in career exploration (e.g., Gushue, Clarke, Pantzer, & Scanlan 2006; Gushue, Scanlan, Pantzer, Clarke, 2006; Nauta, 2007b; Neville & Schlecker, 1988). This research indicates that a student's level of self-efficacy helps predict engagement with career

exploration such that students with higher levels of self-efficacy tend to engage in more career-related activities than students with less self-efficacy. Specifically, self-efficacy beliefs can limit the types of career-related experiences and career options individuals consider (Betz & Hackett, 1981; Hackett & Betz, 1981). Beyond limiting career options, Betz (2004) asserts that "the effects of self-efficacy on persistence are essential for long-term pursuit of one's goals in the face of obstacles" (p. 342). Since self-efficacy influences the pursuit of career goals, it is important to support the development of positive self-efficacy expectations during college. Self-efficacy can be developed through career exploration by engaging students in career-related experiences to help them identify their academic and career-related strengths, encourage them to evaluate their strengths in relation to skills required for career success, and expose them to career opportunities that match with their strengths while providing a sense of purpose in their work (Kosine, Steger, & Duncan, 2008).

Blustein (1992) subsequently reviewed antecedent conditions that foster career exploratory activity; these include internal factors like self-esteem (e.g., Ellis & Taylor, 1983), beliefs associated with the usefulness of career exploration (e.g., Stumpf & Lockhart, 1987) and work-role salience (e.g., Greenhaus & Sklarew, 1981). In examining some of these antecedent conditions further (specifically, the relationship between self-esteem and career exploration), Creed, Patton, and Bartrum (2004) found that a sample of twelfth grade Australian students with greater self-esteem did more career planning and exploration than students with lower self-esteem.

What contextual influences affect career exploration? A growing body of literature examines and promotes the relational aspects of career exploration (Phillips,

Christopher-Sisk, & Gravino, 2001; Richie et al., 1997; Schultheiss, Kress, Manzi, & Glasscock, 2001). For example, Phillips, Christopher-Sisk, and Gravino (2001) examined responses from 58 high school graduates who discussed how relationships can influence career decisions by providing information including career alternatives and support during the career decision-making process. Schultheiss, Kress, Manzi, and Glasscock (2001) interviewed college students and found that relationships provide multidimensional support (e.g., emotional, social, esteem, and information support). While conducting a literature review, Blustein and Flum (1999) found a reciprocal relationship between exploration and interests. Interestingly, Deci and Ryan (1991) describe interests as a thread that ties up “the self to internal and external experiences” (p. 241). The concepts of exploration and interests both tie the self with the environment; in other words, they have elements of person-environment fit.

Due to the importance of context in both career and student development, I used Renn’s (2003) adaptation of Bronfenbrenner’s (1979, 1995) Developmental Ecology Model (see Figure 2.13) to provide a lens to discuss contextual influences because of its focus on college students, its flexibility in capturing student’s unique situations, and utility in describing group interactions. Bronfenbrenner’s ecology model underscores the reciprocal relationship between an individual being shaped by the environment and the individual shaping the environment.

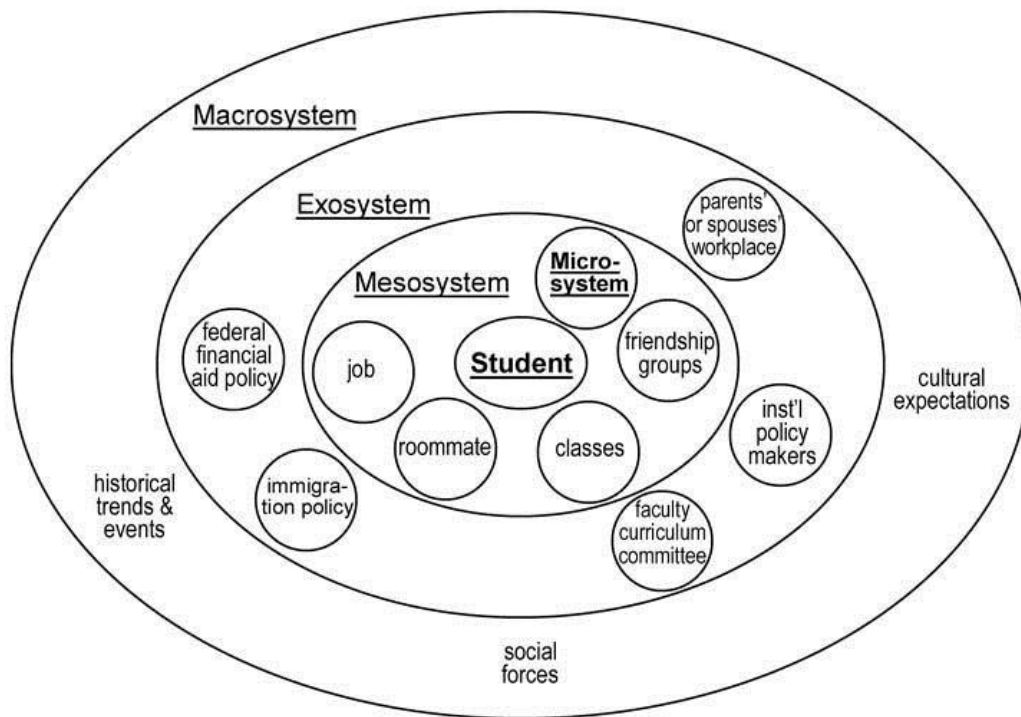


Figure 2.13. Applying the Ecology Model to a Campus Environment. From Renn, K. A. (2003). Understanding the identities of mixed race college students through a developmental ecology lens. *Journal of College Student Development*, 44(3), p. 388.

I adapted Renn's model to fit a career context (see Figure 2.14) by adding career-related experiences as one microsystem. The microsystem representing advisors was added to represent both faculty and professional advisors due to their sometimes pivotal role within the career exploration process. The microsystems of family and friends were also added to represent the important role these individuals play in the career exploration process for many students. Microsystems are not equally powerful or influential. For example, sometimes one microsystem is more influential for a given student (e.g., parental influence during freshman year); however, this influence can change over time (e.g., peer influence during senior year) since there are dynamic

interactions between microsystems. The mesosystem represents the interaction of two or more microsystems (e.g., family and career-related experiences). I also added several items to the macrosystem to represent key forces and factors potentially affecting career exploration, such as economic forces (e.g., globalization) and available job opportunities. All of these factors are important to consider in order to better understand college students' career exploration.

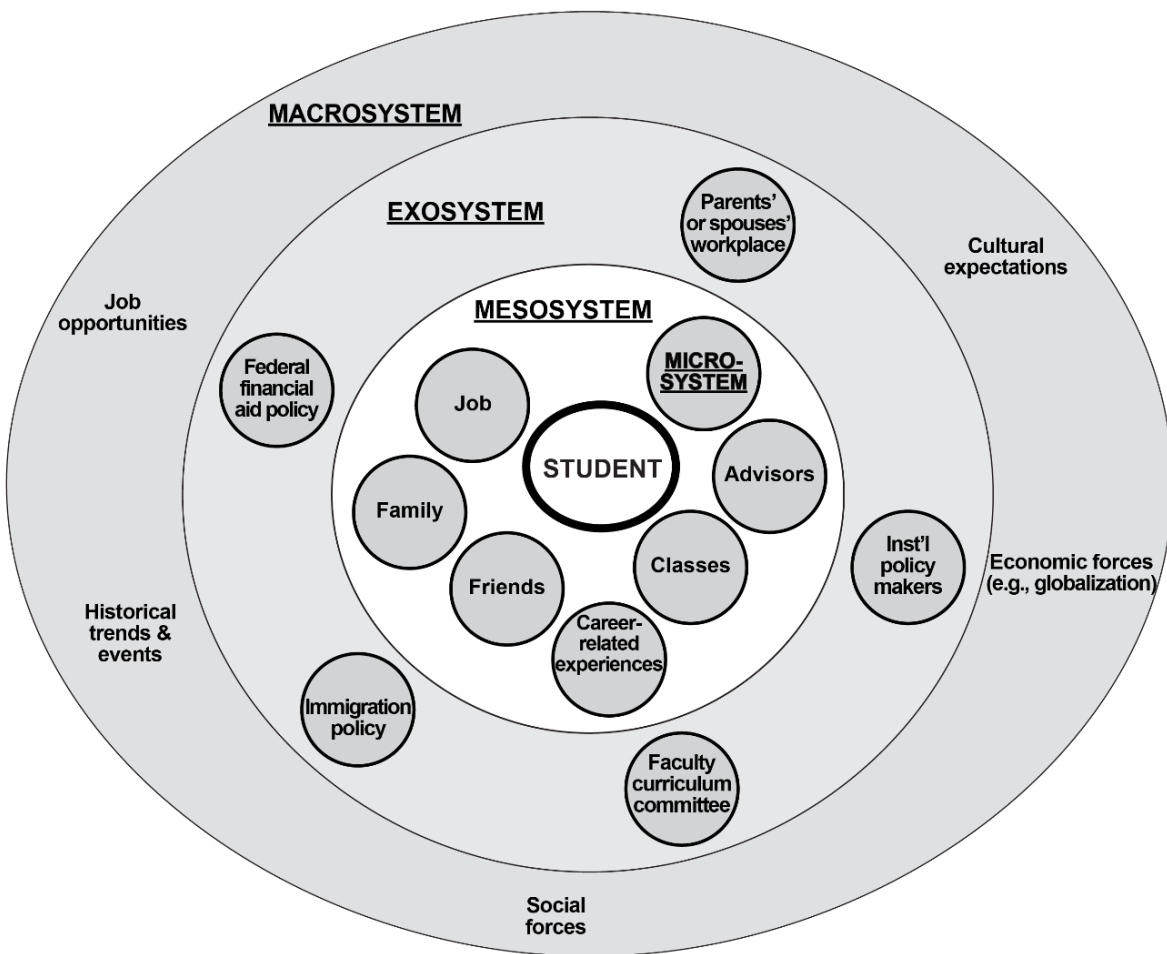


Figure 2.14. Applying the Campus Ecology Model to Career Exploration. Adapted from Renn, K. A. (2003). Understanding the identities of mixed race college students through a developmental ecology lens. *Journal of College Student Development*, 44(3), 383-403.

Why is it important to provide career-related experiences for college students? Empirically examined benefits of career exploration include, but are not limited to, realistic work expectations (Stumpf & Hartman, 1984), better correspondence between an individual's personality and work environment (Grotevant, Cooper, & Kramer, 1986), and obtaining more interviews and job offers (Stumpf, Austin, & Hartman, 1984). The career exploratory process (e.g., thinking about vocational interests and examining different work options) leads to better educational and vocational adjustment (Kracke & Schmitt-Rodermund, 2001). Beyond these career-related benefits, students who participate in career-oriented planning, exploration, and decision-making are less likely to engage in substance abuse and other problematic behaviors (Skorikov & Vondracek, 2007). Due to these and other benefits of career exploration, students should have access to and participate in career-related experiences during college.

**Critique of Career Exploration Research.** In general, research related to career exploration predominantly uses cross-sectional designs with college students (Prideaux & Creed, 2001). Cross-sectional studies help identify patterns and relationships among variables during specified periods of time (Creed, Patton, & Prideaux, 2007). However, longitudinal designs allow researchers to examine dynamic changes in individuals and developmental trends in relationships among variables (Menard, 2002) over time. Additional longitudinal prospective studies examining career exploration are needed.

Flum and Blustein (2000) convincingly argue that Jordaan's contributions need to be refined in order to move forward with better understanding the construct of career

exploration. First, the conceptualization of exploration by Jordaan and many others who built upon his work “did not capture the embedded nature of life roles that defines [sic] psychological and social experience for most individuals at the turn of the millennium” (pp. 383-384). Super is a notable exception since he stressed the importance of accounting for life roles within the career development process. Second, they pointed out that Jordaan’s work focused primarily on adolescence and young adulthood without elaborating on career exploration as a part of a lifelong process of exploration. Finally, “following Jordaan’s focus on integrating related inquiry in collateral lines of psychological research, there is a need to integrate subsequent work with more current bodies of research and theory” (p. 384). There needs to be more conversation and cross-fertilization of ideas among researchers examining different aspects that are important to the career exploration process. Specifically, for example, there is research devoted to student development done by higher education faculty that can inform research being done in psychology related to career exploration. In an attempt to integrate the theories and research presented here, I offer a model of career exploration incorporating elements from different models discussed above.

**Proposed Model of Career Exploration.** Many models of career development and career exploration use a flowchart design. The input/output style of these models does not capture the dynamic nature of career exploration and student development. Thus, the Model of Career Exploration (MCE; see Figure 2.15) emerges from research reviewed here (particularly, Cheung, 2015; Lent, Brown, & Hackett, 1994; Patton & McMahon, 2014; Renn, 2003; Vondracek, Lerner, & Schulenberg, 1986) and highlights



the important role of both the individual and context within the process of career exploration.

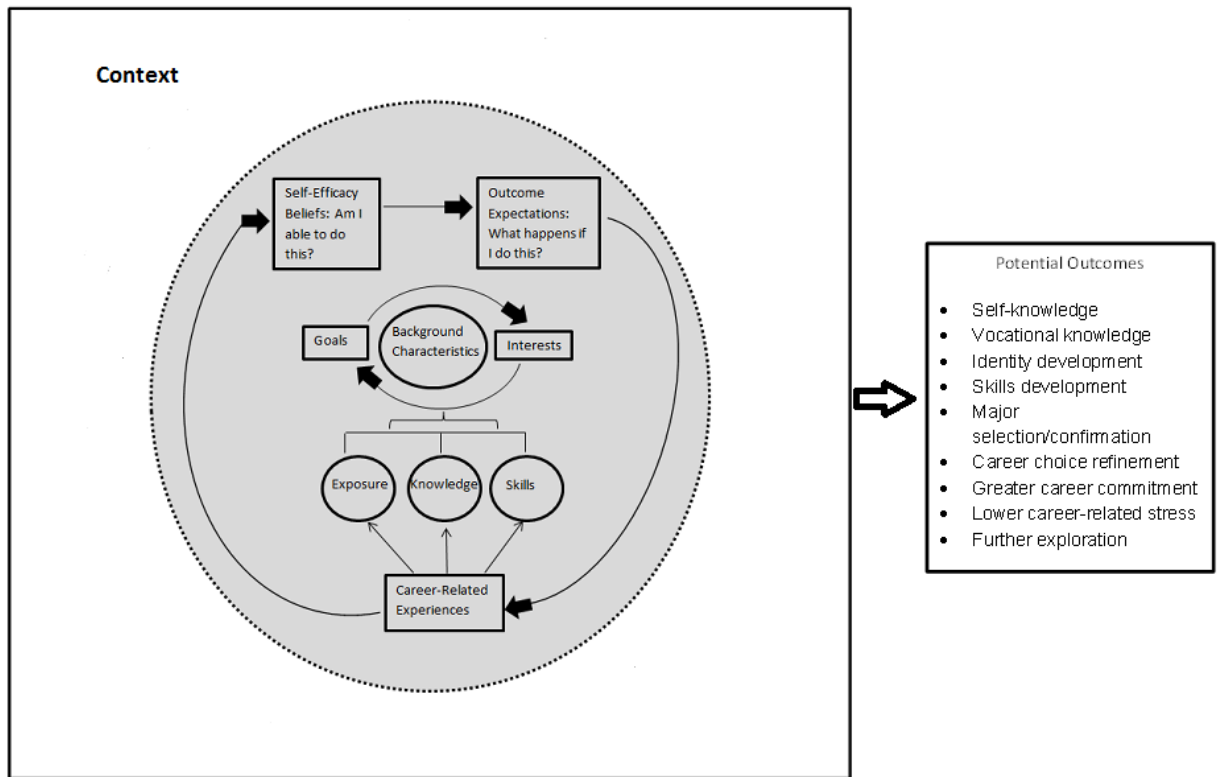


Figure 2.15. Model of Career Exploration.

The center of my model (see Figure 2.15) contains background characteristics including students' traits such as ability, age, ethnicity, gender, health/disability, race, and sexual orientation. Within this model, career-related experiences affect self-efficacy beliefs, which are "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). Subsequently, self-efficacy beliefs affect outcome expectations, which are the consequences or expected results from performing certain behaviors. Self-efficacy beliefs are concerned with abilities (e.g., am I able to do this?), whereas outcome

expectations focus on anticipated outcomes or consequences of actions (e.g., what happens if I do this?). The career-related experiences provide exposure to different career options, knowledge about careers and oneself through these experiences, and skill development acquired by participating in these experiences. Prior to the career-related experience, a student may not realize or may never have explored certain job possibilities. The career-related experience allows students to learn more about themselves in relation to various career options, including their likes and dislikes and strengths and weaknesses. In addition, they learn more about what different career paths entail. They also pick up different career-related skills while participating in career-related experiences (e.g., internships or undergraduate research) that can prove useful in future occupational opportunities.

The interplay between self-efficacy beliefs and outcome expectations also affects career-related interest development. Career-related interests affect career-related goals and vice versa. Importantly, the interaction of career-related experiences with self-efficacy beliefs and outcome expectations affects interests and goal formation. The exterior circle in this model consists of a series of dots (as opposed to a solid line) to represent the permeability of this process and continuous interaction with contextual factors and forces.

Context is depicted as an outer square in this model that represents a campus environment. Just as my adaptation of Renn's model (see Figure 2.14) identifies a variety of contextual influences that are particularly relevant to discussions of college student development related to career exploration, this model captures the idea that just because an individual is present in one microsystem such as school, other

microsystems still exist around the student affecting the student directly and/or indirectly. The interplay and complexity of career exploration is depicted within a web of contextual influences that affect or are affected by the student. This process produces the following potential outcomes: self-knowledge, vocational knowledge, identity development, skills development, major selection/confirmation, career choice refinement, greater career commitment, and lower career-related stress.

**Summary of Career Exploration Theories and Research.** Career exploration is a dynamic and complex process. Various career development and career exploration theories examine this important process. Career development, as the name implies, is a developmental process that involves career exploration during college. Students explore and develop career interests and goals during college through career-related experiences. Even though a rich literature base examining this process exists in the field of psychology, there is a critical need to bridge this knowledge with work being done in different fields like higher education and educational psychology. The next section examines a key developmental theory that is pivotal to better understanding college students' career exploration from a student development perspective.

### **Self-Authorship Theory**

Self-authorship theory is based on Kegan's (1982, 1994) theory of self-evolution across the lifespan. Self-evolution covers the whole developmental trajectory and self-authorship is one of the posited orders of consciousness. Self-authorship theory focuses on the evolution of meaning-making, which takes place in "that most human of 'regions' *between* an event and a reaction to it—the place where the event is privately composed, made sense of, the place where it actually *becomes* an event for that

person” (Kegan, 1982, p. 2, italics in original). The idea of meaning making or “making sense” of an experience captures how an individual interprets (i.e., composes) the experience. Kegan’s use of constructive-developmental theory and his neo-Piagetian approach was inspired by Erik Erikson and Jean Piaget and influenced by his work with Lawrence Kohlberg and William Perry at Harvard University describing development across the lifespan.

**Constructive-Developmental Theory.** Constructive-developmental theory provides a valuable lens for understanding how people (including, but not limited to college students) interpret their experiences. This approach focuses on the process that individuals use in “making sense” of their experiences in contexts such as their relationships, decisions, and identity as opposed to focusing on the content or outcome of an experience. Self-authorship theory follows the tradition of constructive-developmentalism. The constructive-developmental tradition originated through the central work of Jean Piaget (1936) and was influenced by other prominent scholars such as John Dewey (1938) and George Herbert Mead (1934) with a focus on the development of an individual’s ability and interpretation of constructing meaning. Piaget’s (1952) foundational research about how children learn (e.g., less advanced reasoning is subsumed by more advanced reasoning) inspired similar lines of constructive-developmental research in adulthood. This tradition posits that people actively construct meaning by interpreting their experiences (i.e., constructivism) and these constructions lead to more complex meaning-making structures that evolve over time (i.e., developmentalism). A rich scholarship exists with young adults and adults utilizing the constructive-developmental tradition (e.g., Baxter Magolda, 1992; Belenky,

Clinchy, Goldberger, & Tarule, 1986/1997; Bennett, 1993; King & Kitchener, 1994; Kohlberg, 1984; Piaget, 1967; Perry, 1970).

**Kegan's Orders of Consciousness.** Kegan's (1994) theory of self-evolution consists of five sequential and increasingly complex orders of consciousness that focus on how people make sense of knowledge, themselves, and their relationships throughout their lives. Kegan named his orders of consciousness, respectively, as the following forms of minds: Impulsive Mind, Instrumental Mind, Socialized Mind, Self-Authoring Mind, and Self-Transforming Mind. His theory is both constructivist, since it is based on how people make sense of their experiences, and developmental, since it proposes that people develop more complex meaning-making structures over time. The orders of consciousness are organized through the use of the subject-object relationship. Subject refers to "those elements of our knowing or organizing that we are identified with, tied to, fused with, or embedded in" (Kegan, 1994, p. 32). Object "refers to those elements of our knowing or organizing that we can reflect on, handle, look at, be responsible for, relate to each other, take control of, internalize, assimilate, or otherwise operate upon" (p. 32). Moreover, "*we have* object; *we are* subject" (p. 32, italics in original). As individuals progress through the different orders of consciousness, elements that were once subject start becoming object as more complex ways of knowing develop. For example, individuals who are unaware of their prejudices are subject to them; however, using reflection it is possible to make their prejudices object so they engage in decisions and behaviors (including career exploration) without being unconsciously subjugated by this influence. Berger and Johnston (2015) provide powerful language to better understand the interaction of

meaning-making capacity and contextual forces in regards to student development in Table 2.3. Specifically, Berger and Johnston (2015) describe the evolution of the forms of mind as they interact with volatility, uncertainty, complexity, and ambiguity.

Table 2.3. Forms of Mind as They Interact with Volatility, Uncertainty, Complexity, and Ambiguity

Form of mind	Relationship to volatility, uncertainty, complexity, and ambiguity
Self-sovereign	The world is a volatile place and this is out of our control—nothing can be done. Ambiguity is the fault of the leaders, who should have the power or the good sense to make things clear. Complexity is mostly unseen. When people talk about interconnections or shades of gray, the self-sovereign mind may well reject those ideas as absurd (or intentionally misleading) ways to somehow make the situation come out to that person’s advantage.
Socialized	Ideally, the world shouldn’t be a volatile place, and with preparation and the right advice from the right experts, volatility can be fixed or at least minimized. Some volatility can be explained by the right experts. Uncertainty and ambiguity are to be solved with the appropriate processes, and complexity is to be broken down to its component parts to be well managed. In a very complex and uncertain time, additional experts need to be called in to provide research-based solutions.
Self-authored	We have enough perspective to recognize that the world is volatile and uncertain, and while we might not like it, we try to make use of it rather than wishing it away. Complexity, which we freely recognize, can be deployed to meet our self-authored goals. Ambiguity is a necessary evil and should be shifted toward clarity when possible and managed when not possible.
Self-transforming	Here we have the natural playground for uncertainty, complexity, and ambiguity. The world and its patterns appear to us as places we can influence but not control, and we are comfortable with that and agile enough to understand the predictable shifts that we might expect, as well as being prepared for that which is totally unpredictable. We understand the needs of others to eliminate as much ambiguity and volatility as possible, but we do not have that wish ourselves, knowing that ambiguity and volatility are the fabric of a complex world—eliminating them (if it were even possible) would leave us in a world less rich and wonderful than the one we inhabit.

Source: From Berger & Johnston (2015). *Simple habits for complex times: Powerful practices for leaders*. Stanford, CA: Stanford University Press, pp. 179.

Since college students typically make meaning at the third order of consciousness (Baxter Magolda, 1999b), I next provide a brief description of the third and fourth orders that are particularly relevant to college students. The third order is characterized by Kegan (1994) as:

a mental capacity that enables one to think abstractly, identify a complex internal psychological life, orient to the welfare of a human relationship, construct values and ideals self-consciously known as such, and subordinate one's own interests on behalf of one's greater loyalty to maintaining bonds of friendship, or team, or group participation. (p. 75)

Individuals with a third order orientation seek others' approval in regards to their own beliefs, actions, and identities (King & Baxter Magolda, 2011). Kegan described the transition from the third to the fourth order as "the principle transformation of consciousness in adulthood" (Love & Guthrie, 1999, p. 71). This transition represents a slow and deliberate process in which there is recognition of elements (e.g., relationships, decisions) being subject and making them object (King & Baxter Magolda, 2011).

The term "self-authorship" was coined by Kegan to describe the fourth order of consciousness when individuals internally make sense of the world, themselves, and their relationships rather than relying on the approval/influence of external sources. Kegan (1994) noted that "around one-half to two-thirds of the adult population appear not to have fully reached the fourth order of consciousness" (pp. 190-191). Self-authorship refers to a "holistic meaning-making capacity...characterized by internally generating and coordinating one's beliefs, values, and interpersonal loyalties, rather than depending on external values, beliefs, and interpersonal loyalties. Self-authoring

individuals take internal and external responsibility for their thinking, feeling, and acting” (Boes, Baxter Magolda, & Buckley, 2010, p. 4). Self-authored students’ meaning-making capacity entails reflecting on their own values and motivations, evaluating multiple perspectives, and utilizing an internally grounded approach to their decisions, identity, and relationships.

Baxter Magolda (2001) refined and extended Kegan’s work by applying self-authorship theory to college students and following her sample longitudinally for decades. She described four sequential phases (i.e., Following Formulas, Crossroads, Becoming the Author of One’s Life, and Internal Foundation) as students moved from an externally to internally defined sense of self within the three overlapping domains of development (see Table 2.4). These phases depict self-authorship’s continuum of development that evolves throughout an individual’s lifetime.



Table 2.4. Four Phases of the Journey Toward Self-Authorship

	<b>Following Formulas</b>	<b>Crossroads</b>	<b>Becoming the Author of One's Life</b>	<b>Internal Foundation</b>
<b>Epistemological dimension: how do I know?</b>	Believe authority's plans; how "you" know	Question plans; see need for own vision	Choose own beliefs; how "I" know in context of external knowledge claims	Grounded in internal belief system
<b>Intrapersonal dimension: who am I?</b>	Define self through external others	Realize dilemma of external definition; see need for internal identity	Choose own values, identity in context of external forces	Grounded in internal coherent sense of self
<b>Interpersonal dimension: what relationships do I want with others?</b>	Act in relationships to acquire approval	Realize dilemma of focusing on external approval; see need to bring self to relationship	Act in relationships to be true to self, mutually negotiating how needs are met	Grounded in mutuality

Adapted from Baxter Magolda, M. B. (2001). *Making their own way: Narratives for transforming higher education to promote self-authorship*. Sterling, VA: Stylus Publishing, p. 40.

Students who are "Following Formulas" tend to believe and act in accordance with the expectations and instructions of external others such as authorities, parents, educators, and advisors to seek their approval without considering their own desires and expectations. Essentially, these students are *subject* to others. Students in the "Crossroads" phase adapt from generally relying on external sources for their meaning making to a mix of external and internal sources. Subsequently, these students

recognize the need to bring their own thoughts into their previously externally-oriented ways of thinking with the emergence of their internal voice.

“Becoming the Author of One’s Life,” as the name implies, represents when individuals start to choose their own beliefs and interact with others from a more internal orientation. With developmental maturity, students transition into the final phase, “Internal Foundation,” which is characterized by having internal control in all three of the interrelated domains of development. At this point, participants have the capacity to make their decisions, identities, and relationships *object*, so that they can reflect upon their actions and experiences. Students who are self-authored might choose to follow a suggestion by their parent or professor, but know why and own the decision. The focus is on *how* students make this decision, as opposed to what decision they make. Baxter Magolda’s longitudinal research led her to describe three interrelated yet distinct elements within the Internal Foundation phase: *trusting the internal voice*, *building an internal foundation*, and *securing internal commitments* (Baxter Magolda, 2008).

Using Baxter Magolda’s developmental journey framework, Taylor (2008) presents a creative conceptualization of the transformation from being externally oriented to becoming self-authored (see Figure 2.16). A student moving towards becoming self-authored “gradually gains the developmental capacities necessary to reflect on, critique, and reshape his or her social context” (Taylor, 2008, p. 229). In other words, he or she learns to manage contextual influences (i.e., make them object) instead of being managed by them (i.e., being subject to them). While highlighting the process of self-authorship as developmental in nature, Taylor depicts the possibility of bi-directional movement through the phases towards self-authorship. An individual can

regress to an earlier phase depending upon a variety of factors, including contextual influences.

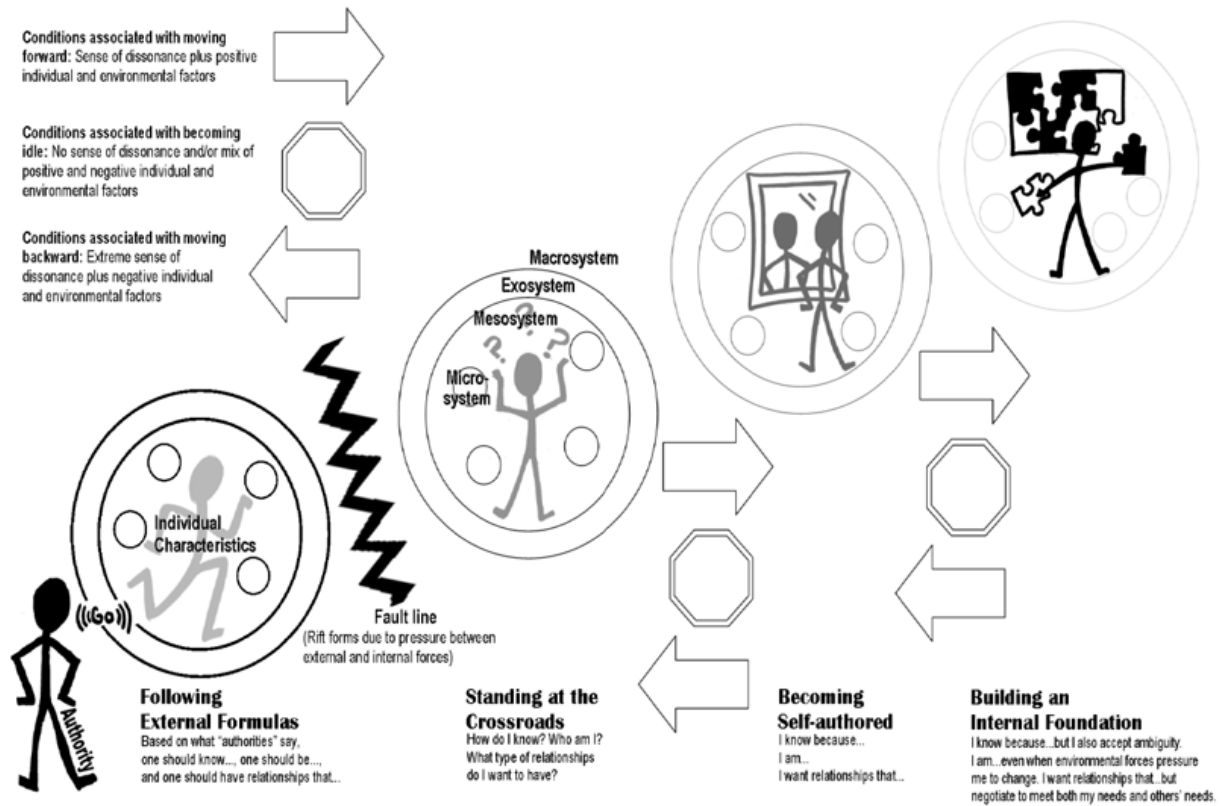


Figure 2.16. Integrated Map of Young Adults' Developmental Journey from Reliance to Internal Definition.

From Taylor, K. B. (2008). Mapping the intricacies of young adults' developmental journey from socially prescribed to internally defined identities, relationships, and beliefs. *Journal of College Student Development*, 49(3), p. 219.

The theory of self-authorship affords an understanding of holistic development within an individual and in relation to others by integrating the epistemological ("How do I know?"), intrapersonal ("Who am I?"), and interpersonal ("What relationships do I want with others?") developmental dimensions (Baxter Magolda, 2001, p. 4). Self-authored

individuals have “an ability to construct knowledge in a contextual world, an ability to construct an internal identity separate from external influences, and an ability to engage in relationships without losing one’s internal identity” (Baxter Magolda, 1999a, p. 12). These abilities allow individuals to make well-informed decisions and engage in authentic relationships.

**Self-Authorship versus Self-Efficacy.** There are various similarities and differences between the constructs of self-authorship and self-efficacy. Self-Authorship (as described above) is based on Kegan’s (1982, 1994) theory of self-evolution and focuses on the evolution of meaning making throughout an individual’s lifespan. There are three dimensions of self-authorship that focus on an individual’s beliefs (cognitive), identity (intrapersonal), and relationships with others (interpersonal). The construct of self-efficacy is concerned with abilities (e.g., am I able to do this?). Although, both self-authorship and self-efficacy are concerned with a person’s cognition in terms of their beliefs; beliefs are just one aspect of the holistic theory of self-authorship. An individual’s meaning-making capacity (i.e., self-authorship level) and self-efficacy beliefs can both change over time. For example, a young child might believe that she is a terrible dancer; however, by taking dance classes and subsequently being selected to perform as a lead dancer in a musical production might change this child’s self-efficacy beliefs related to her ability to dance. From a self-authorship perspective, an individual’s meaning-making capacity evolves over time based on various experiences throughout their lifetime.

**Assessment of Self-Authorship.** Assessing self-authorship requires accessing meaning-making structures. There are several challenges when assessing self-

authorship that stem from the difficulty of accessing meaning-making structures, the complexity and variability of these structures across the cognitive, intrapersonal, and interpersonal dimensions, and the influence of personal and environmental contexts (Baxter Magolda & King, 2012). Many times individuals are not able to recognize or communicate how they make meaning of their experiences since individuals can only reflect on things they can make *object*. Partly due to the nature of these challenges, the predominant and most-reliable method for assessing meaning making is through the use of in-depth semi-structured interviews (Baxter Magolda & King, 2007). Assessing meaning making is labor-intensive and requires highly skilled interviewers who have a thorough understanding of meaning making and can elicit comments that reflect participants' meaning making structures.

Kegan's Subject-Object Interview (SOI) was the first interview designed to assess self-authorship development (Lahey, Souvaine, Kegan, Goodman, & Felix, 1988). The SOI uses the following words on ten index cards as prompts for interviewees to reflect on their experiences: anger, anxious/nervous, success, strong/stand conviction, sad, torn, moved/touched, lost something, change, important to me. Participants jot notes on these cards and select a card to start the interview since the content (i.e., words on the card) is not as important as the thought process related to subject-object relationships (i.e., how they construct meaning about the experiences related to selected prompts). Interviewers use probe questions to follow up on responses in an attempt to access and identify underlying meaning-making structures. Assessors assign a single score reflecting an individual's holistic meaning making in that interview.

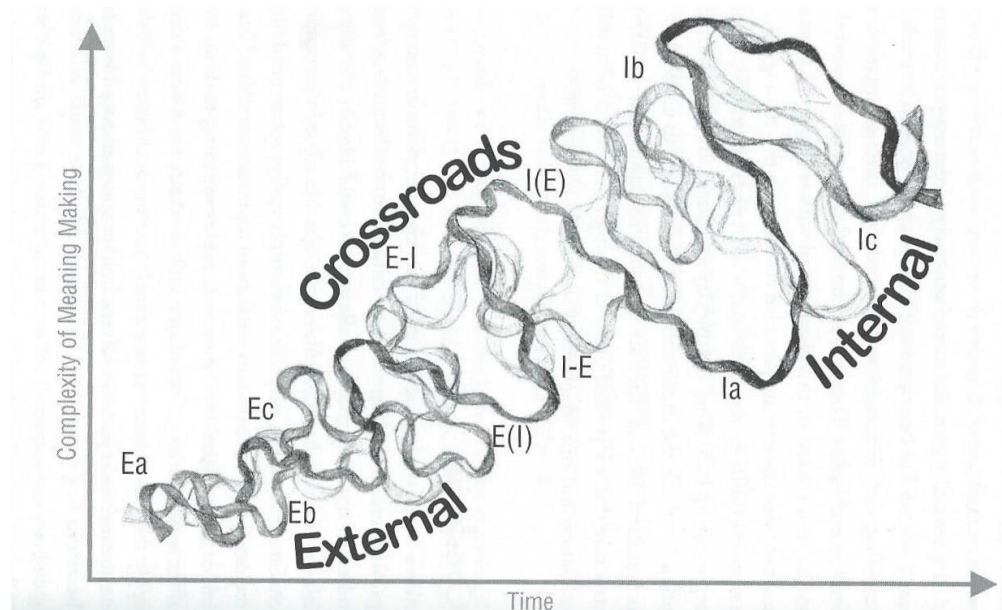
Similar to the SOI, the purpose of Baxter Magolda's (2001) Self-Authorship Interview is to assess self-authorship development of participants in her longitudinal study. During the initial college phase, the focus of her interview was aimed at assessing epistemological development (Baxter Magolda, 1992). However, as her participants began discussing their lives post college, they also wanted to discuss experiences related to themselves and their relationships with others in addition to their formal learning. This led Baxter Magolda to adapt the interview to become more of an informal conversation (Patton, 2001) designed to assess how participants make meaning in all three dimensions of self-authorship. The approximately 90-minute interview begins with participants reflecting on the past year, leading into a discussion of experiences chosen and deemed important by the participant. Similar to the SOI, and other constructive-developmental assessments, the content of these experiences is less important than how participants make sense of the content. Baxter Magolda uses probe questions to elicit descriptions of significant experiences while trying to understand how people make sense of and are affected by these experiences. Towards the end of the interviews, participants are invited to share any additional comments, make connections they see in their present and previous interviews, and ask questions about the interview and research process (Baxter Magolda, 2001; Baxter Magolda & King, 2007). Baxter Magolda uses grounded theory and allows themes to emerge from her data.

The Wabash National Study of Liberal Arts Education (WNS) Interview is adapted from Baxter Magolda's Self-Authorship Interview to trace development towards self-authorship and the following seven liberal arts learning outcomes: integration of learning, inclination to inquire and lifelong learning, effective reasoning and problem

solving, moral character, intercultural effectiveness, leadership, and well-being (see King, Kendall Brown, Lindsay, & VanHecke, 2007 for descriptions of these learning outcomes). The interview protocol used for the WNS was Baxter Magolda and King's (2007) Wabash National Study of Liberal Arts Education Interview (WNS Interview). Using a semi-structured format, the WNS Interview lasts about 60-90 minutes and is organized in three segments. The opening segment focuses on building rapport by discussing participants' background (if meeting for the first time) and reviewing the interview purpose and format. The second segment of the interview focuses on discussing the description and impact of significant experiences identified by participants. There is no strict script for the interview; rather, interviewers use questions in the form of prompts to keep the conversation flowing while attempting to get participants to reflect on and discuss how they make sense of these significant experiences. The third and final segment encourages participants to synthesize the interview by discussing any connections they observed among their responses. An opportunity is provided at the end to make closing remarks and ask any remaining questions about the interview or the project.

Findings from the WNS led to an elongation of a continuum that includes ten meaning-making positions within three structural levels: three external (Ea, Eb, Ec), four in the crossroads (two each in entering the crossroads and leaving the crossroads) and three internal (Ia, Ib, Ic) (Baxter Magolda & King, 2012). This continuum has provided more nuanced student-authorship theorizing and assessment (see Baxter Magolda & King, 2012 for a fuller description of these positions). As seen in Figure 2.17, Baxter Magolda and King (2012) chose to graphically represent the circular (not

linear) nature of development with interwoven ribbons depicting multiple potential pathways on the journey towards self-authorship. An individual can regress to an earlier phase depending upon a variety of factors, including contextual influences, as depicted by Taylor (2008) in Figure 2.16.



SOLELY EXTERNAL MEANING MAKING	CROSSROADS	SOLELY INTERNAL (SELF-AUTHORING) MEANING MAKING
<p><b>Trusting External Authority (Ea):</b> Consistently and unquestioningly rely on external sources <i>without recognizing</i> possible shortcomings of this approach.</p> <p><b>Tensions with Trusting External Authority (Eb):</b> Consistently rely on external sources, but <i>experience tensions</i> in doing so, particularly if external sources conflict; look to authorities to resolve conflicts.</p> <p><b>Recognizing Shortcomings of Trusting External Authority (Ec):</b> Continue to rely on external sources but <i>recognize shortcomings</i> of this approach.</p>	<p><b>Entering the Crossroads</b></p> <p><b>Questioning External Authority [E(I)]:</b> Continue to rely on external sources despite <i>awareness of the need</i> for an internal voice. Realize the dilemma of external meaning making, yet are unsure how to proceed.</p> <p><b>Constructing the Internal Voice (E-I):</b> Begin to <i>actively work on constructing</i> a new way of making meaning yet "lean back" to earlier external positions.</p> <p><b>Leaving the Crossroads</b></p> <p><b>Listening to the Internal Voice (I-E):</b> Begin to <i>listen carefully</i> to internal voice, which now edges out external sources. External sources still strong, making it hard to maintain the internal voice consistently.</p> <p><b>Cultivating the Internal Voice [I(E)]:</b> Actively work to <i>cultivate</i> the internal voice, which mediates most external sources. Consciously work to not slip back into former tendency to allow others' points of view to subsume own point of view.</p>	<p><b>Trusting the Internal Voice (Ia):</b> <i>Trust</i> the internal voice sufficiently to refine beliefs, values, identities and relationships. Use internal voice to shape reactions and manage external sources.</p> <p><b>Building an Internal Foundation (Ib):</b> Trust internal voice sufficiently to craft commitments into a <i>philosophy of life</i> to guide how to react to external sources.</p> <p><b>Securing Internal Commitments (Ic):</b> Solidify philosophy of life as the <i>core of one's being</i>; living it becomes second nature.</p>

Figure 2.17. Developmental Pathways Toward Self-Authorship.



From Baxter Magolda, M. B., & King, P. M. (2012). *Assessing Meaning Making and Self-Authorship: Theory, Research, and Application*. ASHE Higher Education Report, 38(3). San Francisco, CA: Jossey-Bass. Adapted from Baxter Magolda, M. B., King, P. M., Taylor, K. B., & Wakefield, K. M. (2012). Decreasing authority dependence during the first year of college. *Journal of College Student Development*, 53(3), 418-435.

Even though interviews have been the predominant method to assess self-authorship, some quantitative measures have been designed and used. Creamer, Baxter Magolda, and Yue (2010) assessed self-authorship by analyzing 18 items on the Career Decision Making Survey (CDMS). This instrument, mostly framed within the context of career decision-making, is comprised of 28 items in one section of the CDMS that uses a 4-point Likert-type scale for responses. 183 college juniors and seniors completed the 2007-2008 CDMS. The reliability of the scale to measure each of the three phases of development are moderately strong and range from  $\alpha = .58$  for External Formulas, to  $\alpha = .62$  for the Crossroads, to  $\alpha = .70$  for Early Self-Authoring. They found evidence of the validity and reliability of a quantitative measure (i.e., CDMS) of self-authorship. The researchers concluded that “because of its potential to detect subtle nuances in underlying reasoning, an in-depth interview conducted by a trained interviewer remains that [sic] most accurate way to assess individual development” (p. 554). Consequently, they recommend using their instrument to assess outcomes from educational activities and programs designed to promote self-authorship, as opposed to assessing individual development. The results show potential to quantitatively assess the three dimensions of self-authorship.

Pizzolato (2007) created two survey instruments to assess self-authorship development called the Self-Authorship Survey (SAS) and the Experiences Survey

(ES). The SAS is a 24 item survey with a 5 point Likert-type scale used by participants to rate the degree of agreement with statements based on how they usually thought and acted (e.g., “When I set up a goal for myself, I come up with a specific plan for how I am going to achieve it”, p. 35). The ES asked participants to write narratives about the process they used to make two important decisions. Prompts were provided to better understand how they created knowledge and made decisions. Narratives were scored in the following three domains: decision making, problem solving, and autonomy. Pizzolato’s (2007, 2010) results from the SAS and the ES had only a moderate correlation, suggesting that reasoning and action do not always align. For example, responses on the SAS demonstrated that some students reasoned in a self-authored way; however, their descriptions on the ES about their actions did not reflect self-authorship. Therefore, Pizzolato concluded that using both survey instruments together provides an opportunity to assess outcomes and evaluate programs designed to promote self-authorship development.

Best research practices suggest that the research question(s) and the purpose of the assessment determine the use of a qualitative, quantitative, or mixed-methods assessment. There are practical advantages to using a quantitative measure to assess self-authorship development since it is possible to evaluate more individuals in less time than using qualitative methods. On the other hand, using a qualitative approach such as in-depth interviewing with probe questions can identify and dig deeper into a student’s underlying meaning-making structures. However, interviewing requires highly trained interviewers and many hours of data collection and coding.

**Self-Authorship Research.** Self-authorship scholarship directly related to college students has grown over the past twenty-five years. The following four themes emerge when reviewing self-authorship research relevant to this dissertation: evolution of self-authorship development, diverse populations and self-authorship, context and self-authorship, and career exploration and self-authorship. This section presents key findings within each of these themes.

***Evolution of self-authorship development.*** The conceptualization of the evolution of self-authorship began with Kegan's (1982) introduction of this concept and naming of his fourth order of consciousness as self-authorship (described above). Using the Subject Object Interview, Kegan and his associates conducted a longitudinal study of the orders of consciousness in adulthood. This research established the gradual evolution and developmental nature of the orders of consciousness over an entire lifetime. Baxter Magolda (1998, 1999b, 2001, 2009) applied self-authorship theory to college students through her longitudinal study of young adults' development spanning three decades. Her research confirmed the gradual evolution of meaning-making structures from simple to more complex, as portrayed in her four phases in the journey towards self-authorship (described above) and that self-authorship was not common among college students, even seniors.

Analysis of self-authorship data from the WNS also confirmed the gradual evolution of self-authorship development. These broad categories (external, the crossroads, and internal) describe the evolution of an individual's meaning-making capacity from externally to internally grounded approaches. Research findings indicate that most entering college students rely upon external sources (e.g., parents,

professors, textbooks) for their knowledge claims, identities, and relationships (e.g., Abes & Jones, 2004; Baxter Magolda, 2001; Baxter Magolda et al., 2012; Torres & Hernández, 2007). In the next section I will present three studies that have suggested that students who experience marginalization and oppression develop self-authorship prior to or during college (e.g., Abes & Jones, 2004; Pizzolato 2003, 2004; Torres & Hernández, 2007). I will also discuss an emerging area of scholarship examining minoritized students' self-authorship development.

***Diverse populations and self-authorship.*** These studies related to marginalization and oppression lead to the second theme within self-authorship research focusing on diverse populations. Torres (2010) realized the need to study cognitive development in conjunction with ethnic identity development and other developmental issues since it was difficult to separate the ethnic identity development process from cognitive development. She then used the holistic framework of self-authorship to analyze her data. The same phases of the journey toward self-authorship described by Baxter Magolda emerged within Torres' longitudinal mixed-methods study of ( $n=29$ ) Latino/a college students (Torres, 2003; Torres & Baxter Magolda, 2004; Torres & Hernández, 2007). However, there were notable differences that resulted from the centrality of their Latino/a identity throughout the phases of development. Learning to recognize racism, managing the influence of stereotypes on their self-perception, and seeking out supportive relationships challenged all three dimensions of meaning making (i.e., epistemological, intrapersonal, and interpersonal; Torres & Hernández, 2007).

In her longitudinal study of students at a high risk for withdrawing from college, Pizzolato (2003, 2004) examined how contextual influences affect meaning-making

capacity prior to and during college. She initially interviewed a group of 35 students ( $n=16$  females; mostly ethnic minorities) selected through purposeful sampling from high-risk support programs. A key finding of this study was that high-risk (particularly low-privileged) students developed self-authored ways of knowing prior to enrolling in college, possibly as a result of provocative interpersonal experiences. For example, the desire to attend college often conflicted with community and peer expectations, causing dissonance that helped promote an internally defined goal of attending college.

Pizzolato (2004) also conducted two additional semi-structured interviews with 27 of the 35 high-risk students. She found that although many of these students appeared to be self-authored upon entering college, based on experiences in college that questioned their internal foundation (e.g., marginalization of their identities), they often regressed to less self-authored ways (i.e., more externally oriented meaning making) and through coping strategies (e.g., support from others) returned to being self-authored.

Similar to Torres and Pizzolato, Abes' (2003, 2009; Abes & Jones, 2004) and Jones also studied a marginalized population through a 4-year longitudinal study of lesbian college students ( $n=10$ ) examining their identity development. Abes and Jones (2004) applied Baxter Magolda's (2001) phases of "formulaic," "transitional," and "foundational" meaning making to analyze perceptions and salience of students' socially constructed identities. Specifically, they found that "as meaning-making grew more complex, the participants grew more capable of filtering contextual influences [e.g., family background, stereotypes and norms, and peer culture], and thus were increasingly able to decide for themselves how context shaped their identity" (p. 619).

Collectively, these studies demonstrate that factors such as culture, ethnicity, and sexual orientation can promote or hinder self-authorship development (e.g., through marginalization and oppression).

An emerging area of scholarship (Hernández, 2016; Okello, 2018; Perez, 2018) calls for the use of more critical theories (e.g., critical race theory) to examine the experiences of minoritized students. Perez (2018) showed how using a constructivist theory is insufficient to understand meaning making from a racialized perspective with underlying influences of power, privilege, and oppression. Moreover, Perez indicated that the findings from her critical content analysis examining the development of self-authorship “reaffirm questions about whether self-authorship is an appropriate developmental framework for understanding meaning making of racially minoritized individuals” (p. 80). Using a critical constructivist (Perez, 2018) or a social constructivist (Hernández, 2016) approach illuminates issues affecting self-authorship development such as race, racism, power, privilege, and oppression. Critical constructivism assumes that knowledge is socially constructed and that individuals “operate and construct the world and [their] lives on a particular social, cultural, and historical playing field” (Kincheloe, 2005, p. 2). Okello (2018) noted that “developmental theory, self-authorship in particular, as it is written has limitations when trying to understand Black subjectivity” and suggested using black feminist theory as a guiding conceptual framework instead (p. 533-34).

***Context and self-authorship.*** Developmental theories have been criticized for giving insufficient attention to context and its presumed role in promoting development. Self-authorship theory recognizes the influence and importance of context on

development. Baxter Magolda (1999a) provides an extensive analysis of context in her book entitled *Creating Contexts for Learning and Self-Authorship*. Wawrzynski and Pizzolato (2006) emphasized the need to consider the influence and relationships among student's background characteristics, their academic and living environments, and self-authorship. In their longitudinal study, they found that being a student of color, a transfer student, having a strong academic performance prior to college, living on campus, and the student's sex had strong relationships with subscales on the Self-Authorship Survey (Pizzolato, 2004).

A significant contribution of the Wabash National Study (WNS) is an examination of experiences that have a positive impact on self-authorship development. Specifically, *developmentally effective experiences* (DEEs) are experiences that trigger this forward movement towards self-authorship development. In the WNS, an experience was considered developmentally effective if researchers "interpreted the student's response to the experience as having changed an aspect of the student's meaning making orientation" (King, Baxter Magolda, Perez, & Taylor, 2009, p. 111). The following four themes emerged from their analysis of 300 DEEs from 174 student interviews: (1) Increasing awareness, understanding, and openness to diversity, (2) Exploring and establishing a basis for beliefs, choices, actions (3) Developing a sense of identity to guide choices, and (4) Increasing awareness of and openness to responsibility for own learning. The content and context of these experiences varied. Even though many of the DEEs were academically-related, only a small number of experiences occurred within classrooms.

Specifically focusing on DEEs, Barber and King (2014) examined the types of demands that promote self-authorship to better understand developmental effects that led to a growth in meaning-making capacity. Based on 139 DEEs described by 68 students in the pilot phase of the WNS, learning connected to the DEEs takes place in many different contexts: courses ( $n=51$ ), cocurricular ( $n=24$ ), residential ( $n=24$ ), work ( $n=14$ ), friends/social ( $n=12$ ), international ( $n=4$ ), family ( $n=3$ ), and other ( $n=7$ ). The following three themes emerged that identify and explore challenges and supports experienced by students: exposure to new ideas, situations, or people from diverse backgrounds (challenge); experiencing discomfort leading to action (challenge); and relying on organizational structures or routines (support). All of these themes identify the important role of context in promoting or inhibiting self-authorship development. A key finding from this study is that although having both challenge and support creates a stronger context for learning (Baxter Magolda, 1999a), both are not required for developmental growth since support can prompt development.

King, Barber, and Perez (Book in preparation) presented a conceptual framework, the Interactionist Model of College Student Learning and Development, focusing on the interactions between college students and their contextual influences (i.e., person-environment interactions) and by including students' meaning making about their learning experiences (see Figure 2.18). They proposed two ways to strengthen conceptual models for college student success research by (1) examining the interaction between relevant student characteristics and their learning contexts and (2) including students' meaning making as a key factor towards their collegiate success.



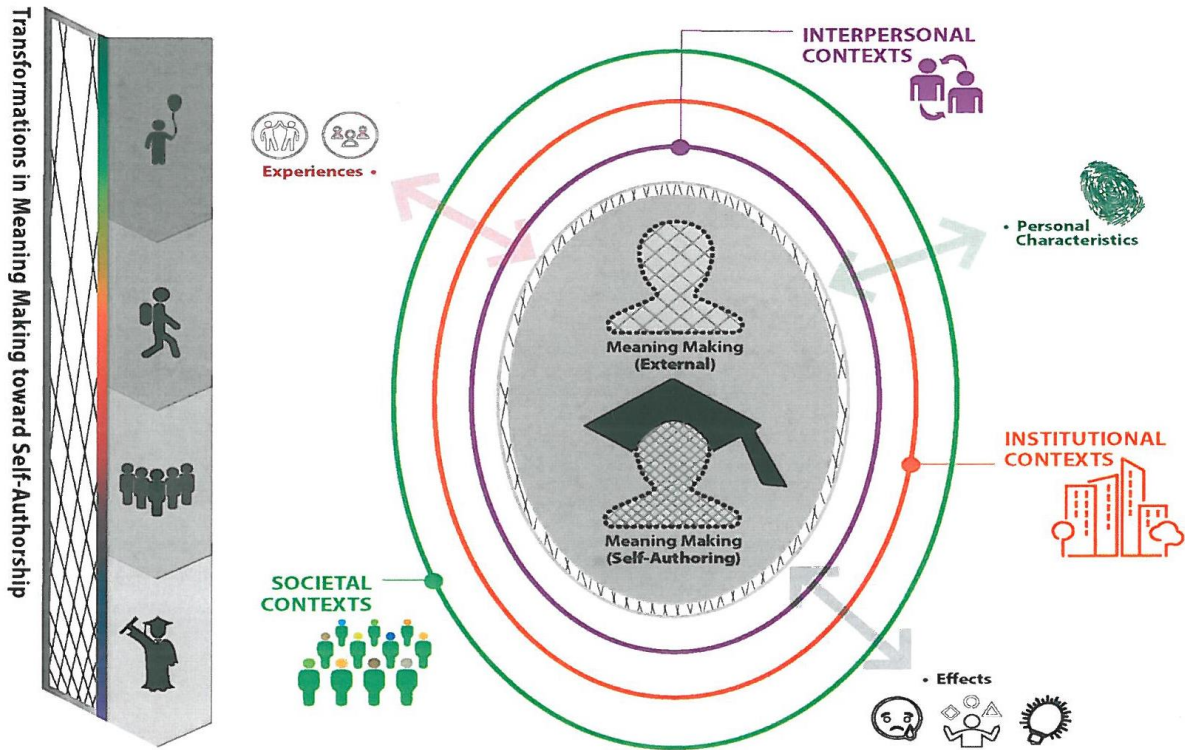


Figure 2.18. Interactionist Model of College Student Learning and Development. From King, P. M., Barber, J. P., & Perez, R. J. (Book in preparation). *Improving college education: Insights from studying student learning and development*. Sterling, VA: Stylus.

**Career development and self-authorship.** Very few studies have examined self-authorship and career development. The Program for Gender Equity in Science, Mathematics, Engineering, and Technology (PGE) in the National Science Foundation funded a project to explore women's interest related to STEM careers, particularly information technology. As a part of this project, Creamer and Laughlin (Creamer & Laughlin, 2005; Laughlin & Creamer, 2007) studied and empirically confirmed that a relationship exists between self-authorship and women's decision making related to careers in information technology. They found that female college students who

predominantly followed external formulas often rejected advice from advisors in favor of trusted others, particularly their parents. For example, responses on a questionnaire, given to all participants ( $n=467$ ) in the quantitative portion of this study, gathered information about participants' career influencers, career decisions, and computer-related attitudes. Responses indicated that 86% of the women discussed their career plans with an advisor or counselor. However, only 7% of the college women interviewed ( $n=40$ ) indicated that a counselor or advisor had significantly influenced their decision (Laughlin & Creamer, 2007). Table 2.5 provides interview questions and the most frequent replies to these questions by students using an external meaning-making orientation.

Table 2.5. Translating Self-Authorship to Career Advising: Interview Questions and Most Frequent Replies

<b>Interview Question</b>	<b>Dimension of Self-Authorship</b>	<b>Student's Reply (External Formulas)</b>	<b>What is Reflected About Self-Authorship</b>
Q1: Who influences college women's career choice?	Interpersonal	First and foremost, my parents.	Dependent on relationships with similar others.
Q2: Reasons given to value the opinions of others.	Epistemological	I trust their [parents] judgment because they know me best.	Unquestioning acceptance of the recommendations of authority.
Q3: Response to conflicting advice.	Intrapersonal	I would not listen.	Ill equipped to judge competing knowledge claims. Little idea of their own role in decision making.

Source: Adapted from Creamer, E. G., & Laughlin, A. (2005). "Self-Authorship and Women's Career Decision Making." *Journal of College Student Development*, 46(1), 13-27.

The researchers hypothesized that these students, who were operating from an external meaning-making capacity, did not seriously consider the advice from the career professionals since they were not open to considering multiple perspectives and opinions when making their decisions, (i.e., they were not self-authored). For example, those with an external orientation seek affirmation and identity through affiliation with others (here, seeking the advice of parents, siblings, close friends). A key contribution of their study highlighted the influence of others on these college women's career decision making. Specifically, interviews with 40 college women revealed the influence parents have on interest development of STEM related professions. Furthermore, Creamer and Laughlin (2005) discovered that when it comes to major decisions such as career choice, students make a distinction between whose advice they seek and whose advice they seriously consider. In other words, even though these students sought the advice of their advisors, they only seriously considered what their parents and other trusted individuals told them. There are implications of this finding for advising and other career-oriented services since inclusion of students' trusted others into the career exploratory process during college can lead to students making more informed career decisions.

Relatively little research exists examining the relationship between career-related experiences (e.g., internships, service learning) and self-authorship development. Baxter Magolda's (1992, 1999b, 2001, 2009) longitudinal study is a notable exception

since it empirically supports the link between self-authorship and career-related decision making (Creamer & Laughlin, 2005). Even though Baxter Magolda's study was not specifically about career-related experiences, many participants discussed how they made sense of their career-related experiences and decisions during college and post-graduation, including facing self-authorship demands in the workplace. Many of her participants spent most of their twenties trying to figure out who they wanted to be and what they wanted to do with their lives. During their thirties, they primarily discussed their career choices and impact of these career-related decisions on their personal lives. This suggests that career issues are really on their minds in their 30s in a way that hadn't occurred previously, now that it's better informed by personal experience and that it's not just about that first job out of college. For example, Mark spent his college years dedicated to pursuing a career in law, went to an Ivy League law school, took a year off to write a novel, changed his career and became a business executive, and eventually stopped working during his thirties to raise his children while his wife financially supported their family. Mark's self-authorship evolved through his dissatisfaction with his career leading him to cultivate his internal voice. Baxter Magolda's study is full of rich examples tracing self-authorship development through participants' formation of career goals, implementation of their career choices, and impact of these decisions on their personal lives.

Jones and Abes (2004) examined the relationship between service-learning (i.e., a potentially career-related experience) and identity development, as well as the role of service-learning to promote self-authorship development. They interviewed eight individuals 2 to 4 years after they finished a service-learning course during college. All

of the respondents indicated that their career-related goals were influenced by their participation in this course leading them to pursue service-oriented careers (e.g., working with Teach for America, AmeriCorps, an AIDS organization, community-based medicine). From a self-authorship perspective, this experience helped promote a more internally-based identity grounded in their desire to help others rather than fulfilling an external expectation. Some individuals participating in service-learning experience dissonance through their connection with others that challenges beliefs gained from external others; reflection with supportive others on the purpose of service learning can help promote a more internally grounded identity (Baxter Magolda, 2000).

Similar to Abes and Jones, Boes (2006) examined the context of service learning and stressed the importance of understanding the meaning that students make of their learning while participating in such courses. Using a constructive-developmental approach, she interviewed eight undergraduate students enrolled in a service learning course to investigate students' knowledge construction, identity development through interactions and relationships with others, and learning by connecting service learning theory and practice. Her findings support that meaning-making capacities apply to different contexts (such as home, school, work) and across the cognitive, intrapersonal, and interpersonal domains of development suggesting that individuals use a range of meaning-making structures. She concluded that students with a more self-authored orientation are better able to learn and meet the demands of service learning courses.

Du (2007) used self-authorship theory and the Learning Partnerships Model (LPM) to examine learning outcomes of study abroad experiences and the conditions that foster these outcomes using a survey ( $n=43$ ) and semi-structured interviews ( $n=3$ ).

Studying abroad is a form of career exploration for some students. Du designed a survey that collected demographic information about the participants and contained seven questions which gathered information about the students' study abroad program. Then the students completed 3 series of short-essay questions that were each aligned with one of the three domains of self-authorship (i.e., epistemological, intrapersonal, and interpersonal outcomes of study abroad). Based on their responses to the short-essay questionnaire, over 70% of the students felt the study abroad experience promoted their development. Du also found different degrees of growth across all three dimensions of self-authorship. For example, students reported the most growth in the epistemological dimension, followed by the interpersonal dimension and the least in the intrapersonal dimension. Du hypothesized that it might take longer for the intrapersonal and interpersonal dimensions to develop or more extensive experiences might be required for this development. Du found that study abroad experiences can promote developmental growth in all phases and all three dimensions of self-authorship, particularly when LPM was used as a model for the study abroad experience.

This review of the literature related to the constructs of self-authorship and career development demonstrates the need to further examine various aspects of the career exploration process in conjunction with self-authorship. Specifically, additional research is needed examining how students make meaning of their career-related experiences during college and how these experiences influence their development and career exploration. There are a few studies examining particular career-related experiences (e.g., service learning, study abroad) using self-authorship theory as a lens to explore the influence of these experiences on development (some of which address career

decision making). However, to my knowledge, there is no study that addresses all of the following three elements: types of career-related experiences students participate in during college, how students make sense of these experiences, and the role these experiences potentially play in their development generally and career-related goal formation specifically. Even though very limited research exists examining self-authorship and career exploration, the research establishes an empirical connection between these two constructs. Interestingly, books dedicated to student development (e.g., Evans, Forney, Guido, Patton, & Renn, 2010) and student affairs (e.g., Schuh, Jones, Harper, & Associates, 2011) that are used in many higher education and student affairs graduate programs are noticeably missing a reference to and incorporation of research on career development. In the same vein, books focusing on career development (e.g., Niles & Harris-Bowlsbey, 2013) do not refer to student development theory and research. Given that career exploration and the development of mature meaning-making capacities are important goals during college, additional research linking career development and student development is necessary.

**Strategies Promoting Self-Authorship Development.** Despite being an important goal of higher education, few college students make meaning in self-authoring ways (Baxter Magolda, 1999b) even though certain life experiences and educational practices can help foster the development of self-authorship (Baxter Magolda & King, 2004). Creamer and Wakefield (2009) reviewed self-authorship research related to women in Science, Engineering, and Technology (SET) fields and suggested several ways for parents, educators, and others who want to encourage interest and success of women in SET fields by promoting self-authorship development. Examples include

reflecting on and assessing one's skills and values, breaking down stereotypes, and exploring SET fields through a variety of activities. These activities provide exposure and potentially stimulate more complex meaning making that can lead to well-informed and mature career decisions.

Baxter Magolda (2001, 2004), presented the Learning Partnerships Model (LPM), a framework to promote self-authorship development that applies her research to practice. It is based on three key assumptions and three key principles of learning that characterize environments that promote this type of holistic development. The key assumptions of this model are: (1) knowledge is complex and socially constructed, (2) self is central to knowledge construction, and (3) authority and expertise are shared in the mutual construction of knowledge among peers. The following three principles help connect these assumptions to an individual's learning and development: (a) validating learners' capacity to know, (b) situating learning in the context of the learner's experience, and (c) defining learning as mutually constructing meaning. The LPM incorporates Sanford's (1962) notion that both challenge (as reflected in LPM's assumptions) and support (presented in its principles) is needed to optimize college students' learning and development. The blending of these assumptions and principles creates a true learning partnership that engages both students and educators in the learning process. Baxter Magolda and King (2004) present detailed descriptions of applications of this model in a variety of disciplines and contexts.

Pizzolato (2008) noted that academic advising provides an opportunity to promote self-authorship development by applying the LPM within a context that engages conversations about career exploration. She encourages recognizing advising



as a site for teaching and structuring advising sessions based on the LPM since, “if students were self-authored, they would be more likely to choose majors that were appropriate and interesting to them, engage in critical thinking about their choices, and develop healthy relationships with diverse others” (p. 20). Baxter Magolda and King (2008) created a conversation guide that can be used to promote reflective conversations with students in advising sessions. A key component of most (if not all) strategies for promoting self-authorship development is structuring time for reflection by an individual and engaging in reflective conversations with a trained listener that allows for time, space, and encouragement to make sense of important experiences.

**Critique of Self-Authorship Research.** Self-authorship is a relatively new theory with a growing body of research. Strengths of self-authorship research include its holistic approach that focuses on the interconnections among the epistemological, intrapersonal, and interpersonal dimensions of development. This holistic approach promotes development of all aspects of an individual (e.g., psychological, social) while recognizing the interaction and influence of all three dimensions on each other. Second, beyond the interconnections, self-authorship research considers the role of context in shaping development. The emphasis on the influence of context on the evolution of meaning-making capacity has provided rich data for creating contexts for learning and development (e.g., Baxter Magolda, 1999a; King et al., 2009; Wawrzynski & Pizzolato, 2006). Self-authorship theory has led to “conceptual breakthroughs” by emphasizing the interconnectivity of the three dimensions of development and the acknowledgment of the role of context in shaping development (Evans et al., 2010, p. 192).

Self-authorship research conducted so far is limited for a number of reasons. Predominantly, self-authorship research uses semi-structured interviews for data collection to access underlying meaning-making structures and a grounded theory approach to evaluate and analyze self-authorship development. Using a developmental-constructivist and grounded theory approach is time-consuming, especially when conducting longitudinal studies. It also requires highly trained individuals since it is difficult to access and evaluate meaning-making processes.

The foundational research shaping self-authorship theory was based on interviews with mostly white students operating from a westernized cultural perspective. Therefore, self-authorship research has been questioned for not considering culturally specific assumptions (e.g., Hofer, 2010; Pizzolato, 2010; Weinstock, 2010). In particular, the theorizing about and research on self-authorship theory has not explicated interpretations of the meaning of self in different cultures that are collectivist or interdependent (Hofer, 2010; Pizzolato, 2010; Weinstock, 2010). There are a few studies that examine the relationship between culture and self-authorship development (e.g. Pizzolato, Nguyen, Johnston & Wang, 2012; Torres & Baxter Magolda, 2004; Torres & Hernández, 2007) and new scholarship is emerging that attempts to address this issue. In addition, as shown in its title, *Development and assessment of self-authorship: Exploring the concept across cultures*, the Baxter Magolda et al. (2010) edited book focusing on the relationship between culture and self-authorship is an integral example of the research commitment to understanding the cross-cultural applicability of self-authorship theory while challenging it.

**Summary.** Self-authorship (Kegan, 1982, 1994; Baxter Magolda, 2001) is a holistic framework integrating the epistemological, intrapersonal, and interpersonal dimensions to better understand student development. Evolution in meaning-making capacity is the journey to self-authorship by gradually shifting external influences from the foreground to the background while developing an internally defined sense of self. Self-authored students' meaning-making capacity entails reflecting on their own values and motivations, evaluating multiple perspectives, and utilizing internally grounded criteria for making judgments and examining their personal values related to their decisions, identity, and relationships. These appear to be attributes of most if not all desired collegiate outcomes, including career decision-making. Despite career development being a key concern for college students and preparation for the workforce being a key assumption related to college attendance, there is a lack of research examining self-authorship and career-related experiences. This study will address this gap by bridging career development and self-authorship theory and research to provide a more complete understanding of the role of self-authorship in career development among college students.

### **Conceptual Framework**

Integrating the key findings from the literature reviewed, I propose the *Model of Career Exploration and Self-Authorship* (see Figure 2.19) depicting the psychological aspects of career exploration, specifically the formation of career goals, using the lens of self-authorship theory to provide a deeper understanding of this process. Earlier in this chapter, I proposed the *Model of Career Exploration* (see Figure 2.15) based on my review of career development and career exploration theories, models, and research.

In the *Model of Career Exploration and Self-Authorship*, I added three intertwined rings depicting the interconnected nature of the three dimensions of development (cognitive, intrapersonal, and interpersonal) to the *Model of Career Exploration* (see Figure 2.15). The circular rings help capture the essence of self-authorship development as a non-linear process that involves times of growth and regression since movement can flow in either direction within a circle at varying speeds. I added the *Applying the Campus Ecology Model to Career Exploration* in Figure 2.19 to depict the student as surrounded by a web of contextual influences (also illustrated in Figure 2.14). Taken together the *Model of Career Exploration and Self-Authorship* illustrates the inner-workings of the student's psychological aspects of career exploration, self-authorship development, and a web of contextual influences.

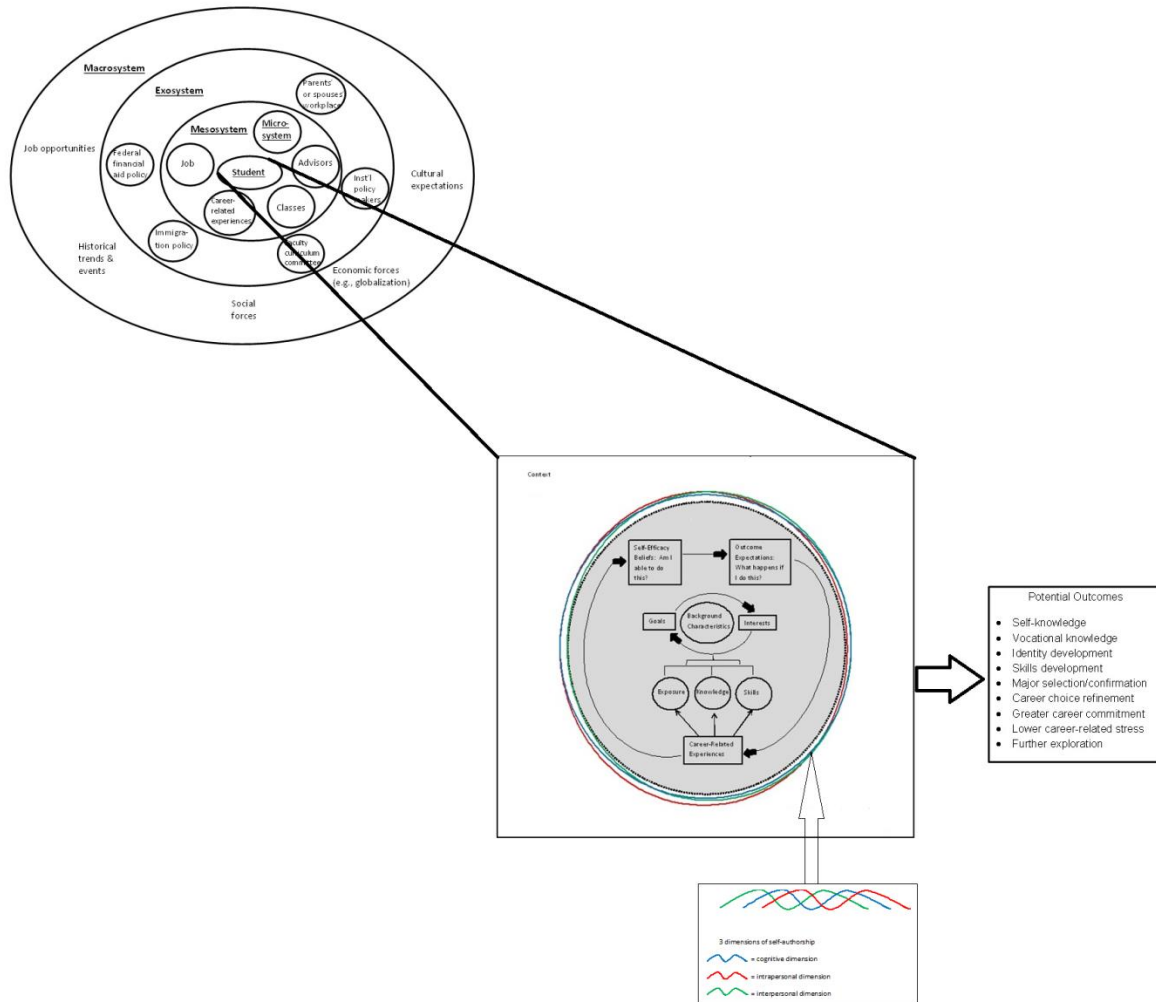


Figure 2.19. Model of Career Exploration and Self-Authorship.

### **Chapter 3: Methods**

This chapter provides details about the methodology I used for this study of meaning making and college students' career goal formation. I begin with an overview of the research questions guiding my inquiry. Since the Wabash National Study of Liberal Arts Education (WNS) is the data source for this study, I provide an overview of the WNS and describe the methods used for data collection. Then, I identify, describe, and position my analytic sample within this larger data set. I discuss my coding and analytic strategies. I conclude this chapter by sharing my sensitizing concepts, subjectivities, and main limitations of this study.

In light of the variety of terms introduced in this chapter (especially terms related to career goal formation) that are subsequently used throughout the remainder of this study, I have provided a table of key terms and their definitions. These appear in Table 3.1.

Table 3.1. Glossary of Key Terms

Term	Definition
Career-related experience (CRE)	an experience that provides an opportunity for career-oriented exposure, knowledge, and/or skill development
Career goal	an aspiration that informs an individual's vocationally oriented actions after graduating from college; the outcome of the process of career goal formation
Career goal formation	the process of forming a career goal
Career goal formation experience (CGFE)	an experience in the service of developing a career goal
Career-related effect	an outcome associated with participating in a career-related experience (e.g., gaining knowledge of self, skill development)
Self-efficacy	belief in one's own ability (Bandura, 1977)
Outcome expectation	a consequence or expected result from performing certain behaviors (Bandura, 1977)
Outcome of the career exploratory process	an effect associated with a student's participation in career exploration (e.g., career choice refinement)

## **Research Questions**

The primary purpose of this study is to explore the relationship between meaning-making capacity and career goal formation through college students' interpretations of their career-related experiences. In particular, this study examines the nature and effect of these experiences from the student's perspective to better understand how students construct and understand their career goals. The specific research questions are as follows:

- 1) What collegiate experiences prompt undergraduate students to consider their career goals?
- 2) What is the nature and effect of experiences that influence career goal formation?
- 3) How do students' career goals develop over time?
- 4) What is the relationship between the development of career goals and self-authorship capacity?

## **Wabash National Study of Liberal Arts Education**

The data in this study originated from the Wabash National Study of Liberal Arts Education (WNS), a large-scale, longitudinal, multi-institutional, mixed methods study of liberal arts education and the development of self-authorship. The broad purpose of the WNS is to examine student experiences and institutional practices that are related to growth on the following seven liberal arts outcomes: integration of learning, inclination to inquire and lifelong learning, effective reasoning and problem solving, moral character, intercultural effectiveness, leadership, and well-being. King, Kendall Brown, Lindsay, and VanHecke (2007) provide definitions of these outcomes and a description



of how these outcomes were chosen. The WNS was launched in 2006 using a longitudinal design with a cohort of first-year, full-time college students. Multiple assessments of these students continued through Winter 2010.

A two-stage sampling strategy was used to select institutions for participation in the quantitative and qualitative portions of the WNS. These institutions were among over 60 that responded to a national invitation to participate in this study. In the first stage, 19 of these institutions were selected based on their commitment to a liberal arts education and to reflect a variety of institutional characteristics, including institutional type, size, and geographic location. In the second stage, six colleges and universities were selected from the 19 institutions to also participate in the qualitative (interview) portion of the WNS. These six institutions were selected to represent diverse institutional types (e.g., liberal arts, research universities, religiously affiliated, minority-serving, single-sex institutions), geographic locations, and student populations. Specifically, the six institutions included four liberal arts colleges, two Hispanic-serving institutions, and two single-sex institutions. Additional information about each institution is provided in Appendix A. Please note that pseudonyms are used for these institutions except for Wabash College.

The data for the quantitative (survey) portion came from a group of 4,501 students at 19 institutions. About 50 students per institution ( $n=6$ ) who completed the WNS quantitative survey portion and indicated a willingness to participate in the interviews were selected for the WNS qualitative component. Men and students of color were over-sampled to represent a more even distribution of gender and to be able to have a sufficiently large underrepresented sample to better address issues related to

the development of students of color. Annual semi-structured interviews were conducted in Years 1-3 on campus and via phone in Year 4. The WNS team interviewed 315 students in Fall 2006 (Year 1), 228 of these students in Fall 2007 (Year 2), 204 in Fall 2008 (Year 3), and 177 students in Fall 2009 (Year 4). Students were interviewed during the early Fall during Years 1-3 except for summer interviews conducted in 2008 for students who studied abroad during the 2008 - 2009 academic year. Year 4 interviews were done throughout 2009 - 2010. The timing of the interviews could have influenced the experiences students shared during the interviews. For example, students interviewed later in Year 4 might have shared more career-related experiences because of the proximity to graduation.

This study used the qualitative WNS interview data for the following reasons: (1) this data set contains a high number of career-related experiences influencing their career goals reported by students in the interviews; (2) the richness of the in-depth personal conversations within the interviews allows for a deeper exploration of complex processes such as career goal formation and self-authorship development; (3) the interviews have been assessed for self-authorship development (Baxter Magolda & King, 2012); (4) the longitudinal multi-year design of the WNS provides an opportunity to examine the potential relationship between meaning-making capacity and career goal formation across time.

### **WNS Interview**

The interview protocol used for the WNS was Baxter Magolda and King's (2007) Wabash National Study of Liberal Arts Education Interview (WNS Interview). This interview was designed to yield information about students' characteristics, important

college experiences, and how students make meaning of these experiences. The semi-structured interview was designed to engage students and interviewers in a co-constructed conversation about meaningful experiences selected by the interviewee (Baxter Magolda & King, 2007). Interviewers used prompts to elicit students' detailed descriptions of the content and personal interpretations of these significant experiences. Specifically, the data collected through this process provided information about the nature and effect of these experiences. Dependent upon student responses, interviewers also collected information about teaching practices and institutional conditions that promoted or inhibited student learning. The WNS interview provides both structure and flexibility to allow students to reflect on their important experiences to make meaning of them and to reveal information to access their underlying meaning-making structures (Baxter Magolda & King, 2007).

Informed consent was obtained annually before the interview began (a sample of the informed consent form is provided in Appendix B). The interview protocols were similar for all four years and contained three major segments. The introductory segment is designed to build rapport and trust between the interviewer and student while gathering background information. During the first-year interview, background information such as the students' hometowns, information about their families, their high school experiences, and their intended majors in college was collected. In subsequent interviews during the introductory segment, the interviewer briefly highlighted important experiences students discussed in their last interview, asked students about their transition from one year to the next, and inquired about their expectations and how these expectations compared with their actual experiences. The second and longest

segment is designed to access students' meaningful experiences over the past year and how they make sense of them. The third and final interview segment is designed to encourage students to reflect on connections they see among their different experiences and synthesize what they shared in their interview. Towards the end of the interview, students were asked if they had any observations or questions they wanted to share. After the interview concluded, the interviewer reflected and recorded observations about the interview and noted information that might be helpful for transcription and data analysis.

The interview protocols were reviewed annually and adjusted by the research team to accommodate the longitudinal and developmental nature of the WNS (Baxter Magolda & King, 2007). For example, Year 1 interviews focused more on students' background characteristics, expectations for college, and their meaning making of important experiences as they entered college. In Years 2 through 4, interviewers were encouraged to elicit more detailed descriptions of experiences and engage students in a deeper reflection and interpretation of their meaningful experiences during college. The Wabash National Study interview protocol is provided in Appendix C.

### **Data Collection**

The interviews, which were digitally recorded, typically lasted for 60-90 minutes. Students were given a \$30 stipend for each interview they completed. The WNS interview team consisted of trained graduate students (predominantly studying higher education or college student personnel) led by Dr. Patricia M. King at the University of Michigan and Dr. Marcia Baxter Magolda at Miami University (Ohio). Initial training consisted of approximately 15 hours of in-person instruction by one or both authors of

the WNS interview. Knowledge of student developmental theories was a prerequisite due to the developmental nature of the interviews. Specifically, interviewers needed to make decisions in-situ about which experiences to probe further during the interview to yield a deeper reflection by students to uncover how they made meaning of the world (Baxter Magolda & King, 2007). Every interviewer conducted at least one practice interview before collecting data for the WNS. Students had an opportunity to choose pseudonyms for themselves in the WNS; these pseudonyms are used throughout this dissertation.

Interviews were transcribed and annual summaries were prepared for all of the interviews. Annual summaries were completed in two phases. The purpose of the first phase was to identify experiences that students deemed important; each experience was analyzed to capture its nature, effect, and institutional role (if applicable). The effect of these experiences on learning as related to the liberal arts learning outcomes was also identified. I was a part of the WNS summarizing team and I constructed Phase 1 summaries for two years.

Phase 2 summaries were done to assess the self-authorship capacity of each student. There were four separate assessments that yielded an overall self-authorship assessment and an assessment for each dimension of self-authorship (i.e., cognitive, intrapersonal, and interpersonal). Illustrative verbatim quotes were included in both Phase 1 and Phase 2 summaries to support these descriptions, observations, and interpretations. Baxter Magolda and King (2012) provide a detailed description of the annual summarization process.

The last phase of summarizing was the construction of a Longitudinal Summary for each student. These summaries are designed to trace a student's journey throughout the four years of the WNS. This summary compiles all the information from the annual summaries and provides an integrative analysis that addresses the four major parts of the updated conceptual model used to guide the WNS (i.e., personal characteristics, experiences, meaning making, and effects of experiences); this is the Interactionist Model of College Student Learning and Development (King, Barber, & Perez (Book in preparation)).

Following the completion of the summaries, a spreadsheet was created to record data in a manner that was more amenable to information retrieval. This spreadsheet, known as the Experiences Spreadsheet, is a list of all the experiences, the nature, effects, and institutional role recorded by the annual summarizers.

**Trustworthiness.** The WNS bolstered trustworthiness in several ways during the data collection and analysis process. Interviewers and summarizers participated in extensive training that required an understanding of the purpose of the interview, feedback during practice interview sessions, discussion of interviewer subjectivities, and practice summary writing with feedback. Each summary (including the LS) was reviewed by other team members at least once for consistency with the assessment protocol and criteria. Building rapport was included in the first part of the interview to encourage authentic sharing of experiences and whenever possible, the same interviewer conducted subsequent interviews to maintain continuity. Credibility was enhanced through prolonged engagement with participants. Interviewees were offered

copies of transcripts to review for accuracy, provide comments, and additional insights. Member checking was not feasible due to the size of the sample.

### **Identifying the Analytic Sample**

In order to identify the analytic sample, I used a two-phase process. I first sought to identify students with career goal formation experiences and a sub-sample of students who provided rich descriptions of these experiences to link these to their meaning making. This review included participants from all six institutions in the WNS qualitative portion to increase the likelihood to yield a sufficient number of career-related experiences for this purpose.

During Phase 1 of the coding process, I reviewed all 2182 experiences in the Experiences Spreadsheet for Years 2-4 to identify which were career-related. I excluded the Year 1 interviews because they were conducted early in the first year as baseline data and thus include few collegiate experiences. I defined experiences as *career-related* if they provided students with an opportunity for career-oriented exposure, knowledge, and/or skill development. Based on my literature review I define these career-related effects as follows: *Exposure* enables students to learn about a given major(s) and/or job possibilities. *Knowledge of career* enables students to learn more about what different majors and/or career paths entail. *Knowledge of self* enables students to learn more about themselves in relation to various career options, including their likes and dislikes and strengths and weaknesses. *Skill development* enables students to learn different career-related skills that can prove useful in future occupational opportunities.

In order to identify the career-related experiences, I reviewed the nature, effect, and institutional role coded on the Experiences Spreadsheet. Using this process, I identified a total of 939 experiences that are career-related; these included internships, undergraduate research, career advising, and service learning. Next, I checked to see how many of these career-related experiences influenced students' career goals. I coded whether or not they influenced career goal formation and identified a total of 339 experiences that influenced students' career goals. Table 3.2 presents the breakdown of these experiences by type, frequency, and year.

Table 3.2. Career-Related Experiences Influencing Career Goal Formation for Years 2-4

Year	General Career-Related Experiences		Career Goal Formation Experiences		# of Unique Students
	n	%	n	%	
2	238	29%	70	29%	18
3	402	50%	144	36%	44
4	299	54%	125	42%	33
Total	939	43%	339	36%	95

As the table shows, only about one-third of the general career experiences students reported affected their career goal formation.

Since this study focused on career goal formation over time, I then identified students with career-related experiences that influenced their career goal formation (hereafter, CGFEs) in at least two years. I identified 56 unique students with CGFEs in two years of the study; they represented a total of 138 CGFEs. There were 17 students with CGFEs in all three years (Y2-Y4) for a total of 65 CGFEs. These 73 students



yielded a combined total of 203 CGFEs. Table 3.3 provides the frequency and number of unique students associated with career goal formation experiences in at least two years.

Table 3.3. Career Goal Formation Experiences in at Least Two Years Per Unique Student

# of years	Career goal formation experiences (n)	# unique students
2	138	56
3	65	17
Total	203	73

During Phase 2 of coding, I reviewed 168 transcripts ( $n=73$  unique students) to identify CGFEs while being inclusive. While reviewing each transcript, I identified an additional 23 CGFEs. Ten experiences ( $n=9$  unique students) were discussed in more than one interview (i.e., multi-year CGFEs). Since I did not want to inflate the number of experiences by counting the same experience more than once, I counted the experience only once in the year that it occurred or was substantively discussed. This procedure yielded an analytic sample of 216 CGFEs from 73 unique students. Since career goal formation was not a focus of the WNS, the total number of CGFEs is notable. Figure 3.1 presents these steps visually.

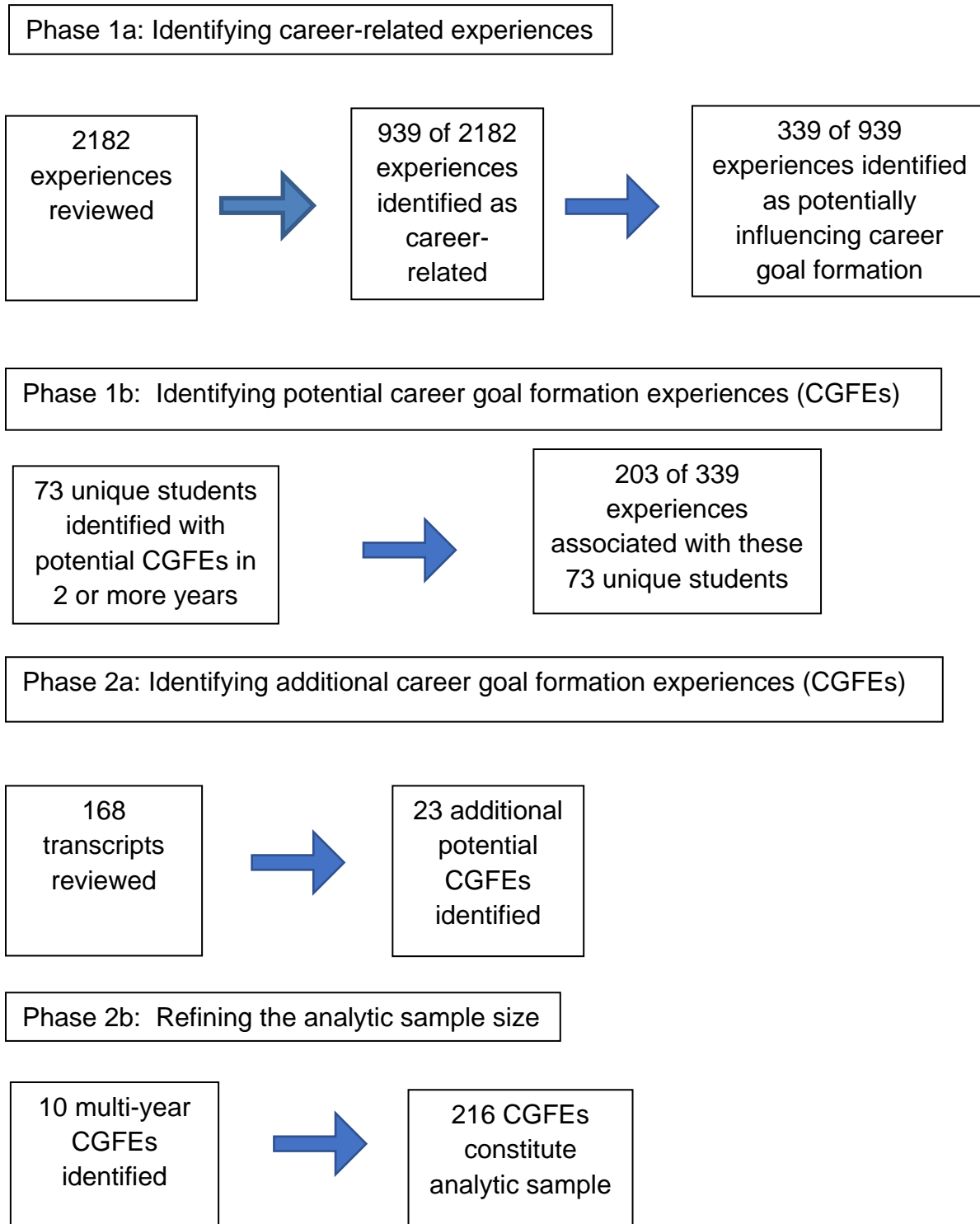


Figure 3.1. Steps Used to Identify the Analytic Sample with Corresponding n's.

Participant profiles for the 73 students in the analytic sample are provided in Table 3.4. There is a comparable representation of males and females in this sample. About one-third of the sample (37%) are students of color.

Table 3.4. Gender and Race for the Analytic Sample

<b>Gender</b>	
Female	34 (47%)
Male	39 (53%)
<b>Race</b>	
Asian/Pacific Islander	5 (9%)
Asian/Pacific Islander, Hispanic	1 (1%)
Black	4 (6%)
Hispanic	8 (11%)
Pacific Islander	1 (1%)
White	52 (71%)
International/Asian	2 (3%)

### **Analytic Approach**

This section describes the process used to answer the four research questions introduced at the beginning of this chapter and the peer debriefer’s role. I used QSR International’s NVivo 11 qualitative data analysis software to organize, manage, and analyze the data collected through the transcripts, summaries, spreadsheets, and memos as I reviewed the data. I created detailed memos throughout my data analysis process to record observations, questions, and comments related to coding and emergent themes.

**Career-Related Experiences Influencing Career Goal Formation.** I used the following decision rules to determine whether to include a reported experience [for further consideration for inclusion] in the analytic sample:

- 1) I only included experiences that occurred during college (i.e., not in high school).
- 2) I included experiences that took place on or off campus.
- 3) I counted an experience when it occurred, not when it was reported. For example, if in Year 4 a student reflected on an experience that occurred in Y2, I included the experience in the count for Year 2.
- 4) If a student talked about the same experience over multiple years (e.g., being a part of a multi-year research project), I coded it as one experience.

In order to differentiate CGFEs from other aspects of career development, I selected for further analysis only those experiences that met the following two criteria:

- 1) the experience influenced the student's career goal formation journey; and 2) there was at least one identifiable career-related effect (e.g., exposure, knowledge, skills).

Career goal formation is a process that focuses on the cognitive processes underlying the development of a career goal focusing on steps towards a job or further education or training after graduation. Career goal formation experiences (CGFEs) are experiences in the service of developing a career goal that explicitly links to what a student plans to do after graduation.

Here are a few examples to illustrate the type of discernment that was involved to determine if a career-related experience met the criteria established for being coded as a career goal formation experience. I used examples of career-related experiences that

were more difficult to code to clarify my criteria and decision-making rules provided above.

In the first example, Thomas clearly articulated the influence and multiple effects of participating in undergraduate research on his career goal formation. Thomas was involved with a few different research projects with the same professor for two and a half years and he had a paper published based on this research (i.e., gained exposure to research). While doing this research, Thomas developed his research and problem-solving skills (i.e., skill development). His professor's confidence in his research abilities and having a paper published provided external validation that bolstered his self-efficacy through social persuasion. By doing this research, Thomas clarified his interest within computer science (i.e., gained knowledge of self) and he became interested in pursuing a Ph.D. working with this professor. He experienced the life of a graduate student and contemplated a career as a researcher (i.e., gained career-related knowledge).

The next example depicts an experience that was not coded as a career goal formation experience. In his third-year interview, Elijah discussed taking a disappointing rhetoric class. He commented, "the normal speech teacher had a kid last year and so we had this visiting teacher and I could have taught that class better myself with no pre-knowledge of any kind of rhetoric." He mentioned that he did learn a little bit about different speeches; but after taking this class, Elijah decided not to pursue a minor in rhetoric. Although this class had an impact on his decision to pursue rhetoric, he never articulated how a minor in rhetoric would relate to his career goal. Even though he emphasized that he was exposed to bad pedagogy, he never discussed any specific

effect of this course on his career goal formation. Sometimes a minor can be associated with a student's post-graduation plans; however, when coding I didn't assume minors (and/or majors) influenced a student's career goal formation unless the student articulated this.

In some cases, it wasn't immediately clear if an experience met the criteria for a career goal formation experience. For these cases, I discussed my coding questions and concerns with my debriefer. I provide two examples to demonstrate how coding decisions were complicated at times.

Example 1: During her third-year interview, Patricia described having her first job as a newspaper reporter in her hometown. When the interviewer asked: "How has the job, if it has, influenced kind of your career goals?" She replied:

It actually hasn't so much. I'm glad I did it. I, my grandpa still wants me to be a writer. I came here wanting to be a writer and I like writing, but, I would rather work with children at this point in a therapy setting, which I'll try this summer and if it turns out I like that better, I'll go back that way, but, I, yeah it hasn't changed what I'm going to do anyway, but it was a nice thing to do, even something that I wanted to do.

Through this experience, she learned how a newspaper runs (i.e., career-related knowledge) and developed her writing skills (i.e., skill development). She felt that she could go back to this newspaper if she couldn't get a job after college: "it was nice to know that I have a skill that if I get out of school and don't actually know what I want to do, I can go back there." This job became a back-up plan for her to make money after graduation if she doesn't know what she wants to do. This example raised the question of how a back-up plan fits into the career goal formation process. It seems like such a plan is valuable for students, especially when they are interested in pursuing this plan

as a desired career goal. However, as reflected in Patricia's words, a back-up plan can provide a practical solution for employment after graduation (e.g., financial compensation towards expenses) while students continue to identify their career-related interests and formulate their personally meaningful career goals. Also, in this example, Patricia clearly articulated that this job did not influence her career goals. For these reasons, this experience was not coded as a career goal formation experience.

Example 2: Matt discussed doing poorly on the MCAT during his fourth-year interview. As a result, Matt considered back-up plans. When I spoke with my debriefer about whether the back-up plan has to be consistent with the career goal (in this case becoming a doctor), we decided that I should focus on whether the experience prompted the student to reconsider his/her career goals. Matt discussed the influence of this experience on his back-up plans:

I was looking at Plan Bs and there's a choice of going and picking up a one-year Masters in physiology and anatomy, which would be a direct kind of holding tank for going into medical school or I could think about starting up on chemistry and I could go and try to go for a Masters in Chemistry, or try to get into industrial chemistry or some kind of job.

This experience negatively affected his goal of exclusively pursuing medical school:

After messing up on the MCATs and not being able to get the score I wanted after prepping all summer, it was kind of a pretty big blow to the drive to keep on no matter what driving for medical school.

Despite the negative impact of this experience on his immediate career goal, it prompted him to consider back-up plans and he had at least one identifiable career-related effect (i.e., knowledge of self when he identified back-up plans) so I coded this as a career goal formation experience.

Next, I turn to a description of the process I used to answer the research questions for this study. Each is discussed below.

**Research Question 1:** *What collegiate experiences prompt undergraduate students to consider their career goals?* I examined the career-related experiences that influenced students' career goal formation ( $n=216$ ) using the identification process described above. First, I categorized these experiences according to their type (e.g., internships, advising, and undergraduate research). Second, I repeated this process based on the description of the experiences using as a guide the four categories from Dykeman et al.'s (2001) *National Research Center's Taxonomy of Career Development Interventions that Occur in U.S. Secondary Schools*. These categories are: (1) introductory interventions (e.g., career fairs, field trips, aptitude assessment); (2) advising interventions (e.g., academic and career counseling, information interviewing); (3) curriculum-based interventions (e.g., courses infused with career information and skills, career/technical education courses); and (4) work-based interventions (e.g., cooperative education, internships, mentoring, work study).

Since my literature review yielded no taxonomy categorizing the types of career-related experiences students have during college, I modified the Dykeman et al. taxonomy with definitions to reflect a focus on post-secondary education (e.g., acknowledging the potential influence of undergraduate majors on career goal formation). Also, the Dykeman et al. taxonomy identifies only intentionally-designed interventions, so I adapted the categories to include experiences that were not intentionally designed, replacing "interventions" with "experiences." I then analyzed and categorized students' career-related experiences by examining the description of the



experiences. I identified and coded all the applicable Dykeman et al. categories for each experience. The definitions for the Dykeman et al. interventions were applicable to my study with two modifications. First, I broadened the definition of work-based experiences since the experiences in the WNS are not limited to work sites. I also added the concept of exploration within this definition since it was prevalent in my literature review as an important part of a student's college experience and the career goal formation process and was frequently reported in the WNS data. Last, I adapted the examples to better fit collegiate contexts. Table 3.5 captures the original Dykeman et al. (2001) and the modified career experience categories' definitions and examples.

Table 3.5. Original and Modified Career Experience Categories

Dykeman et al. Category	Dykeman et al. Definition of Interventions and Examples	Adapted Definition of Experiences and Examples
Introductory	Designed to awaken a student's interest in their own personal and professional growth (e.g., career fairs, field trips, aptitude assessment).	Designed to awaken a student's interest in their own personal and professional growth (e.g., career fairs, student organizations).
Advising	Designed to provide direction, resolve impediments, or sustain planfulness in students about their goals for the future (e.g., academic and career counseling, information interviewing).	Designed to provide direction, resolve impediments, or sustain planfulness in students about their goals for the future (e.g., academic and career counseling, conversations with faculty members and working professionals).
Curriculum-based	Designed to promote career and academic knowledge and skills through means and content relevant to the world of work (e.g., courses infused with career information and skills, career/technical education courses).	Designed to promote career and academic knowledge and skills through means and content relevant to the world of work (e.g., major-related courses, study abroad, student teaching).
Work-based	Designed to promote both career and academic self-efficacy and motivation through sustained and meaningful interactions with work sites in the community (e.g., cooperative education, internships, mentoring, work study).	Designed to promote both career and academic exploration, self-efficacy, and motivation through sustained and meaningful interactions with working professionals (e.g., internships, jobs, field training).

The adapted career-related experience categories and examples are common to higher education. For example, collegiate examples of curriculum-based experiences are major-related courses, study abroad, and student teaching.

**Research Question 2:** *What is the nature and effect of experiences that influence career goal formation?* To answer this question, I further examined the same set of 216 experiences used to answer Research Question 1. However, this review focused on the nature and effect of these experiences. To contextualize the career-related effects, I examined the nature of the CGFEs by creating a description of the experience focusing on career-goal formation and the relevant effects resulting from participation in the CGFE. The WNS defines nature as the content of the experience. As depicted in my conceptual model (see Figure 2.15), I started with four types of career-related effects (i.e., exposure, knowledge of career, knowledge of self, and skill development) and added other categories as they became apparent in the data. Specifically, career-related experiences provide *exposure* to different career paths, *knowledge* about career options and oneself, and *skill development* gained through these experiences. I added the following two categories during the coding process: “impact on self-efficacy” and “impact on graduate school and job search process.” I created an “other” category to capture effects (i.e., influence on confidence, motivation, satisfaction, self-esteem, and sense of self) associated with only eight experiences.

**Research Question 3:** *How do students’ career goals develop over time?* In order to answer this question, I examined 3 rich cases selected from the analytic sample to follow students’ career journeys during college. These cases were selected from students who interviewed all four years of the WNS study. This number was

affected by the availability of appropriate cases for Research Question 4 since the same sub-sample was used for Research Questions 3 and 4 (discussed below). I started by identifying students with a higher number of career-related experiences that influenced their career goals to obtain a sufficient number of experiences to analyze. In other words, having more experiences to examine helped me understand their career-oriented exposure, knowledge acquisition, and skill development as gleaned from prior analysis completed for Research Questions 1 and 2. Priority was given to those students whose experiences are described in a sufficiently detailed manner to illustrate career goal formation and to those who revealed information about self-efficacy beliefs.

I used my conceptual model (see Figure 2.15) to guide this inquiry, which accounts for the interaction among career-related experiences, self-efficacy beliefs, outcome expectations, and career goal formation. Building on the information gathered about the nature and effects of these experiences, I reviewed references by students about their self-efficacy beliefs to get a better sense of how career-related experiences and self-efficacy beliefs relate to career goal formation over time. Specifically, self-efficacy beliefs can lead to career goal refinement. I then determined if students discussed their outcome expectations. I found limited discussion of the influence of outcome expectations on career goal formation. Again, guided by my conceptual model, I examined discussions of outcomes of the career exploratory process (such as identity development and major selection or confirmation). Note that outcome expectations are different than outcomes of the career exploratory process. Outcome expectations are the consequences or expected results from performing certain behaviors that are linked with self-efficacy beliefs. Outcomes of the career exploratory

process are consequences resulting from students' participation in career exploration (e.g., career choice refinement). Last, I compiled this information to construct a longitudinal career summary of these students' career goal formation during college.

**Research Question 4:** *What is the relationship between the development of career goals and self-authorship capacity?* To answer this question, I used the same set of 3 rich cases selected for Research Question 3 and built on the longitudinal career summaries I constructed for that purpose. Given their journey of career goal formation, I investigated this journey through the lens of their evolving meaning making during college. That is, I interpreted their career goal formation journey by examining how it reflected their meaning making orientation. I reviewed several documents for each student including the 4 transcripts and the longitudinal summary. Also, as needed, I reviewed the 4 phase 1 annual summaries and 4 phase 2 annual summaries (descriptions of summaries provided above in the data collection section). I used a case study format to present my findings. I prepared a separate summary for each student. Then I compared the summaries for each student collectively and noted themes that emerged during my analysis.

**Debriefers.** In addition to serving as the chair of my dissertation committee, Dr. Patricia King also served as a debriefer for coding issues. We met regularly during my data analysis phase to discuss my coding with an emphasis on questions about specific codes. During these meetings, Dr. King and I would read excerpts from the transcripts to review my coding decisions and criteria and make revisions as needed. She helped me look for consistency in the application of coding criteria, helped me manage my

subjectivities, and challenged my preconceptions. I created detailed memos for each of these meetings to reference during the coding and writing phases.

My second debriefer, Dr. Kerri Wakefield, is a former member of the WNS team who completed her Ph.D. in Higher Education at UM and also used data from the WNS for her dissertation. Since I served as her peer debriefer, we have rapport and are familiar with each other's assumptions and biases. I chose her for this role since she is familiar with the WNS data, has experience and knowledge of qualitative methods, and has professional experience working in advising and other administrative capacities in higher education. Her debriefing role was to review my data analysis plan and help me manage my subjectivities by keeping my sensitizing concepts in check. She also reviewed my case studies and provided written feedback. The use of two debriefers helped bolster the authenticity and trustworthiness of my findings.

### **Sensitizing Concepts and Subjectivities**

Within the qualitative research tradition, researchers frequently identify and acknowledge not only the subjectivity of the research process, but also their own assumptions and potential biases in order to manage their influence on data analysis. Since I am interpreting the data for this study, I will share my background experiences and interest in pursuing this research. By acknowledging my sensitizing concepts and subjectivities, I aim to limit their inadvertent influence on my interpretations and data analysis.

As I engage in reflexivity (i.e., reflecting on my own subjectivities), I begin by identifying my social identities that potentially influence my data analysis. I am a married second-generation Asian Indian American woman in my 40s with two

daughters. These are my primary social identity lenses. As a result of the acculturative process, I struggled with my own identity development, including my career identity, when I was an undergraduate student. During college, I initially pursued a career path in medicine by majoring in biology to appease cultural and familial expectations. I changed my major a few times before settling on an undergraduate major based on my own academic and career interests studying speech communication that led to a master's degree in educational administration and a career as an academic affairs administrator in a university setting. While advising undergraduate students in the College of Science and Technology at Temple University, I advised Asian Indian and other minority students who were also caught in dilemmas similar to what I once experienced. Throughout my life, I have known members of the Asian Indian community who gravitate towards certain professions such as medicine and engineering to satisfy expectations imposed by parents or community members. In light of these experiences and interests, I might privilege discussions related to identity development and cultural expectations influencing career goal formation of students in my study.

My academic, personal, and professional experiences all have led me to value the formation of career goals. Within my own career, I helped college students choose majors and career paths that were consistent with their academic and career-related interests. I need to be mindful that not all students come to college with the intention of formulating career goals. Some college students never work in a professional capacity for family, geographical or economic reasons. I also need to remember that my experiences as an administrator in higher education for more than a decade provide a particular lens to help interpret the data; however, I should not superimpose my

professional experiences on my analysis. For example, even though I believe that advising and exposure to career-related experiences is valuable, some students have negative career-related experiences. I need to remember that all students are individuals with unique sets of experiences that shape their career interests during college and career paths throughout their lives. I strive to remain true to the students' experiences and represent their voices throughout my data analysis.

I am particularly invested in this research topic since I struggled with self-authoring my career goals during college. As a result, based on my research findings, I want to better understand students' career goal formation from a student's perspective so that I can design and provide students access to developmentally appropriate career-related experiences in the future. Since I am embedded in my research, I plan to draw on my personal and professional experiences to inform my data. Working with two debriefers will help keep my subjectivities in check; since I was Kerri's peer debriefer, we shared our subjectivities with each other so that we are both aware of and challenge each other's assumptions and preconceived notions.

### **Limitations**

A major limitation of this study is the use of a secondary data source since the WNS was not designed to elicit information about career goal formation. My study is bounded by the theoretical underpinnings of the WNS. However, in the *Making Sense of Educational Experiences Segment* of the WNS interviews (i.e., the second segment described above), students were asked to discuss experiences that were significant to them. Since the WNS interviewed college students during the academic year, many participants discussed experiences related to their major, participation in different



organizations, internships, and other career-related experiences. However, even though students spoke about their self-efficacy beliefs, I couldn't explore the constructs of self-efficacy beliefs and outcome expectations in more depth due to the limitations associated with using this data set. Since students were not specially asked about their self-efficacy beliefs and outcome expectations, there is limited discussion about these constructs in the interviews to fully understand their influence on career goal formation.

A second limitation is based on the timing of the fourth-year interviews. The WNS interview was designed to ask students to reflect on their previous academic year since the interviews during years 1-3 of the study took place in the beginning of the academic year. However, the fourth-year interviews were not all completed in early fall so students were still asked to reflect on experiences from their previous year. Students who were interviewed later had an opportunity to discuss more experiences from their fourth year when compared with students who interviewed earlier. Subsequently, reflections about experiences during a student's fourth year or senior year in college are largely missing; although we did capture some of these reflections. Based on the data, it's important to note this observation since it appears that students tend to engage in more career-related activities each year closer to graduation as they prepare for their school-to-work transition.

A third limitation stems from all of the institutions within the qualitative portion of the WNS being four-year colleges and universities. Access to career-related experiences might be different at community colleges and other types of post-secondary institutions based on their resources, mission, and student demographics. For example, some community colleges might not have extensive career development, counseling,

and advising services available. Not having a dedicated career center may lead to students participating in fewer internships, study abroad opportunities, and career fairs. Students might experience different types and varying amounts of career-related experiences in community colleges. Even students within four year colleges and universities do not have equivalent access to career-related experiences and student support services such as career counseling and professional advising. I chose participants in my study from all six institutions in the interview portion of the WNS in my analytic sample so students and their experiences at a variety of institutions (e.g., public, private, minority-serving institutions, and single-sex institutions) are included. Nonetheless, since these six institutions are not representative of all the different types of post-secondary institutions, this study does not offer a comprehensive list of collegiate experiences influencing career goal formation.

## **Chapter 4: Nature and Effect of Career-Related Experiences Influencing Career Goal Formation**

The broad purpose of this study is to examine collegiate experiences that affect career goal formation from a student's perspective. In this chapter, I present the findings about the nature and effect of students' career-related experiences influencing career goal formation (CGFEs) to better understand how students construct and understand their career goals. Specifically, this chapter focuses on my first and second research questions: 1) *What collegiate experiences prompt undergraduate students to consider their career goals?* and 2) *What is the nature and effect of experiences that influence career goal formation?* This chapter also provides a foundation for analyzing the case studies mapping students' career goal formation journeys presented in Chapter 5.

### **Collegiate Experiences that Affect Career Goal Formation**

I used career-related experiences ( $n=216$ ) as the unit of analysis to answer these research questions. The students in the analytic sample ( $n=73$ ) reported an average of about three such experiences during college ( $M=2.96$ ,  $SD=1.44$ ).

**Analysis of career-related experiences by type.** I used the nature of the career-related experiences to determine the type of experience (e.g., internship, research) and then categorized it using the collegiate career experience categories (described in Table 3.5). I identified 31 different types of experiences and collapsed

these into nine categories. These are listed in Table 4.1, grouped by type of experience.

Table 4.1. Frequency of Career-Related Experiences by Type and Year

Type of Experience	Description of Experience	Representative Experiences	Y2	Y3	Y4	Total	Total % (n/216)
Courses	experiences portraying the influence of undergraduate coursework on career goal formation	courses, comprehensive exam, field work, reflective portfolio, senior project, student teaching	19	18	15	52	24.07%
Internship/ Externship	structured and supervised experiences that are intentionally designed to train students in areas related to academic programs or professional interests and provide feedback on their performance	internship, externship	4	26	21	51	23.61%
Co-curricular/ Extra-curricular	experiences that supplement academic experiences but occur outside classroom settings	student organizations, field training, volunteering	10	6	12	28	12.96%
Information Seeking	conversations with professors, peers, career service counselors, alums, working professionals	advising, observations, law school visit, role model, shadowing	5	8	15	28	12.96%
Job/Work	experiences in which students provide a service, typically for pay; they may not be intentionally structured or provide feedback	work study assignment, off-campus job, tutoring, TA	5	11	6	22	10.19%

Research	systematic research opportunities	UROP experiences, research assistant	1	7	5	13	6.02%
Major/Minor	students' reflection on selecting or changing their degree-related field of study or area of concentration	change of major, selection of major or minor	2	6	2	10	4.63%
Study Abroad	study in another country, usually through a study abroad program affiliated with the student's college or university	study abroad	1	0	8	9	4.17%
Personal Event	personal and sometimes traumatic experiences	personal incident/injury, traumatic event	1	1	1	3	1.39%

As this table shows, students reported internships and courses as their most frequent experiences affecting career goal formation during college. Almost half of these experiences, courses and internships (48%) were tied to a student's degree program, highlighting the importance of academically-oriented experiences on career goal formation. Both participation in co-curricular/extra-curricular activities (e.g., participating in student organizations) and information seeking (e.g., advising) were relatively common, with each accounting for 13% of the reported experiences. Students also discussed the influence of voluntary and paid work and research opportunities on career goal formation; such experiences during college allow students to explore potential career hats without commitment to a chosen profession. Even though only a

small number of students discussed the influence of personal events on their career goals, these experiences significantly shaped their career-related journeys by exposing them to a profession (e.g., desire to go into orthopedics after having a negative health care experience for a fractured tibia) or led to reprioritize career-related goals (e.g., desire to help others instead of focusing on making money after experiencing the death of a fraternity brother).

An undergraduate major may or may not be directly tied to a student's career. In this data set, selecting an undergraduate major was sometimes but not always a CGFE; rather, the CGFE was embedded in the process used to make this choice. For example, I didn't code "selecting a major" as a CGFE for second-year student Daniel since he never articulated the connection between biology (his major) and career goal formation; however, I added "talking with friends' parents about their jobs" as a CGFE since this experience was part of his "selecting a major" experience in that he started seeing pharmacy as a possibility after being exposed to this career through these conversations. Also, as a further example of the judgments regarding the coding of CGFEs, Daniel explicitly stated that he could not identify one experience that turned him on to biology. He talked about liking the hands-on approach in the biology classes, especially during lab times, but I saw this as a comment that focused more on a pedagogical approach than on majoring in biology relating to career-goal formation.

On the other hand, changing his major was a significant CGFE for third-year student Vincent, who participated in a CGFE labeled "changing major and career path from pre-med to chemistry and graduate school" that is comprised of multiple related experiences including "took chemistry class and loved it" (not a CGFE), "did an

internship in silicon chemistry” (CGFE), and “career-related reflection and advising by alums and peers” (CGFE). When talking about this experience, he spoke about other experiences that influenced his decision to change his major, such as the internship and advising he received. He also engaged in career-related reflection for a month while he talked with brothers in his fraternity, alumni, and peers on the pre-med track. The internship in silicon chemistry allowed him to engage in research that led to his desire to pursue graduate school studying silicon chemistry. These CGFEs together helped solidify his decision not to pursue pre-med, change his major to chemistry, and apply to graduate school to continue doing research in silicon chemistry.

When examining frequencies of experiences over time, Table 4.1 shows that students discussed courses in relation to their undergraduate majors and career goals more frequently earlier in their college careers: the number of these CGFEs decreased from 19 to 18 to 15 in Years 2, 3, and 4, respectively. However, some of the capstone courses may have been internship-related. By contrast, students reported engaging in more advising and other forms of information seeking related to their career goal formation as they progressed through college: the number of these CGFEs increased from 5 to 8 to 15 in Years 2, 3, and 4 respectively. It is not surprising that eight of the nine study abroad experiences were discussed in the fourth-year interviews since such programs frequently occur in the junior year. Similarly, students most often recounted their participation in information seeking activities (e.g., advising) during their fourth-year interviews. This outcome might have been expected since they are nearing closer to graduation and solidifying their career goals.

**Challenges to categorizing.** Even though categorizing CGFEs was mostly straight-forward, I experienced a few challenges determining categories and labeling experiences. For example, I reevaluated experiences initially identified as study abroad to identify the appropriate classification category. For example, sometimes a student traveled abroad and experienced a different culture that influenced his or her career goal formation, such as Jacky's decision to pursue museum studies. She credited her trip to Italy and seeing the different sculptures and artifacts in museums as influencing her decision to become a museum curator. Specifically, this study abroad experience led her to choose a career that would involve traveling as a part of her job. By contrast, other experiences that I initially coded as study abroad I later decided focused more strongly on another aspect of the experience, such as student teaching or participating in an internship that happened to occur in an international setting and I recoded these. Despite identifying only nine study abroad CGFEs in my data, I decided to retain the category since the exposure to a different culture substantially affected career goal formation for these students.

Since I used secondary data, I was limited by the discussion and details students provided in their interviews about these experiences. Certain categories have similarities, yet are qualitatively different to justify separate categories; examples include the *internship/externship* and *job/work* categories. I tried to remain true to the students' words and descriptions of their experiences. When students specifically described an experience as an internship/externship, I coded that experience within the *internship/externship* category. I re-read the descriptions I created for these CGFEs to confirm that the experiences in this category had enough similarities to warrant a



distinct category. For these experiences, students participated in activities that were structured and supervised with an intentional learning component that led to training in an area either related to the student's academic field/program or an area of potential professional interest. By contrast in the category of *job/work*, the distinguishing characteristic was that these experiences were not intentionally structured to provide feedback related to a student's academic program or professional interest.

Second, I learned that talking about one experience often brought up another experience for a student; this both provided an argument to support the interconnectedness of experiences and sometimes led to difficulties isolating and coding individual experiences. For example, "settling down with her career goals" is a label I used to capture an experience discussed by Olivia. Upon closer inspection, I realized that this label captured several experiences, including career-related reflection as well as very brief references to praying on campus, talking with others in the profession, career-related research, and the influence of an internship. Olivia specifically articulated that the experience of talking with others led her to realize that she didn't want to be a physical therapist or psychologist; rather, she wanted to be a physician. She didn't articulate any specific connection between praying, career-related reflection, career-related research and her career goal formation. For this reason, I selected "talking with other people about their jobs" as the CGFE while acknowledging that although these other tangential experiences were potentially important to her career goal formation, they didn't rise to the level of an independent CGFE.

Last, I encountered problems categorizing/coding the role of reflection in the career exploration process. When I originally started coding experiences, I coded some

as “career-related reflection.” Upon closer examination, I realized that this wasn’t an independent CGFE for any student in my sample. For some students, career-related reflection, including contemplation, was an important step within their career goal formation journey, but it was either prompted or perpetuated by some other experience, including a CGFE. I identified the experiences that prompted the reflection and coded them (not the reflection) as CGFEs. This was missing in my initial conceptual model representing the career goal formation process.

**Categorizing types of career-related experiences.** I collapsed related types of career-related experiences into general categories to reflect the context of these experiences. By context, I mean the environment or setting of these experiences. Specifically, I reviewed each experience to identify all applicable collegiate career experience categories (i.e., instead of selecting only the dominant category) as represented in Table 4.2 below (see Chapter 3 for a discussion of how these collegiate career categories were created). Some experiences ( $n=17$ ; 7.97%) overlapped two collegiate career experience categories: these were advising and curriculum-based ( $n=7$ ); curriculum-based and work-based ( $n=4$ ); introductory and advising ( $n=2$ ); introductory and curriculum-based ( $n=2$ ); and introductory and work-based ( $n=2$ ). These 17 experiences are not included in Table 4.2 since they only represent eight percent of the total. None of the experiences had three or more applicable categories.

Table 4.2. Frequency of Career-Related Experiences by Category and Year

Collegiate Career Experience Category	Y2	Y3	Y4	Total	% (n/216)
Work-based	13	42	31	86	39.81%
Curriculum-based	21	16	23	60	27.78%
Introductory	6	9	17	32	14.81%
Advising	3	7	11	21	9.72%

To summarize this table, students most frequently reported work-based experiences that included internships and job opportunities as influencing their career goal formation. In particular, the number of work-based experiences more than tripled from Y2 ( $n=13$ ) to Y3 ( $n=42$ ). Students most often discussed participation in internships and other work-related opportunities (e.g. jobs, tutoring) during their third-year interviews. The next most frequently reported were curriculum-based experiences such as major-related courses, study abroad, and student teaching. Since many students chose majors by their junior year, they were engaged in exploratory activities that were both work-based and curriculum-based. In contrast, students discussed the influence of advising experiences on career exploration least frequently. This might be a consequence of using a secondary data set since students were not asked specifically about their participation in CGFEs such as advising. They were asked to discuss experiences that were most important to them. It is notable that so many students spoke about CGFEs throughout their interviews without any prompts encouraging them to discuss experiences related to their career goal formation.

## **Career-Related Effects of Experiences that Influence Career Goal Formation**

After identifying the types of CGFEs students participated in, I was interested in better understanding the influence of these experiences on students' career goal formation. Based on my literature review, I started coding for the following four career-related effects: exposure, knowledge of career, knowledge of self, and skill development. During the coding process, I realized that students also acknowledged the influence of CGFEs on their graduate school and/or job search process as well as the impact of these experiences on their self-efficacy.

The self-efficacy category emerged as I noticed students talked about CGFEs affecting their confidence. Initially, I thought students were talking about gaining or losing confidence in themselves and/or their career goals. After I finished my initial coding, I reviewed the items in the category I labeled "gaining confidence" and realized that students were mostly talking about the impact of CGFEs on their self-efficacy, which is included in my conceptual model (Figure 2.15), rather than on their confidence. As noted by Bandura (1997), "confidence is a nondescript term that refers to strength of belief but does not necessarily specify what the certainty is about" (p. 382). Self-efficacy, on the other hand, refers to the beliefs and confidence individuals have about their own ability to successfully perform a specific task or behavior (Bandura, 1977). As students discussed the effects of their CGFEs, students reported gaining confidence through various career-related tasks they were able to accomplish, which is consistent with the definition of self-efficacy. Upon closer examination, I realized that the nature of the CGFEs reflected the following four sources of self-efficacy categorized by Bandura (1986): task mastery, modeling, social persuasion, and physiological state. He defined

mastery as an individual's successes and failures, and this source has the greatest impact on a person's self-efficacy beliefs. Modeling involves watching someone an individual relates to (e.g., a peer) succeed or fail a task. Social persuasion is when someone else gives an opinion to an individual about his ability to succeed. Finally, physiological state is the amount of anxiety an individual feels when performing a specific task. Based on the congruence with Bandura's definition, I then renamed the "gaining confidence" category as "impact on self-efficacy."

There were 8 career goal formation experiences identified with career-related effects that I grouped in a category called "other" (i.e., influence on confidence, motivation, satisfaction, self-esteem, and sense of self). Table 4.3 provides definitions of the six main types of career-related effects, and Table 4.4 presents the frequency of effects of career-related experiences by year.

Table 4.3. Definition of Career-Related Effects

<b>Career-Related Effect</b>	<b>Definition</b>
Exposure	learn about a given major(s) and/or job possibilities
Knowledge of career	learn more about what different majors and/or career paths entail
Knowledge of self	learn more about themselves in relation to various career options, including their likes and dislikes and strengths and weaknesses
Skill development	learn different career-related skills that can prove useful in future occupational opportunities
Impact on graduate school and job search process	learn to enhance their resumes, applications, interviews, and/or recommendations
Impact on self-efficacy	learn to successfully perform a specific task or behavior (Bandura, 1977) and develop confidence in their own abilities

Table 4.4. Frequency of Effects of Career-Related Experiences by Year

Career-Related Effect	Y2	Y3	Y4	Total	% (n/485)
Knowledge of self	11	52	61	124	25.57%
Exposure	28	43	49	120	24.74%
Knowledge of career	17	46	42	105	21.65%
Skill development	8	28	26	62	12.78%
Impact on self-efficacy	11	24	12	47	9.70%
Impact on graduate school and job search process	5	5	8	18	3.71%
Other effects	2	0	7	9	1.86%

**Examples of career-related effects.** Here are two illustrative examples of each career-related effect.

*Knowledge of self*

George, a fourth-year student, articulated the influence of doing an internship that reinforced his interest in law. By participating in this internship, he gained knowledge about himself when he learned what legal work involved and realized that he liked doing it.

George: And I really liked it and it actually was a really good experience for me because it affirmed my plans. It made me realize that I like being in court, that I like lawyers and sort of like the work of the law and it seemed – it was a very good, positive experience. It wasn't that hard, it wasn't that demanding and I really got a lot of meaning out of it and a lot of comprehension, I guess.

George was exposed to a courtroom in action and discovered that he liked being in a courtroom and being around lawyers. This was his first law internship that allowed him to discover that he liked being in a courtroom and being around lawyers. The knowledge of self he gained from this experience resulted in the formation of a goal to go to law school and become a lawyer. Prior to participating in this CGFE, he contemplated becoming a historian, but after the internship, he decided to pursue law.

Jack, a third-year student, realized that he liked working in government better than in politics when he participated in an internship with the Republican caucus in the state House of Representatives.

Jack: I ended up working for the House Republican caucus. They're kind of [an] election division so it's actually for the Republican party and not the state, so I worked at Republican party headquarters in Indy this summer. Again, I was paid full time and I had a good time there. I liked it. I definitely found that I like working in government better than politics.

Interviewer: Okay, tell me what that distinction is 'cause I think a lot of people would not really make a distinction between those two words, but I'm sure that there's a diverse...

Jack: At first, it definitely seemed like working politics would be more fun. It's definitely a more laid back atmosphere. I could wear cargo shorts and a polo shirt to work. There wasn't a time clock or anything 'cause it wasn't tax payer money paying for it, so it was good in that respect, but I felt like working for the state, that I was doing more important work and it was definitely more to my liking. I worked in the policy office during my house internship, which I really liked and it was really good training for law school, which is what I want to do after [college]. I had to wear a suit everyday. I had to be there at 8 o'clock in the winter, which wasn't a whole lot of fun.

Jack observed how law was practiced and saw connections between his coursework and what he did during his internship. The internship motivated him to work to his full potential, taught him the value of writing, and provided him with a roadmap to the future. Through this internship, he gained personal insight about his preference for working in government more than in politics. Furthermore, he saw the kind of work he could do, recognized his abilities, and saw his potential as a government employee.

### *Exposure*

During a pre-med internship, third-year student Olivia was introduced to academic medicine through the internship and this helped shape her future career goals.

Interviewer: So, how do you think those activities that you're doing and what you did over the summer – how do you think that's going to make a difference?

Olivia: I think it's helping to shape the type of person I want to be and also it's helping me to realize the goals that I have and really see that there's a lot more that I can do. Although there are certain things I want to do, there are different paths that I can take. For example, I had never really considered academic medicine, but after my summer program, I thought maybe that's something I'm interested in, too. Not only that, but I feel like the more experiences that I have, the more interactions I have talking to people, helping with people as a physician, that's what I want to do. I want to work with people. It's a people-oriented



business, and the best way to help – I don't understand how you could go to medicine and say you want to help people if you're not helping people already. So, by continually just making those interactions and helping people and any little – or any degree possible I feel as though I'm making some sort of concerted effort to reach my end goal.

Olivia talked about how her experiences during college shaped who she wanted to be and how this helped her realize her goals. She stressed the importance of CGFEs in college by acknowledging the value of participating in experiences that represented her prospective career path. By participating in this internship, she expressed that she was working towards reaching her end goal: if she decided to apply to academic medicine, she could strengthen her medical school application by referring to the exposure and opportunities she was afforded to help people.

Fourth-year student Jacky's CGFE, studying abroad in Italy, is a powerful example of the influence of exposure on career goal formation. Jacky confirmed her interest in museum studies after seeing several different museums, the sculptures and other historical and cultural artifacts they exhibited.

Jacky: When we went to Italy it was about a week after the carnival, so I got to get a real Venetian mask really cheap...it was really pretty. So that was the best time of my life. That's pretty much what sealed the deal for the museum work for me because I was running around to all the different museums over that and like going crazy.

...

Interviewer: Wow. And so it seems like it really made your love of history come to life, like actually getting to see the stuff like the David in person. Did it change the way that you think about history?

Jacky: It made me even more interested because even going places like the Coliseum and stuff like that. We went to the Christian Catacombs outside of Rome. Stuff like that kind of seals it for me because to actually be up front and personal with history [is] what really sparked my passion in preserving a lot of it. Because a lot of that stuff over there was so old, but the only reason that we could see it was that people take care of it and I want to help with stuff like that.

That's what I like: cataloging, keeping stuff and being able to teach people in the future about things.

As a result of participating in this CGFE, Jacky wanted to become a curator to preserve historical artifacts and teach people about them. As Jacky said elsewhere, she was also interested in traveling as a part of her job and visiting Europe again.

### *Knowledge of career*

Diana, a fourth-year student, participated in an internship at the LGBT center that substantially affected her career goals.

Diana: I feel like it impacted my life and it's also going to help me in my career goals.

Interviewer: And how do you think it's going to help you in your career goals?

Diana: Well, after I'm done with graduate school, my goal is to now become a director of LGBT Centers. Because I've seen how much I like the kind of workshops and programs that I develop are to help LGBT students on college campuses kind of feel comfortable because sometimes there's not a very safe environment on some college campuses. And when they don't feel like they have a place where they can be themselves. And so as an intern, I develop programs of discussion groups, movie nights, and different types of workshops to have different people come and speak about their experiences. I would like to do that only in a different capacity as the director. And so I think that being an intern will help me to become a director one day because I have experience in working in a setting like this.

...

Interviewer: In what ways do you think that you're going to be using all those different experiences?

Diana: I think having the freedom to kind of create my own kind of program and what I want to do. It's kind of giving me how to create something from nothing. Right now, I'm working on this big week of events that's going to happen in April, and having to contact people and set dates and finalize things, that's something that people do in their every day job. So I'm already getting that experience and going to staff meetings and meeting with the Vice President and talking with her. All kinds of different experiences – that I'm learning how to work with people that are maybe difficult at times, but having to get a job done...I feel like they're definitely in my career and just all kinds of things.

...

Diana: I love my internship and this is something that I want to do as a career, so I'm not going to give up lightly because I'm very passionate about it.

This internship helped Diana understand how an LGBT center works. She was given leeway by the director when she designed programs, events, and workshops, participated in staff meetings, and networked with administrators like the Vice President. Through this internship, she gained career-related knowledge that she didn't otherwise have access to.

Through a summer internship, fourth-year student Bruce gained career-related knowledge when he interacted with lawyers and saw many of the cases that were tried. Participating in this CGFE led to Bruce's consideration of becoming a defense attorney.

Interviewer: Okay. Do you have an idea of what kind of law you'd want to practice or what area of the field you'd go into?

Bruce: Criminal. I would do criminal. My dad and my grandparents were both county sheriffs and I'm pretty familiar with the criminal justice system. And also, over the summer I did an internship with a couple of the county judges, just seeing what they do on a day by day basis and getting to see all the lawyers who come through their offices and all the cases that are tried. So, I have a real interest in criminal law and I would sort of like to be a prosecutor given I'd like to be on the same side of the courtroom as my dad and my grandpa, but I – after this summer I think that I could be a defense attorney, too.

After participating in this CGFE, Bruce realized that he liked the work associated with becoming a defense attorney since he was "interested in people and these cases that they had" during his internship (i.e., he gained knowledge of career and self).

### *Skill development*

Savannah, a fourth-year student, did an internship at Sears Holding Corporation where she worked as a manager in training and developed managerial and leadership skills. As a result of this internship, she decided that she didn't want to do this type of

work in the future (although she indicated she planned to talk about her internship experience in future job interviews).

Savannah: Well, it was in a store every day and I worked different shifts, so I worked opening shifts and closing shifts and weekends, during the week, those were a variety of hours and I worked with another intern and we were basically managers in training, that's what the program was – there were 300 interns across the country and then that's what they pulled the hiring pool from. And so we had a lot of responsibility. We both were in charge of different departments and had to make sure that everything went smoothly there and then we actually did some hiring for a couple of different stores and went around to different stores and helped to make them more functional...It was paid, so that was a big deal, and also I did gain a lot of leadership experience and I talk about it for interviews now, because a lot of jobs will look a lot at leadership experience or if you've had any experience managing other people or projects, so it's good to talk about that side, definitely.

For Savannah, this CGFE helped her decide that although she didn't want to pursue this type of work in the future, she found the leadership and managerial skills she gained from this experience would be valuable in interviews for other jobs.

Aaron, a fourth-year student, conducted Alzheimer's research with one of his professors. Through this CGFE, he was exposed to alternative career options besides being a doctor and developed his skills.

Aaron: The research has definitely been a good experience, doing my research work. It's kind of opened my eyes to possibilities in the science world and what I can also do instead of being a doctor. But it's also given me skills that make me more attractive as an undergraduate student to be admitted.

Interviewer: Can you give me some examples of those skills?

Aaron: Well, they're more like lab skills. Like working – we're working with rat marrow cells, so we have to work under sterile techniques, so everything – the hood we work under is completely sterile and then everything that goes in there has to be sterilized, everything that – it's kind of a pain, but it's also, I don't know, it's a very useful skill. And then also a lot of the techniques we need to use to

take care of the cells and apply different chemicals to them to test different things.

Aaron was looking forward to a having a publication accepted based on the research he has done with his professor and lab partner. In addition to developing his research skills, Aaron also gained career-related knowledge by working in the lab independently and with his advisor's guidance. He made connections between his research and his class that led to his getting better grades and gaining knowledge of self. Aaron realized that he was good at doing research, was looking forward to having a publication accepted, and had decided he wanted to engage in research in the future.

#### *Impact on self-efficacy*

Below, I provide one example for each of the four sources of self-efficacy.

*Mastery.* Third-year student Beatriz became interested in teaching science to high school students after she was a teaching assistant (TA). She subsequently declared a secondary education major.

Beatriz: ...explaining it to them and seeing them get it, kind of that moment of recognition where the light bulb turns on, it was just awesome because, gosh, in my mind, I could remember going through the same thing. I didn't have the best TA [laughs] and so, I did, not that I learned it from the TAs and stuff. I would talk more with the professors and with my classmates, but knowing that I was the one that helped them and kind of gave them that "aha!" moment, it just made me feel really great and kind of like, "Okay, my work here is done." It was an awesome feeling.

Before becoming a TA, Beatriz felt she couldn't effectively teach younger kids, that she was "overrun" by the kids. However, after becoming a TA, Beatriz perceived that she had mastered some teaching skills and was getting through to the students.

*Modeling.* Warren, a fourth-year student, met up with a friend who is the nephew of a famous artist who became a role model for him. Through his friend, he was exposed to raw art that was lying around this famous artist's apartment. This artist's life story inspired Warren to pursue his professional passion for art as a career despite being discouraged by others.

Warren: And it's been an inspiring semester because the way that his uncle lives his life and his story is really inspiring to me, because he didn't really go to art school – well, he went to art school but then he dropped out and then he just traveled around. It's kind of a – he's basically a bad ass, just kind of has the fuck-it mentality and just does whatever he wants. He's been super successful as an artist just because he didn't listen to what anybody told him to do. And so that's kind of what I'm looking at. I've always been told to obey and all of the said rules, and for the longest time it's kind of trapped me, but now I just – I don't really care. I just want to do what I want to do and see what happens...My dream was to just do artwork and if I'm successful and other people like it, it'd be cool to travel the world and show other people my artwork, much like my friend's uncle is doing. And so that's what I want to do.

His friend's uncle modeled a successful career path that enhanced Warren's self-efficacy related to pursuing a career in art.

*Social persuasion.* When her research professors said good things about second-year student Archita, she felt that maybe it was true that she was good at doing research and could go to graduate school.

Interviewer: [W]hat did you learn about yourself now that you know you can do the lab work and you can kind of compete and you can do it as well as some of the upper-classmen, did that teach you anything about yourself or your potential?

Archita: I can only judge myself, but when the professors with whom I'm doing the research, if they say good thing[s] about me I do feel like, "Okay, maybe that's true." I can – I mean, I'm that good...The other thing was that my lab work, it was very good. My professors all said that, "You're very good in labs." So that kind of told me, "Okay. You like to do this so you should stay with this." So I think I should – I can push that so I'll be more diligent in my nature.

Her professor's praise heightened Archita's self-efficacy through social persuasion. Subsequently, after doing research in the summer, she realized that she liked doing lab work and wanted to go to graduate school for molecular genetics or molecular biology.

*Physiological state.* Third-year student Gia successfully passed a month-long Air Force training that simulated what students do once they graduate from ROTC. The activities were designed to prepare cadets for combat through problem solving tasks in the Leadership Reaction Corps.

Interviewer: [H]ow did accomplishing that task [Leadership Reaction Corps] affect you?

Gia: It gives you the sense of you can be a leader...I am sometimes really timid when it comes to leading, or I was before I went to field training. I was always afraid of leading our flight, just because I'm a girl and just my voice doesn't project as far as most of my male counterparts. But now that I've learned how to do it I—I'm twice as loud as most of my cadets now that I'm training this year. And I'm like, "Wow, I was in their position a year ago and here I am being able to teach them what I've learned."

...

Interviewer: What does that mean to you to be one of the few women who's made it this far?

Gia: I want to say it surprised me. I always had this little fear that I wouldn't make it. I don't know why. My friends are like, "You—you're one of the most hoo-ha persons in all of ROTC. How do you think you're not going to make it?" and I'm like, "I don't know, there's always this fear about me failing." And I was just so happy to come back.

As a result of this experience, Gia felt less fearful and more assured about her abilities as a leader. Specifically, her fears were allayed after she successfully completed field training and consequently felt that she can go into combat and leadership.

### *Impact on graduate school and job search process*

Second-year student Dolores gained exposure to business in general and real estate through her job. It also helped her realize some expectations associated with a real estate job.

Dolores: So, I just wanted to have that as a security, just to tell them I have had the experience and I have been around people who have been in the business. So, yeah, because I can present future agents or future bosses a resume that looks pretty good.

Dolores wanted to mention her real estate job on her resume. She considered a business major as a result of this job.

Martin, a third-year student, completed an internship for Proctor and Gamble (P & G) that helped him gain presentation and communication skills.

Martin: [I]t was a great internship program and the thing with working for a big-name company like that, you write that, I have that on my résumé. When I show people my résumé, they're going to know. Everybody knows Procter & Gamble [laughs].

Martin gained career-related knowledge working on controls and capping and he learned this was not a field he wanted to pursue for the rest of his life. He also learned how a big company such as P & G works. Through this internship, Martin realized that he didn't want to work more and be compensated less, so he chose an engineering major over a science major.

**Multiple career-related effects.** Career-related effects aren't mutually exclusive and may be interconnected, which sometimes made it difficult to identify distinct career-related effects. Several students discussed multiple career-related effects. In the example above, in addition to enhancing his resume by working for a well-recognized



company, Martin gained exposure to a large company, self and career knowledge, and skill development (i.e., he enhanced his presentation and communication skills). His experience with this CGFE reinforces the idea that career-related effects are not mutually exclusive; rather, they can affect each other. Aaron's example above demonstrates the skill development effect, this experience was also coded for exposure, gaining self and career knowledge, and impact on self-efficacy, showing how one CGFE can influence a student's career goal formation through several effects. In other examples, skill development sometimes led to a student gaining knowledge about self, developing leadership skills, and realizing he/she has a natural inclination to be a leader and potentially thrive in a career that provides an opportunity to be a leader. In some cases, the process of being exposed to a career led to knowledge about oneself. Exposure sometimes led to career-related knowledge since being introduced to a career option is necessary prior to gaining information about the career (i.e., career-related knowledge). Specifically, students discussed over two career-related effects per CGFE ( $M=2.23$ ,  $SD=1.12$ ). Students identified three or more career-related effects for about one-third ( $n=79$ ) of the 216 CGFEs. For two of the CGFEs, students described all six of the career-related effects influencing their career goal formation.

**Challenges to coding career-related effects.** If the student didn't mention the influence of a career-related effect (e.g., gaining exposure or skill development), then I did not assume that the experience led to a career-related effect. For example, it is tempting to think that a position such as being a manager would build leadership skills, but not all students stated this effect. Sometimes students realized that a specific career path was not for them since they were uncomfortable as a leader or public

speaker or had a negative experience and didn't develop those skills during the experience. Further, not every effect concerning a major/minor was a career-related effect. The decision rule I used is that the effect needed to influence career goal formation, not result in other effects.

### **Patterns Associated with Career-Related Effects**

The following career-related effects were most prevalent: knowledge of self, gaining exposure, and knowledge of career; each of these accounted for about 22-26% (and collectively, almost  $\frac{3}{4}$ ) of the CGFEs. Skill development, impact on self-efficacy, and the impact on graduate school and job search process were much less prevalent. It is possible that since the WNS interviews were designed to elicit information about students' meaning-making, interviewers asked questions that encouraged discussion about gaining knowledge of self (the most frequent effect reported). Students gained more exposure as they progressed through college and participated in more CGFEs as reflected in a greater number of examples reported in Y3 and Y4 than in Y2. Also, the timing of the interviews may have influenced how much students talked about the impact of CGFEs on the graduate school and job search process: perhaps if students were interviewed during or after completing their graduate school and/or job search process, they might reflect more on the impact of CGFEs.

In terms of self-efficacy, students mentioned mastery most often (over half the time). This finding is notable since Bandura (1986) discussed mastery as having the greatest impact on self-efficacy. Social persuasion was the second most prevalent source influencing self-efficacy in this data set (about  $\frac{1}{4}$  of the time). Young adulthood can be an impressionable time for college students, a time when social relationships

with peers and professors can affect self-efficacy development through social persuasion. Also, students most often talked about positive influences on their self-efficacy and career goal formation. Specifically, for 40 of the 47 self-efficacy effects reported, students felt they could be successful in a chosen career goal after participating in a CGFE. Those interested in or know the value of mentoring might be surprised that there were so few examples of modeling mentioned in these effects.

Table 4.5 reports the frequency of self-efficacy sources by year.

Table 4.5. Frequency of Self-Efficacy Sources by Year

Self-Efficacy Sources	Y2	Y3	Y4	Positive	Negative	Total	Percent n/47
Mastery	4	14	5	20	3	23	48.94%
Social Persuasion	4	4	5	10	3	13	27.66%
Modeling	2	3	1	6	0	6	12.77%
Physiological State	1	3	1	4	1	5	10.64%
Total	11	24	12	40	7	47	

## Summary

Based on my coding and analysis of the WNS interview data, I presented a taxonomy of collegiate-related experiences that influence career goal formation. Students frequently reported that their career goal formation was impacted by courses and internships (48%) that were tied to their degree program, by co-curricular and extra-curricular experiences (13%) and by information-seeking experiences (13%). For academic and student affairs professionals, these findings reinforce the importance of strategically designing opportunities that occur both inside and outside classroom settings to help students determine their career trajectories. I also identified career-

related effects associated with these experiences that influenced career goal formation. The aspects of career goal formation that were most frequently affected were knowledge of self (26%), gaining exposure to a potential career (25%), and knowledge of careers (22%). Interestingly, the impact of self-efficacy on career goal formation (10%) emerged as a notable effect. Specifically, for 40 of the 47 self-efficacy effects reported, students felt they could be successful in a chosen career goal after participating in a CGFE. In this chapter my unit of analysis was individual CGFEs for 73 students, whereas in the next chapter, I focus on the student as the unit of analysis using case studies.

The Model of Career Exploration guiding my analyses (Figure 2.15) depicts relationships among key elements related to students' career exploration during college. Key elements include background characteristics, career-related experiences, career-related effects, self-efficacy beliefs, outcome expectations, career interests, and career goals. Overall, this model reflects findings from my literature review and my coding decisions were consistent with this model. In addition, my coding led to a few refinements of this model. Specifically, some students discussed the *impact of applying for graduate school and the job search process* on their career goal formation, an effect that was not captured in the original version of the Model of Career Exploration. Another effect that emerged during the coding process was the *impact of self-efficacy* on career goal formation. This effect is captured in the conceptual model within the construct labeled *self-efficacy beliefs*. Also, the role of reflection is another key element in the career exploration process that emerged during coding that wasn't captured in the initial model.

## **Chapter 5: Longitudinal Career Formation Summaries**

In this chapter I examine the development of career goal formation over time via case studies that trace this journey for three students. I use the students' career-related experiences to capture the storyline of their journeys and also discuss the relationship between their career goal formation and self-authorship development. As noted above, both student names and institutional names are pseudonyms except for Wabash College.

### **Case Study #1: Gavin's Career Goal Formation**

In this case study, I first introduce Gavin through his background and personal characteristics. I then discuss Gavin's choice of academic major and his participation in career-related experiences that influenced his career goal formation during college. I conclude with a discussion of the relationship between these experiences and his self-authorship development.

Gavin is a White male who went to an all-boys private high school and attended St. Bernadette University, from which his parents and brother had also graduated. This religiously affiliated university was founded in the mid-1800s and is in a midwestern metropolitan area with a population of more than 300,000 people. Nearly 9,000 undergraduates attend St. Bernadette; it offers approximately 80 majors and more than 500 student organizations and has a 10:1 student-to-faculty ratio. Gavin chose this university based on several factors, including its academic reputation and emphasis on

different aspects of student life (e.g., student organizations, programming). This university offered a broad range of career development services and career exploratory opportunities through the career center, access to diverse internships, and world-class research opportunities.

Gavin was the captain of his high school swim team, and he noted that leadership experiences were important to him throughout his education. During college, he became the president of the Engineering Council, joined the Investment Banking Club, was a resident assistant (RA), and got involved with additional leadership activities. Faith was also important to him: he actively participated in religious activities on campus. According to Gavin, he was good at math and science and his mother believed that he was going to become an engineer. Gavin's mother may have been operating from a fixed mindset (Dweck, 2016) with her definitive belief about his future career and she might have fostered a fixed mindset for Gavin, too. He also commented on his parents not being overly involved in his education during college, allowing him to deal with his own academic failures.

**Gavin's search for an academic major.** Gavin's academic major was initially affected by his love of math and science since he believed there were right answers in these fields; conversely, he was troubled by the subjective element in liberal arts courses. In his first year, he enrolled in an engineering course that exposed him to what engineers do that made him question if he wanted to do this kind of work daily for eight hours a day. Gavin's development of a more internalized notion of career success started with doubting his major and considering other career options. He was having

second thoughts about pursuing civil engineering and expressed an interest in another sub-discipline of engineering or a different major, such as business or accounting.

By his second year, Gavin changed his major to mechanical engineering and contemplated changing it again after discovering that he did not enjoy and did poorly in these classes. Gavin interpreted not doing well on exams as an indication that engineering was not meant for him (providing an example of his fixed mindset). As a part of the process of reevaluating his talents, he became more involved on campus, joined the Investment Banking Club, and became vice-president of the Engineering Council. Students in the Investment Banking Club and in his dorm talked positively about their experiences with the business school, which motivated him to explore business as a major. At the same time, engineering students tried to convince him to stick with engineering since it's common for students to experience what he was going through. Gavin noted during his second-year interview that, "I've gotten to meet a lot of good engineers and they talk to me about the classes later on. They say, 'The light's at the end of the tunnel and things will get better.'" This is one of several examples Gavin offered in his first two interviews, where he showed how he relied on others to make decisions while considering his own wants. And although he admitted to being ignorant of what other majors entail and their job prospects, Gavin planned to add a second major, which is another indicator that his decisions weren't carefully considered.

During his junior year, Gavin decided to stay with a mechanical engineering major because he enjoyed the coursework, valued the departmental faculty, and appreciated the comradery among his friends in this program. In his Year 3 interview he commented,

The professors, the department [mechanical engineering] is pretty close. They're pretty available. They've shown, they've demonstrated...just of how passionate they are to both educate their students and about their own work, their own research and things like that, so that was something that was attractive about it and another huge thing was just getting a core group of friends together.

Gavin began college as an engineering major and although he changed from civil to mechanical engineering [and considered majors in business], he was still an engineering major during his senior year.

**Career-related experiences influencing Gavin's career goal formation.** A variety of collegiate experiences influenced Gavin's choice of academic major and/or career such as participation in student organizations, religious activities, and work study jobs. Although Gavin participated in general career-related experiences (i.e., experiences that provided an opportunity for career-oriented exposure, knowledge, and/or skill development), I focused on experiences that affected Gavin's career goal formation.



Table 5.1. Gavin's Career-Related Experiences, Effects, Developmentally Effective Experiences, and Meaning-Making Assessment by Year

Year	Career-Related Experiences	Effects	Developmentally Effective Experience (DEE)	Meaning-Making Assessment
1				Ea
2	Courses (Engineering)	Knowledge of self	No	Eb
	Job/Work	Self-efficacy (social persuasion); Resume	No	
	Co-curricular/Extra-curricular (Clubs)	Exposure; Knowledge of career; Resume	No	
3	Internship/Externship (Engineering)	Exposure; Knowledge of career; Knowledge of self; Skill development; Self-efficacy (mastery, modeling, & physiological state)	No	E(I)
	Courses (Philosophy)	Knowledge of career; Knowledge of self; Skill development	Yes	
	Research	Exposure; Self-efficacy (mastery & social persuasion)	Yes	
	Co-curricular/Extra-curricular (Career fair)	Exposure; Impact on grad school & job search process	Experience added during coding process	
4	Internship/Externship (Accounting)	Exposure; Knowledge of career; Skill development	Yes	E-I
	Advising	Exposure; Knowledge of career; Knowledge of self	Experience added during coding process	

At this point, I will start with columns 1-3 of Table 5.1 and refer to the other columns later in this chapter. As noted in Table 5.1, Gavin participated in nine career-related experiences that influenced his career goal formation (CGFEs) during college and his career goal formation was particularly influenced by the following three CGFEs: internships, undergraduate research, and a specific course. I next discuss these three experiences in detail.

***Internships.*** Gavin's institution provided resources such as funding, databases, and career counselors to help students find and evaluate different internship opportunities. He participated in several internships throughout his college experience; the two discussed below were particularly significant and relevant for his career goal formation.

***Engineering internship.*** Gavin participated in an influential internship with a major car company during the summer before his junior year of college. Participating in this CGFE led to the following career-related effects: exposure, skill development, and knowledge about himself and his potential career in engineering. Specifically, during his Year 3 interview he noted,

I got in there and I realized that my technical skill set isn't really that developed and that's something that I realized is kind of a weakness in our curriculum. It's not really demanded that you get into the real meat of manufacturing when you go to your classes here.

As reflected in the quote above, he commented on his internship supplementing his academic courses.

Career-related experiences affect self-efficacy beliefs, which are "people's judgments of their capabilities to organize and execute courses of action required to

attain designated types of performances” (Bandura, 1986, p. 391). This internship bolstered Gavin’s self-efficacy through mastery, modeling, and lowering his anxiety about his career since he felt he could be a valuable member of a team. For example, as he mastered the goals of the project, Gavin’s confidence and self-efficacy increased, while his anxiety decreased. Through modeling, by observing a senior engineer during the internship, Gavin realized that he could see himself 20 years later in a similar position as his role model. By being able to visualize this, Gavin felt more comfortable making this choice since he had a concrete image to hold on to as described in his own words during his Year 3 interview:

Being able to see somebody like that where if you kind of stay in something long enough and really become a pro that people will depend on you and that people will look up to you and, but also getting to work with that guy and having him just take the time to help me out and explain, I’m spending too much time there kind of helped me to see like what is it that, this is something that, that maybe I would become. He was a really good mentor for me and kind of helped me look down the road and see like 20 years down the road. [M]aybe that could be me working long hours and staying busy and being a really valuable member of the team there.

Subsequently, self-efficacy beliefs affect outcome expectations which are the consequences or expected results from performing certain behaviors. Gavin expressed this outcome expectation and the benefits he gained through this internship in the following junior year interview excerpt:

I’m not really worried about a career anymore and just, solidifying that, the lack of concern was this summer being able to work in a corporation and I think be a valuable member of the team and see what that’s like. I’m not really scared anymore and that was an anxiety that I really had freshman and sophomore years. Ultimately, when I come out of college, I need a job, so it took care of all the anxiety and feeling a lot less pressure and a lot more just happy as a student here and that’s for all of it.

As a valuable member of a team in a corporation, Gavin became less anxious about his career through his expectation (i.e., outcome expectation) that he would get a return offer from this company based on his performance in his internship.

Context is an important factor to consider when interpreting the influence of an experience on a student's career goal formation. In this example, Gavin was a student at a university that supported and encouraged career exploration through opportunities such as internships. There is an interplay between contextual influences and CGFEs that affect or are affected by the student. Some of the potential outcomes of participating in this CGFE for Gavin were self-knowledge, vocational knowledge, skill refinement, and lower career-related stress. Using his own words from his Year 3 interview, he felt that this engineering internship was "one of the most valuable things about my past few years."

*Accounting internship.* During his fourth-year interview, Gavin discussed exploring options outside of engineering, particularly in business. He described an internship he enjoyed during the past summer at a Big Four accounting firm doing technology-based advisory work. At the firm, he was assigned an alumni coach (i.e., a recent graduate from his university who agreed to coach enrolled students) and a career coach to help him develop professionally through questions identifying his strengths, weaknesses, and goals. Specifically, he clarified his career goals through his conversations with the career coach as reflected in the following comments:

Really, it's just that some of the things that I thought were huge weaknesses of mine [e.g., lack of technical background] weren't necessarily big deals. And just to get more specific with my goals. That was a big thing. I would – you'd fill out this kind of career development form. So it would say, "What are some career goals you have?" and I would list them out...[The coach] would say, "I'd like to

see you get more specific with these goals.”...He just wanted me to get more specific, and I think the philosophy was the more specific with your career goals and your professional development, the more likely you’ll follow through on those.

Prior to these conversations, Gavin thought his lack of a technical background in business precluded him from pursuing a potential career in accounting. This experience encouraged him to reflect on his occupationally-oriented goals so he could identify what he wanted to do professionally and follow through on personally meaningful career goals.

Through reflection about his purpose in life, Gavin thought he was called upon to participate in a mission to do service work or become a philanthropist to give back to his community. This internship allowed him to explore and think more complexly about his interests, values, and talents to further develop a sense of purpose and meaningful career-related goals. He stated,

I used to think kind of more that I was a little more meant – just kind of pound out work and make my contribution to the community just financially. Just purely being a philanthropist or something like that... finding something that is really important to me and something that I love doing every day. I’m certainly willing now to take a financial hit just to go out and do something that I really like, whereas before, I think it was just kind of all about, okay, how can I use myself to generate the most wealth and then give that back to my community? I’m kind of steering myself away from the soul crushing work that I thought that I was cut out for. And it’s something that’s been a big important realization for me.

As highlighted in this excerpt from his senior year, Gavin struggled with whether he valued or defined himself through his potential financial success and philanthropic contributions. He moved away from external notions of financial success based on how much wealth he accrued towards a more internally defined sense of professional success based on what was important to him (e.g., service work, charitable

contributions). This illustrates Gavin creating an authentic identity based on his career-related goals, experiences, and insights by Year 4.

***Undergraduate research.*** In addition to the possibility of working as an engineer in the future, Gavin also considered pursuing a graduate degree. Gavin's institution offers world-class research opportunities, facilities, and equipment. In the past, he saw graduate students doing research and didn't consider himself able to handle graduate school, but having helped conduct research as an undergraduate student, he experienced increased self-efficacy and considered this option. This would be consistent with Gavin's evolution towards a growth mindset. Gavin expressed this sentiment during his Year 3 interview when he stated,

I'm thinking more about going to grad school now than I ever have before because when I came in as a freshman, I looked at these grad students and I said, "Oh, my gosh. These guys are leagues above me. I'll never be that smart and I'll never be able to do what they're doing." And now that I'm kind of in there doing the research, I can say to myself, "Maybe I can do this stuff and maybe this is something that I'll have the option to work with..."

His self-efficacy was strengthened by working on a research project (i.e., mastery) and through his principal investigator's faith in his research abilities (i.e., social persuasion). Since he still leaned on external sources for information and validation (i.e., his external meaning making), the social persuasion he received from his principal investigator had an especially strong impact on his self-efficacy and sense of self.

***Influential philosophy course.*** The last influential experience featured here is Gavin's enrollment in a philosophy course that led to skill development (e.g., analyzing and deciphering arguments) that he was able to apply to engineering and other aspects

of his life. Specifically, as discussed in his third-year interview, he used the skills he gained from this course to identify what is important to him:

[The philosophy class] really helped me kind of lay out what's important to me. When I told you when I die, I want to be able to answer yes to those three questions [Did I use my time the best that I could?; Did I work as hard as I could with the talents that I had?; Did I affect people positively around me?], or to be able to say that I've done as much work as I can, I've used my time as well as I can and I've helped people around me, that all came out of last year because I really took the time to think about that stuff and what really does matter to me and just kind of what I think are the truths in this world and what makes sense. So that's really one of the really powerful things that I took away from it was just kind of taking the time to clearly state what's important to me and having that direction is invaluable. It's going to influence the job that I choose. It's going to influence the things that I, the other extracurricular things that I choose to do in the coming years. It's just going to really give me a lot of direction, so I feel it was something that was there before I took the class but now I can, I feel like I've taken the time to just sit down and, look at what I want to do.

The required readings for this class prompted Gavin to think about questions and principles such as justice and virtue by allowing him to reflect upon the three questions (i.e., Did I use my time the best that I could?; Did I work as hard as I could with the talents that I had?; Did I affect people positively around me?) he identified as important that influenced his career-related decisions. Specifically, he wanted to do as much work as he could, use his time as well as he could, and help people around him. His intention of engaging in service-oriented work is consistent with an affirmative response to these questions. He reevaluated his values, questioned his identity, and recognized the need to identify an internal vision for himself based on what matters to him (e.g., doing service work or being a philanthropist).

**Gavin's post-graduation career decision.** Even though Gavin was reflective by nature, he acknowledged that he "second-guessed" his decisions. He wanted to pursue a career path that would make him happy and through contemplation about his values, he started questioning his identity. Specifically, hearing stories of service-oriented alumni who furthered the university's humanitarian mission led Gavin to question his sense of self and shift his criteria for selecting a career from purely monetary reasons to considering helping others through his work. He described alumni pursuing careers that they wanted to do. For example, his mother chose to become a teacher to spend time raising her children instead of pursuing a potential six figure salary as an engineer. His father also chose a service-oriented career working as a public servant for the government.

Through his work, Gavin wanted monetary, emotional, and spiritual accomplishment. However, his definition of success changed over time and became more internally grounded. As he explained in Year 1,

There's a lot of people who do great things with their lives and don't make a lot of money and make huge impacts on the world and that's great and that's important. [I]f somebody makes \$200,000 a year, you can't look at them and say, "He's not successful." I mean there's no refuting that.

By his sophomore year in college, his conception of career success acknowledged that making a lot of money wasn't essential to have an impact, but he still was very impressed by a high salary as a concrete and irrefutable indicator of success. Gavin's life plan was to make as much money as possible for five years without caring if he was happy in order to get a house, car, pay off his loans, and lay a financial groundwork for himself. Then, he planned to figure out what he wanted to do. He saw college as a



financial investment in himself that meant he should pay off his loans and produce money upon graduation. Nevertheless, he feared that he might look back at his life 30 years later and feel dissatisfied, even though he was financially secure.

During his sophomore year, he viewed engineering as a socially conscious career that is “just about making life better or easier for people.” He liked the job security associated with engineering and thought the engineering internships were “cool.” As an engineer, Gavin felt that his work should result in producing something like a gadget; however, the accounting internship allowed him to realize that he felt satisfied by knowing that his analysis and work contributed to helping organizations save money and streamline their business practices. He was influenced by his alumni friends’ experiences working as engineers in major engineering firms to determine what their day-to-day work entailed (e.g., number of hours in front of a computer, number of meetings attended). He considered graduate school and interviewed in both industry and financial services.

After considering all this career-related information, he accepted a full-time post-graduation job offer from his accounting internship site; he saw this as a four-year opportunity to develop professionally before he went on to the next step in his career.

Regarding his decision, he made this statement during his senior year:

I chose to work for this firm just based on professional development and adding some things to my background that I think are missing and, whereas with an engineering company, I could strengthen some things in my background that I had already had. I think there’s a lot of new opportunities on this horizon and what I’m looking to develop in the next few years, this firm is going to add the most value to my background.

Gavin accepted the job offer from the accounting firm based in part on the reports from

his alumni friends' professional experiences in engineering that made him uncertain if an engineering job would fit with his needs, desires, and interests. When he realized that pursuing an engineering-related job was not the only way to be successful, he decided to consider other career choices. Specifically, he enjoyed his internship at a Big Four accounting firm enough that he decided to continue working at this firm post-graduation.

If he didn't like this job, he planned to just stay there two or three years and go back to engineering working towards a management position. He approached the job offer with some hesitation in that his decision was guided by both external influences and internal criteria reflecting his beliefs, values, and identity. As a possible long-term career option, he considered starting his own business that integrates his engineering background and professional experiences in the business world. He described getting a job as his "ultimate goal" and stated that, "I don't want to be stuck doing something I don't like, I'll probably just switch my job later anyway, I've noticed a lot of people do that." And some do so in dramatic ways: as noted by Gavin during his first interview, "My mom switched careers from engineering to teaching..."

**Relationship between Gavin's career goal formation and self-authorship development.** This section examines Gavin's self-authorship development in relation to his career goal formation over time (see Table 5.1 for an overview of Gavin's meaning-making assessment). Self-authorship refers to a "holistic meaning-making capacity...characterized by internally generating and coordinating one's beliefs, values, and interpersonal loyalties, rather than depending on external values, beliefs, and interpersonal loyalties. Self-authoring individuals take internal and external

responsibility for their thinking, feeling, and acting” (Boes, Baxter Magolda, & Buckley, 2010, p. 4). (For a description of developmental levels and specific positions leading to self-authorship, see Figure 2.17.) Specifically, in this section I will discuss Gavin’s development throughout his collegiate experience using a lens examining the interaction of self-authorship development and career goal formation (the process of constructing career goals).

Being a white male with a proclivity towards math and science influenced who he was and how he interpreted and interacted with the world. Gavin came into college with the impression that his undergraduate college experience would determine his career, which is consistent with his solely external meaning making. Over time, he figured out that a better way to make this choice was to align his career choice with his interests, identity, and purpose in life. He was very certain about this process during his first year of college: “I know when I come out of here in four years, even though I’m working really hard, I’m going to be pretty much set with what I want to do.” Gavin discussed switching his major from engineering to business throughout all four years of his interviews. As described in the prior section, despite remaining a mechanical engineering major, he explored business opportunities through his internships and student organizations.

Gavin’s collegiate experiences also influenced his self-authorship development. In this section, I reference ten meaning-making positions (see Figure 2.17 for a description of each of the ten positions) that are organized within three structural levels: three solely external (Ea, Eb, Ec), four in the crossroads (two each in entering the crossroads and leaving the crossroads) and three solely internal (Ia, Ib, Ic) (Baxter

Magolda & King, 2012). Gavin began college operating from solely external positions (i.e., Ea in Year 1 and Eb in Year 2). Operating from an externally-oriented perspective, Trusting External Authority (Ea) position during Year 1, both his choice of school and his major were strongly influenced by his parents' advice about what was right for him. Gavin struggled with selecting his career since he relied so heavily on external factors (e.g., others' advice, the notion of success as a high salary) and less on internal factors (e.g., his own values, interests, and passion for the field) to make this decision. The experiences of others, particularly his mother, upper-class peers, and alumni friends, influenced his career-related decisions.

By Year 2, Gavin still operated from an externally-oriented meaning-making capacity, but had developed to position Eb (i.e., Tensions with Trusting External Authorities) as reflected by his continued reliance on others to make his decisions; however, he now experienced tension when the feedback on exams conflicted with his self-perception of being good in math and science. For example, in his second-year interview he shared,

If I don't do well on the exams, I know that means I obviously don't know the material and I don't want to be bad at my job, so, it's kind of making me think that engineering might not be for me, that maybe I should switch out, and it's kind of making me reevaluate my talents. I've always, just kind of thought I was only really good at science and math and that kind of thing, but I've been trying to look at business and all that, and trying to see where my talents could take me with that.

Gavin's perception of being only good at math and science led him to choose a mechanical engineering major. However, he struggled to perform well in his engineering classes, which led him to reconsider his perception of his talents. Within this passage, Gavin's description reflects a change from a fixed mindset towards a

growth mindset since he became open to discovering his talents instead of holding onto his beliefs about his abilities.

By participating in CGFEs, particularly the internships, Gavin gained knowledge of careers that helped clarify his professional aspirations and provided dissonance that promoted developmental growth. The dissonance he experienced in his CFGEs led to his awareness of the need for an internal voice in Year 3 and to begin to construct and listen to his internal voice in Year 4. This is shown by his development to positions E(I), Questioning External Authority in Year 3 and E-I, Constructing the Internal Voice, in Year 4. For example, his emerging internal voice is apparent in this Year 4 comment:

I kind of built this mental image in my head of carrying my engineering books with me to work and, having them there at my desk and looking through things. And in some of my work experiences, at least with the engineering companies, there was – I've seen guys who for 20 years have been sitting at the same desk, had the same thermo – thermodynamic chart on the – on their wall, and that really didn't appeal to me, and it does appeal to some people and that's great, and it just – I didn't think it was for me.

Exposure to the engineering companies through internships helped Gavin realize that his own mental image of engineers was discordant with doing the same job for 20 years, and although this worked for others, it didn't appeal to him.

His internships and conversations with engineering professionals led him to question his assumption that engineers were not constrained to computers as much as business professionals were, as he stated during his Year 4 interview:

One of the big problems I've had this summer [at the accounting internship] was having to sit in front of a computer all day and just feeling like I was 100% dependent on my laptop. I had an internship two years ago where I was working in manufacturing and I got to be out on the shop floor a lot. So I was talking to one of my buddies from [a major engineering firm], and it was kind of surprising to hear him tell me about how much time he, himself, spends in front of a computer. And [this] kind of debunked that theory that meant that engineers

aren't really constrained to the same lifestyle that people on the business side of things are. I guess just the way the technology is changing, we're a little more dependent on it, and that was something that kind of opened my eyes from that standpoint.

Furthermore, through his internships, he decided that "the stereotypes are true." Gavin still relied on more simple constructions (e.g., "the stereotypes are true") to inform his interpretations about work environments and gave a lot of weight to this in his career decision-making process.

By his fourth year, Gavin had stopped exclusively relying on externalized meaning making as he developed within the crossroads. Gavin looked at both the world in general and at his career goal formation in particular more complexly now. At this point developmentally, he was able to consider others' experiences and also distinguish how his personality, talents, and interests differed from others he consulted about careers. As noted above, this was an important developmental accomplishment. This development is reflected in this comment:

Well, really I just kind of thought, what would I like to do personally, because I know these people that I'm talking to are a little different than me. Some of them were much better students in college and were more like free spirited, like to work with their hands a little more, didn't really care as much about school. So I try to kind of compare myself from that standpoint and think, how would my talents fit in versus this person's talents, and just try to compare how is – am I going to be able to produce at the same level as these people? Am I going to be given the same opportunities? And at the end of the day, I was really kind of shying away from that and I just figured some people were meant to be engineers and some people really weren't. And I'm not sure that I fit as a cog in the big machine of things appropriately, or as appropriately as these other people were.

Gavin's comment "what would I like to do personally" and his acknowledgement that others "are a little different than me" reflects that he can differentiate his own goals from others and thus, his emerging voice. His approach of comparing himself to others (e.g.,

their talents and productivity) reflects the external orientation that persists in the early crossroads. For example, Gavin's statement, "some people were meant to be engineers and some people really weren't" shows that he was still using less complex, bifurcated (i.e., either/or) thinking, which is still viable in early crossroads thinking. This also reflects Gavin's fixed mindset at that time. He acknowledged that interests and talents are relevant factors to include in his decision-making, but he still structured his approach in terms that are less complex (i.e., his bifurcated analysis of people who were "meant" to be engineers) and subject to external influences (e.g., comparing himself to others and their talents). Even though he made significant developmental progress during college, he wasn't self-authored by his senior year.

In understanding what contributed to Gavin's development, it is important to point out that three of the four career-related experiences that influenced Gavin's career goal formation highlighted in this case study were coded as developmentally effective experiences (DEEs), or experiences that trigger forward movement towards becoming self-authoring. For example, participating in undergraduate research was a DEE that had a positive impact on Gavin's self-authorship development. Through this research experience, Gavin learned to co-construct knowledge with graduate students and the faculty advisor of the project. The faculty member's faith in this student's research abilities led Gavin to rely less on external sources for knowledge and more on himself for knowledge construction. Participating in an influential philosophy course, also a DEE, challenged Gavin to evaluate evidence and the basis of his knowledge claims by helping him identify values that were consistent with his internal identity. Another DEE, the accounting internship, prompted Gavin to think more complexly about who he was

and what he valued and how this connected with his professional goals. This experience also helped him move away from external notions of success towards an internal notion of success.

Despite having multiple DEEs during college, Gavin moved four positions from being firmly external (Ea) to entering the crossroads (E-I) by the end of college. Even with all that richness within his experiences during college (e.g., several DEEs discussed above), he couldn't make the transition to leave the crossroads. On the one hand, his movement of four positions during college is noteworthy, as it reflects a substantive change in world view, such as his ability to see the value of different perspectives rather than only one correct perspective, and the emergence of his own voice in constructing his life. However, it also raises the question of whether there was enough challenge and support during college to fully promote Gavin's self-authorship development. For example, perhaps he could have had more courses like his philosophy class that linked content knowledge to life values. Nonetheless, Gavin's participation in CGFEs during college promoted both his career goal formation and self-authorship development.

**Conclusion.** Gavin started out college relying on his parents to guide his career decisions, including his choice of college and his major. As he participated in developmentally effective career-oriented experiences, he started to align his career decisions with his interests, values, identity, and goals. Whether his development gave him the capacity to think differently about his career goals or thinking about his career goals contributed to his development, I can't specify the direction of the influence.

There were several salient outcomes of Gavin's career goal formation process as he



navigated the crossroads; these included more complex meaning making, the construction of personally meaningful goals, confirming his major choice, and refining his career choice. Additionally, career goal formation experiences (CGFEs) helped ease Gavin's anxiety associated with the transition from college to work that he first noted in his Year 1 interview:

I definitely feel to go from here to the world would be less of a step than from high school to getting an actual job. So far college is helping me feel that way, and just seeing the upper classmen and the seniors and how they're pursuing their jobs and everything, it makes it feel a lot less anxious about getting a job in the real world.

Even though these comments are from the first few weeks of college, Gavin had already expressed his career focus. CGFEs helped Gavin make an informed career-related decision about post-graduation employment and reduced his anxiety about working after graduation. Specifically, Gavin learned that his academic major did not dictate his career by participating in CGFEs during college. Taken more broadly, Gavin's words echo the value of participating in CGFEs for students to apply the academic skills they gain during college in extra-curricular settings to carve their own paths towards personally meaningful career-related goals.

## **Case Study #2: Larry's Career Goal Formation**

As with the previous case, I first introduce Larry through his background and personal characteristics, then discuss his choice of academic major and his participation in career-related experiences that influenced his career goal formation during college. I conclude with a discussion of the relationship between his self-authorship development and career goal formation journey.

Larry is a White male who grew up in a small town in the midwest with two older siblings. He attended Wabash College, an all-male private four-year liberal arts college in Crawfordsville, Indiana (with a population of about 16,000 residents); it is located 45 minutes away from Indianapolis. Wabash College was founded in 1832 as an independent and non-sectarian college for men, as it remains today. Wabash has close to 900 male students from 33 states and 18 foreign countries with 70% of its students from the state of Indiana; it offers 25 majors. The student-to-faculty ratio is 10:1 and nearly 80% of the courses have fewer than 20 students.

Larry has an open-minded attitude and an interest in possibilities. Reflecting his varied interests, he was involved in many campus activities such as the Physics club, Russian club, comedy club, tennis team, and a fraternity. Even though he was raised in a small town that lacked diversity in terms of including people from different cultures and religious ideas, Larry's parents allowed him to decide if he wanted to attend church and he chose to be agnostic. In college, he participated in activities that promoted exposure to diverse perspectives and cultures such as attending colloquia on campus and studying abroad in Scotland. He did fourteen hours of work-study per week as a physics/math tutor and a tour guide for admissions. Larry's open-minded attitude

resulted in “falling into” decisions such as choosing Wabash as his college choice, majors, internships, and summer jobs. For example, Larry described his selection of Wabash:

I didn't like the idea of just going and being trained to do a certain job and fell into Wabash where you have a student/teacher ratio of 1:9. It's more about a liberal arts education where you're educated in everything and then told to apply it to any field. I really like the appeal to that and just the liberal arts of it and the quality and personal contact of it really felt like an education rather than training.

The idea of seeking an education rather than a training is consistent with his openness. Sometimes Larry's openness led to indecisiveness as reflected in his major selection and career goal formation, discussed in the next section.

**Larry's search for an academic major.** Larry entered college with a major in physics since he liked cause and effect and had an interest in pursuing engineering as a career. He elaborated on his interest in physics as a venue to study cause and effect when he stated, “Like if this happens, why does this happen and physics is definitely the route to that.” However, he decided to pursue pre-med instead of engineering because of an internship (immediately prior to his sophomore year) that “pretty much altered the life course” for him. This internship, working at a camp for kids from broken homes, had a profound influence on Larry's career goal formation. He was inspired by his work with the children at this camp and realized he wanted to have a career that helped others. Although he didn't talk much about his decision to pursue pre-med, he added a minor in chemistry to strengthen his progress towards the pre-med track.

Larry was interested in attending medical school and planned to take the MCAT during his study abroad experience in Scotland or right after he returned from this trip. He took physics, chemistry, biology, and literature classes during his junior year and

thought he was going to have a “fretful year” due to his heavy course load; however, as he stated, he felt the year “actually hasn’t been too bad.” He further elaborated about his experience when he said, “this is kind of to test the wherewithal this year because after this year, it’s just finish up my major, take some distribution [classes], maybe do a minor in chemistry, but otherwise the med school requirements are done.” During his junior year, despite what others told him, Larry expressed his desire to pursue a major in physics instead of a major more typically associated with pre-med, such as biology or chemistry:

When you’re a physics major and you’re doing pre-med and people are like why don’t you do chemistry or biology? Cause I don’t want to. I just want to do physics and I’ll tag on some chemistry and biology so I can get into med school...

Since he started college, Larry was interested in a physics major. In his junior year, he considered a joint M.D./Ph.D. program after doing a research-based internship.

However, after taking an influential biology course that he hated, he dropped the idea of pursuing an M.D. Instead, he wanted to pursue a program in nuclear engineering that incorporated his interest in physics. His interest changed from engineering to medicine and then back to a physics-oriented program due to his experiences during college.

**Career-related experiences influencing Larry’s career goal formation.** One of Larry’s friends described college as “having the responsibilities of a child and the privileges of an adult.” Larry described college as a time when:

You can do anything you want here and I mean you’re held accountable for your actions, but there’s no bills to be paid and no child to support right now and no wife to make sure you don’t have to sign divorce papers and you’re just kind of on your own as long as you get your homework done.

These quotes, from Larry’s second-year interview, depict the college years as a time in a person’s life without the responsibilities associated with adulthood. Students can participate in experiences during college without the stress of financial obligations such as a mortgage and dependent-care costs. With the time and space college provided for career exploration, Larry participated in several CGFEs including internships, research opportunities, and courses that affected his desired career path.

Table 5.2. Larry’s Career-Related Experiences, Effects, Developmentally Effective Experiences, and Meaning-Making Assessment by Year

Year	Career-Related Experiences	Effects	Developmentally Effective Experience (DEE)	Meaning-Making Assessment
1				Ec
2	Internship (Summer camp)	Knowledge of self	Yes	Ec
3	Internship (Physics research)	Exposure; Knowledge of career; Knowledge of self	No	Ec
4	Courses	Exposure	Experience added during coding process	I-E
	Internship (Virginia)	Knowledge of career	Yes	

I will start with columns 1-3 of Table 5.2 and refer to the DEE and meaning making columns later in this chapter. As shown here, Larry participated in four career-related experiences that influenced his career goal formation (CGFEs) during college. I next discuss these four experiences in greater detail.

**Internships.** Larry participated in three internships during college. His first internship was working as an assistant at a summer camp. For the other two

internships, he worked as a research assistant with a professor and a post-doc. For the purpose of this dissertation, I labeled these two research-based experiences as internships instead of undergraduate research experiences since Larry described them as internships.

*Summer camp internship.* Larry believed that a “twist of fate” led to his participation in an internship at a summer camp. He attended a presentation recruiting students for this opportunity since he was broke and wanted a free pizza lunch. At this point, he had no intention of doing this internship. Initially, he decided to do the internship because he only had \$30 in his bank account and the internship offered \$3,500 for two months of service. He didn’t realize what he signed up for until after he started working and realized that these kids from broken homes could only attend this summer camp if they were referred by a school or a social organization. This example illustrates Krumboltz’s emphasis on the role of chance or the idea of happenstance (associated with unpredictable events) on career goal formation. Furthermore, “individuals do not plan any of these circumstances nor do they control the learning experiences that are open to them” (Mitchell, Levin, and Krumboltz, 1999, p. 16). As a result of participating in this internship, he decided that he wanted to pursue medicine instead of engineering so he could altruistically help people and felt that medicine was a better fit for him “since it is something more dynamic.” In the end, he decided that he would have done this internship even if he wasn’t paid since he “really enjoyed it and felt like it was a worthwhile summer then.”

During his second-year interview, he described why this internship was tied to his desire to pursue pre-med:

[J]ust the fact of trying to help people and even if it was just helping kids. I don't think that I have the heart to every day deal with social problems and deal with broken homes and not take that home with me and feel that to be a personal burden that I should resolve instead of just doing the best I can so. I kind of want to be a doctor and help as many people as I could, but at the end of the day it's not something that I have to take home. I may have to, I've never really done much, but I don't anticipate having to really dwell on stuff or being called in at three in the morning because someone's dad beat their mom and that kid needs a place to stay.

As Larry expressed in the quote above, he wanted to become a doctor to help people without having the responsibilities associated with a social work-oriented profession.

However, Larry considered a career as a medical doctor without exposure to the medical field. This CGFE allowed Larry to gain knowledge about himself by identifying his desire to help others and gain knowledge about a career tied to this desire.

*Summer research internship.* Larry worked with a professor during the summer in a superconducting lab applying math (i.e., computations) to science. This was another chance incident or an example of happenstance where a professor approached Larry and asked him if he was interested in doing research in the summer. As Larry shared in his third-year interview,

I finally got to see science in the real world and that was really nice. Because instead of being like "Man this is terrible. I don't want to do this." It was "Yeah, I like this" and it felt reinforced.

Participation in this CGFE provided exposure to a potential career and allowed Larry to apply his scientific and mathematical knowledge to a laboratory setting. He realized that he enjoyed doing this kind of work (thus, he gained knowledge of self) and felt that this opportunity reinforced the connection between his academic and professional interests. Larry recounted the importance of his participating in this experience:

I think just finding out that you like what you're doing. I don't know. You can just go through so much and just pick something that's easy or pick something that you think you like and it's just kind of a nice relief, a sigh of relief to do what I liked and then find out that I did like it. And it wasn't monotonous or tedious to me and otherwise it was just a good experience to have working with the professor. You never thought you were going to do that.

Through this experience he felt he was on the right career track and it reassured him to keep going in this direction.

*Research internship in Virginia.* Larry found this opportunity through the National Science Foundation's (NSF) website under Recruit Experience for Undergraduates (REUs). Immediately after returning from his study abroad experience in Scotland, Larry participated in this nine-week summer internship doing computer simulations. Larry worked under the supervision of a post-doc. During his senior year, he expressed:

I enjoyed the work too, which was really nice, 'cause I think that's tough to find, work that you actually enjoy doing. And so I enjoyed that and I enjoyed kind of focusing in on hopefully what I'm going to do a little bit later in life.

This experience that was described as "pretty life-changing" by Larry and helped him think about his future career path by gaining career-related knowledge for a potential research-oriented career option.

***Influential biology course.*** Even though Larry barely talked about his experience of taking a biology course, this course had a significant impact on his career goal formation. Until he took this course, he was thinking about a joint M.D./Ph.D. program after he finished his undergraduate degree. However, during his fourth-year interview, Larry indicated "I took a bio class and I hated the bio class, and so I kind of dropped the M.D., 'cause I figured a lot of that would be the biology." This one course



changed his focus from medicine back to his pursuit of a physics-oriented profession “more along the lines of nuclear engineering.”

**Larry’s post-graduation career decision.** Larry was focused on his undergraduate education at the time of his interviews but was also in the process of determining the next phase of his life’s journey. In this section, I discuss the influence of CGFEs on Larry’s post-graduation plans. Before I discuss specific CGFEs, I will provide an overview of Larry’s beliefs about life’s purpose and his personal goals that influenced his post-graduation career goal formation.

Larry made an analogy of life being like a factory and described how people go through life like an assembly line in a factory:

I think if I could maybe generalize – I would say, I probably when I was in high school – whether this is my own belief or someone else’s beliefs put into my head, but it’s kind of a factory. You go through the system. You go get a Bachelor’s degree, a Master’s degree and then you go get a Ph.D. and then you get a job and you work a job and you have a family, and then you get happy and you just live your life out.

Larry saw life unfolding linearly with a chain of events that cause certain effects. For example, Larry saw the attainment of academic training, a job, and a family leading to eventual happiness.

During his interviews, Larry reflected on his life after college and the training he needed to fulfill his personal and professional goals. As a freshman, Larry described his life goals:

I want a good life. I think I guess really to look down in the future you start building the future now and I hope people realize that. I don’t know if the people, it’s kind of I don’t want a lavish life. I want a nice sized home, a car that won’t break down. I don’t want a lavish life at all. I do want a family and I want a good life for the kids and it just comes with I think seeing that and saying the only way to get there is work now. Work now.

Larry's personal goals influenced his academic and professional goal development. He saw his four years in college as a time to shape his career, set up the rest of his life, and make his time worthwhile. He elaborated on this perspective in his first-year interview:

You work your butt off if you need to for four years. I don't even care if you get four or five hours of sleep a night. You just do the work. Work your butt off now. It's four years. You go out in the workforce. You're going to have to work for 30 or 40 years so why not save yourself up. If you can do four years and set yourself up for 40; it seems like a good trade off for me...So I'll just do the work. I don't mind it. I guess the big thing is that I hate the idea of bills. I never had to pay bills, but I just want to have a bill and just not worry about it. It's kind of my goal, I guess. The house mortgage is paid and stuff like that. It's just living a comfortable life is what I want...So I'll take the uncomfortableness now.

Larry's words emphasized the value of college being a time for him where he could get the required training to fulfill his life goals without the stress of financial obligations that come with being an adult in the workforce. He saw peace of mind and being comfortable later in life as a return on his investment of hard work and training during college.

Larry noted that his most difficult decision was deciding what to do after graduation because he felt that this determines "basically what your life's going to be." Specifically, he discussed his post-graduation decision in detail during his fourth-year interview:

The biggest pressure I feel is just trying to figure out what I want to do in life, and a lot of times I guess I handle that – I just kind of ask myself, I try to reassure myself that I can't know exactly what I want to do in life. I can feel within reasonable limits how – what I want to do at the moment, and I can only just do that and then see either that reinforces that idea or see if it changes that idea into something that I hadn't previously thought of. But, I'm no soothsayer, so I can't see the future and I can't see how the experiences I feel I'd like to do will actually affect me. So to me, it's just kind of being patient and letting life kind of – the

give and take with life or whatever you want to call life, the interaction of life. But, doing something and letting it affect you and being open to how much it affects you and let it push you in whatever direction.

Larry indicated that he can't predict the future to determine if he will make a career-related decision that he will enjoy. Specifically, reflecting a more mature approach by his senior year, he showed that he was comfortable with the ambiguity of figuring out his future, indicating that he can't predict even how an experience he would like to do will affect him. This also reflects Larry's growth mindset in which he was open to opportunities to learn more about himself and explore unanticipated directions. Fortunately, CGFEs allow students to catch a glimpse of the future by trying out an experience in the present to determine if they're interested in pursuing a career path affiliated with this experience in the future.

Larry also stressed the importance of pursuing a career that you enjoy when he stated:

You get one life and it's probably just going to be just short of 90 years, which I don't think will be too long so just don't step on other people when you're doing it, but really do what you want to do while you're here.

For undergraduate students, many career options are available. How do students determine what they really want to do after graduation and in some cases for the rest of their lives? Participation in different curricular and extra-curricular opportunities becomes critical for students to explore career options to avoid premature closure on a career choice without adequate exposure or opportunities for self and career-related knowledge development. Larry participated in several CGFEs that helped clarify his post-graduation plans and helped him determine what he really wanted to do. For example, after participating in a summer camp internship, Larry wanted to pursue a

career helping others and felt that becoming a physician was a way for him to accomplish this goal. In his second-year interview, he described his interest in pre-med when he stated, “I think I do want to do pre-med, but again like I’m committing myself to a career goal.” At this point, Larry was still considering his options and contemplated doing a joint program for an M.D./Ph.D. or just an M.D. program. He learned about the M.D./Ph.D. degree option from a friend and from a medical physicist during a shadowing experience at a hospital with a medical physics program. He briefly contemplated doing a medical physics degree but decided against this option after his shadowing experience in which he thought the work was “very mundane, very much on the computer.” During his junior year interview, he described different career options he was considering as follows:

But I’m stuck between like a medical degree, just a plain doctorate is what they’re called, I don’t know what they’re called, but then an M.D./Ph.D. which is a research doctor and so that might, again it’s always kind of that selective process of you find out something new. I kind of like the sound of that. Doing medical research more than just in a hospital so I’m not sure. Those are two avenues, but whatever schools are open are good which I’ll look into sometime probably soon. I’ll just go after that.

Participation in CGFEs helped Larry shape his career-related interests and refine his career-related goals.

Furthermore, during his third-year interview, when Larry was asked about the biggest idea he gained over the last year, he provided his thoughts about his career goal formation:

I guess one of the biggest ideas might be the M.D./Ph.D. because it has my central focus in the sense now a career is becoming obvious. Like you said, the glass is half full and you’ve kind of weeded your way through distribution and you’ve went through two or three different careers by now that you said I’d like, I don’t like. To me it’s the idea that you have to make a choice that will impact the

rest of your life and not just for a year or two or five years. You're talking the rest of your life. That could be your career that you choose to work for 50 years and so that kind of perspective and trying to organize your life I guess is a central idea with me right now. It's what do I do to get there and that kind of idea is probably the biggest idea I'd say.

After participating in different CGFEs, he was in the process of refining his career choice. By his senior year, after completing two research-based internships, he clarified what he wanted to do post-graduation when he said,

...what I'm thinking about is a program more along the lines of nuclear engineering. So still kind of do the physics side of it, and physics seems to be the mainstay...I don't think get a Ph.D. in physics in general, but the nuclear side of it just seems to have an interest to me.

...  
I'm kind of trying to focus on getting out of school for a little while but still learning in the sense of doing. So, putting your hands on something and having a technical application...the Navy is going to be my first choice. I'll apply to grad schools as backup, but, and then if – and when I get into the Navy, I can expect that to be the next billiard ball as I look at it, and hopefully – it'll kind of help me determine a better direction so I can kind of hone in on something permanent.

This is an interesting analogy of looking at his application to graduate schools as a backup like “the next billiard ball” since billiard balls can represent a series or chain of events in the game of life. He also indirectly alluded to finding his direction in life similarly to the direction a billiard ball takes towards a pocket.

He still planned to take the GRE and apply to graduate programs. In his fourth-year interview, he elaborated on his perspective of life after finishing an undergraduate degree:

You either go on and get four more years of education, but this isn't when you choose college out of high school. Once you choose a graduate program, a lot more doors shut than a lot more doors open. You start to become a one track person and in general, if you don't even choose graduate school, then you have to figure out what sort of job you want to get, where you want to live at, what sort of income that you'd like to make and et cetera, et cetera, et cetera. Anything

you choose you're starting to choose what you're going to do for the next however long you live, 70 years. And to me, that's mind wracking.

Larry's linear way of thinking about life as a series of steps was stressful for him. He put pressure on himself by believing that the choices he made for life after graduation would affect the rest of his personal and professional life with a domino effect. Moreover, the concept of "a lot more doors shut than a lot more doors open" reflected Larry's fear of limiting options during graduate school.

**Relationship between Larry's career goal formation and self-authorship development.** This section examines the connection between Larry's self-authorship development and career goal formation over time (see Table 5.2 for an overview of Larry's meaning-making assessment). Specifically, in this section I will use self-authorship development as a lens to discuss Larry's development throughout the course of his college career, while examining the interaction of self-authorship development and career goal formation (the process of constructing career goals). Larry's collegiate experiences influenced his self-authorship development. In this section, I reference ten meaning-making positions (see Figure 2.17 for a description of each of the ten positions) that are organized within three structural levels: three solely external (Ea, Eb, Ec), four in the crossroads (two each in entering the crossroads and leaving the crossroads) and three solely internal (Ia, Ib, Ic) (Baxter Magolda & King, 2012).

During the first three years of college, Larry operated from a solely external position (i.e., Ec, Recognizing Shortcomings of Trusting External Authority). Larry brought several external formulas with him to college (adopted from his parents) that influenced his beliefs, sense of self, and interactions with others (e.g., avoid arrogance,

become responsible and mature, and treat people equally). These formulas affected how he approached and interpreted his experiences related to all aspects of his life including his classes, decisions, and relationships with others. Larry was open-minded, considered possibilities, and liked to keep his options open. His openness towards diversity and multiple perspectives may also have been based on formulas from his parents. Larry spent about four and a half months immersed in a study abroad opportunity in Scotland that had a profound impact on him (e.g., it fostered his independence and led to an openness to new and diverse perspectives).

Larry's open-mindedness was tied to his indecisiveness throughout college. He declared, "I'm really indecisive about a lot of things. That goes back to being agnostic. I don't think I really know enough to really set myself anywhere yet." He wasn't set on a career choice even as a senior; in fact, he kept changing his career goal pursuits based on different experiences he fell into. For example, he went to a presentation with a friend for a free lunch during his first year and on a whim signed up for an internship the following summer for children from broken homes. He found this experience meaningful and realized that he wanted a career that helped others, a realization that prompted him to change his career path from engineering to medicine. Then he did a research internship (during the summer before his junior year) based on his professor's suggestion. After this experience working in a superconducting lab applying math to science, he considered obtaining a Ph.D. to pursue a career as a researcher, but felt "stuck" when considering the options for pursuing that or becoming a medical doctor.

Larry valued the opinions and perspectives of external authorities (such as his professors) as he made his career-related decisions. For example, he spoke to a

medical physicist during a shadowing experience about her career-oriented interest and subsequently decided to pursue her goal of attaining an M.D./Ph.D.:

I was talking to her about interest and how she got into it. She recommended an M.D./Ph.D. program. She even said she was a medical physicist, but she wanted to eventually get an M.D./Ph.D. and so she was just going to work for five years with her Masters and then go and try and get that. Either of those sound immense.

Even as a junior, he relied on external formulas. For example, he believed that hard work will get you where you want to go, and professors can point out flaws in your thinking so you can know when you're wrong. During his senior year, his parents voiced different opinions about his Navy career choice. His mother supported his desire to become a navy officer; however, his dad was not supportive since he wanted him to pursue higher education. Larry mentioned that he tried "to just kind of accommodate their feelings and understand where they're coming from" while he recognized that it's his life and his decision. It's important to him that he's not "hurting someone or disadvantaging anybody" with his career choice. During his fourth year interview, he mentioned that he tried to reassure and appease his parents when he said, "even if I come out of the Navy and realize that's not what I want, you can always go back to grad school, and a lot of grad schools nowadays almost require you to have some work." As he was well into the crossroads developmentally (i.e., I-E, Listening to the Internal Voice), by then, external voices were still strong for him (e.g., he tried to appease his parents), even as he recognized that he needed to choose his own career path.

Even though Larry took responsibility for his career decisions, he indicated that he felt pressure with deciding what to do. Some of his pressure resulted from having no



clear internal criteria for making this decision as reflected in his words from his senior year:

I feel sometimes I'm getting behind, but at the same time I reassure myself that I'm just trying to do it thoughtfully. And by thoughtfully, I'm kind of just talking to people and I'm thinking about it and maybe there's not a lot of physical action. I haven't applied to a lot of places, I haven't done massive amounts of research. It's just kind of day-to-day thinking about what I want to do, what I'm looking for out of life and – that's going to be your next question. It's going to be very tentative, but maybe sort of that hands-on thing. Wherever that came from, really not sure where that came from.

He considered career options when he was “really not sure where that came from” regarding his desire to pursue a hands-on career. Larry's career decisions reflected his reluctance to narrow possibilities. Since he was tired of authorities telling him what to do, as a senior he decided to pursue a hands-on program in the Navy prior to going to graduate school.

He feared making a specific career choice since he saw this choice as permanent for the rest of his life during his first three years of college. During his senior year, his attitude changed. This change was reflected in his fourth-year interview when the interviewer asked, “How have your experiences over the last year helped you think about how you want to approach the upcoming year?” His response was:

I think it just teaches you to just do all you can. You apply to schools you like and you apply to programs, like the Navy program, that looks of interest to you, and you hope you get in, but if you don't, then life won't collapse inside yourself and you'll become homeless. You find another option. So I guess, you just do it. You apply, you don't worry so much about being rejected, and you can't really know whether or not you're going to get accepted. You can have a good feeling, I've done all I can, but at the end of the day, you have to do it and you have to let that letter of acceptance or rejection – whatever you call that letter. That letter of acceptance or they reject you come and move from there. But you can't really move from there unless you're there in the first place. And you can't get there unless you just do it and apply.

Larry's words reflect his resilient attitude and his desire to keep his options open with his intention of applying to graduate programs and the physics-based Navy program. There is a change in his thought-process by his senior year: earlier he expressed the belief that he needed to find a specific career path to set himself up for the rest of his life. As a senior, he was more comfortable with the uncertainty in life and was ready to explore and narrow career-related options as necessary. By this time, he was starting to leave the crossroads (i.e., I-E, Listening to the Internal Voice) and his internal voice had shifted to being in charge, but not consistently.

To understand what contributed to Larry's development, it is important to point out that two of the four career-related experiences that influenced Larry's career goal formation highlighted in this case study were coded as developmentally effective experiences (DEEs), or experiences that trigger forward movement towards becoming self-authoring. His internship at the summer camp for children from broken homes was a DEE. Larry's externally oriented meaning making was influenced by his realization that he wanted to have a career helping others as a result of this dissonant experience working with these children that was unexpectedly challenging yet inspiring. He expressed, "I don't think that I have the heart to every day deal with social problems and deal with broken homes and not take that home with me..." This realization prompted him to change his career path from engineering to pre-med to become a doctor to follow his passion of helping others without having the personal responsibility associated with the social services aspect of this work. This decision, to some extent, seemed to be based on his reliance on external formulas associated with his definition of being a good person.

The second DEE was the research internship in Virginia doing computer simulations through an NSF funded program through an historically Black university during the summer before his senior year. Larry felt this experience combined with his study abroad experience in Scotland immediately prior to the start of this research internship as “pretty life-changing” as he described the dissonance he experienced:

[J]ust in the terms of how you view people around you, just to go from a small town in Indiana to larger city in Scotland to small town in Virginia, where you’re absolutely the minority, and just kind of see how you react, and kind of all the situations and how people, live in all the situations, a good sampling.

As a White man, he felt that this experience (coupled with his study abroad experience) led to a greater awareness and appreciation of diversity, referring to himself as “absolutely the minority.” The research internship also helped him think about his next career steps after graduation; his first choice was serving in an officer’s program in the Navy related to nuclear engineering and his back-up plan was applying to graduate school. Even though Larry had a strong set of experiences that developed his internal voice, he fell short of becoming fully self-authoring by his fourth-year interview.

**Conclusion.** Larry’s participation in career goal formation experiences (CGFEs) promoted both career exploration and self-authorship development as he started to listen to his internal voice when making career-related decisions. Through these experiences, he had an opportunity to consider careers that he didn’t see as an option for himself. For example, he was pleasantly surprised that he enjoyed doing research, which led to his consideration of attending graduate school after his service in the Navy. The process of career exploration led Larry to gain knowledge about himself and potential vocations as well as lower his career-related stress. Subsequently, CGFEs,

especially those that also promoted his development, made a major contribution for Larry to construct more personally meaningful career-related goals.

### **Case Study #3: Elis' Career Goal Formation**

This case follows the structure of the previous two case studies: it starts with an introduction of Elis (her background and personal characteristics), then moves to her choice of academic major and her participation in career-related experiences that influenced her career goal formation during college. I conclude the case by discussing the relationship between her self-authorship development and career goal formation journey.

Elis is a White female who spent her childhood in Atlanta before she moved to a “preppy” and “conservative” town in Connecticut around seventh grade. Reflecting a fixed mindset, Elis described herself as “a little girl who was convinced that she would be an actress and didn’t need to go to college.” As she grew older, she realized that she needed further training and wanted: “to gain a good academic experience and to gain a good social experience...to make more friends” during college. She attended Hudson College, a small, private, four-year liberal arts college founded in the mid-1800s in a rural town in the northeastern United States. Approximately 2,000 undergraduate students and more than 600 graduate students attend Hudson College, with a student-to-faculty ratio of 10:1. There are more than one hundred student clubs on campus, including several clubs dedicated to theater and other performance arts. Reflecting Elis’ love of acting and her desire to make new friends, she starred in several plays. Hudson College has a focus on arts and culture, as well as human rights, and many forms of civic engagement. It also encourages students to individualize their studies by offering many opportunities for students to take individual tutorials in an area of their interest. Of interest to this case study, Hudson College has an office of career development

services that provides a variety of services including career counseling, online resources, career exploration assessments, internship assistance, and career events.

Elis lived on campus for three of her four years and was passionate about working as a tour guide for admissions, a job she saw as a backup plan for her future if a career in film didn't work out for her.

**Elis' search for an academic major.** Since childhood, she was interested in theater and saw herself as an actor. She was influenced by having participated in an artistic residency camp during high school that focused on theater; this subsequently affected her choice of college and program of study. She was interested in theater and film prior to entering college, so she specifically chose an artistic liberal arts college instead of a conservatory to explore both career-related interests and provide her with a liberal arts education that she desired.

Even though she had "a huge connection to theater," she felt that she was doing theater for so long that she was becoming bored and tired by it. During her second-year interview, she explained:

I never really became interested in film until junior, senior year of high school. Most the kids in the film program were making movies when they were four years old. And I have had some experience with theater, I was constantly acting when I was four and that was the thing I've been doing since I was little, but still I'm kind of late in the game. And all these kids saw, I don't know, Charlie Chaplin when they were 12 and I didn't see him until last year, which doesn't mean that I can't talk as intelligently about the movies and that I don't know as much as they do, just that I always felt the connection with theater and now it's kind of changing, so.

Even though her interest in theater was waning, in the summer between her sophomore and junior years, Elis worked as a director's assistant for a play that was not affiliated with her college. This experience helped Elis realize that she liked theater in general,

just not the theater department at her college. She was pleased to recognize that for her, theater was still a desirable career option. If she pursued theater, she wanted to become a director.

Choosing to take film or theater classes was an important part of her career journey, and choosing one over the other was a big challenge for her. She felt she needed to take more classes to decide on her academic program as reflected in this comment:

I'll be able to figure out whether or not I want to pursue both [film and theater] or either or, which I think is only something I'm going to gain from my classes experiences this semester and next semester so that's my main goal, is to figure that out.

Through her coursework, she wanted to figure out to which program of study she felt “a greater connection.” She felt more comfortable and connected with the students in her film classes than she did in her theater classes.

She decided against declaring both film and theater majors because she felt these programs are “really difficult” with “so many requirements for both” and it’s “a combination which doesn’t work too well together.” Ultimately, she selected film as her major by using her coursework to help make this decision. Elis described this choice: “So because that’s where my interest in art lay [portraying human consciousness], film seemed like a better medium for that...which I think is really a lot of what helped make my decision.”

She shifted from seeing herself as an actor in her early years of college to identifying as an artist. This shift in her identity corresponded to her struggle of deciding

between film or theater as a major. Her selection of film as a major also reflected the transformation of her identity from an actor to an artist.

**Career-related experiences influencing Elis’ career goal formation.** Elis participated in an influential artistic residency camp during high school. Since this experience occurred two years prior to college, I did not identify this as a CGFE. Nonetheless, this experience is noteworthy because it helped Elis gain confidence in herself and her career choice to pursue performance art at an artistic college.

Table 5.3. Elis’ Career-Related Experiences, Effects, Developmentally Effective Experiences, and Meaning-Making Assessment by Year

Year	Career-Related Experiences	Effects	Developmentally Effective Experience (DEE)	Meaning-Making Assessment
1				Eb
2	Job (Admissions office)	Knowledge of career; Skill development	No	E(I)
3	Major selection	Knowledge of self	Yes	E(I)
	Courses	Knowledge of career	No	
	Job (Director’s assistant)	Exposure; Knowledge of self	Experience added during coding process	
4	Internship	Exposure; Knowledge of career; Knowledge of self	Yes	I-E
	Courses (Senior project)	Knowledge of career; Knowledge of self; Skill development	Yes	

I will start with the first three columns of Table 5.3 and refer to the other two columns later in this case study. As noted in Table 5.3, Elis participated in six career-related experiences that influenced her career goal formation (CGFEs) during college. I next discuss four of these experiences (i.e., courses, job, internship, senior project) that



particularly influenced her career goal formation. As noted above, Elis' search for an academic major permeated her entire collegiate experience and was related to all of the CGFEs discussed in this section.

**Courses.** As noted above, Elis decided to take different classes in the theater (e.g., directing class) and film (e.g., production class) departments to help her decide between majoring in theater or film. Specifically, she made her first film and found that challenging, but she gained knowledge about herself, worked towards figuring out her "own aesthetic," and developed her technical skills. Taking another course about the influence of theater on film through the film department "cemented" her decision to pursue film. Through this experience, she gained career-related knowledge and realized that she was "interested in filmmaking as an ability to show conscious human thought." Regarding the second semester of her sophomore year, Elis further described this decision by providing her insight on knowledge she gained about herself through this process:

I decided to try and not take any theater classes and see how that would go, if I would die, or if it would be a good thing. And it actually ended up not being that radical of a change for me, because while I've been taking theater classes I haven't really been too involved in the theater department in general, I wasn't really doing any plays or anything. I'm not taking any this semester either, so it's kind of been a full step in the other direction I guess in some ways. But it was a good decision, so.

Taking courses in both the film and theater departments allowed Elis to make an informed decision that majoring in film was a better fit by "having the knowledge to compare the two [programs]." Furthermore, through her coursework, Elis gained career-related knowledge and knowledge about herself to make a career-related decision that allowed her to pursue personally meaningful goals.

**Admissions Office Job.** Elis was fortunate enough to get her “dream” job working as a tour guide for the admissions office. After working as a tour guide during her sophomore and junior years, she was hired during her senior year “to make tours for their [admissions] website.” This opportunity allowed her to make films for the admissions office by applying her academic knowledge and technical skills as a film major. During her senior year interview, when Elis was asked what she saw herself doing right after college, she replied: “given that I’m a tour guide...is to be a college counselor and be involved in the admissions process as a way to be involved in academia.” Since her academic interest and professional goal was to become a film director she probably would not have considered a job as a college counselor if she hadn’t had exposure to working in the admissions office.

**Internship.** Elis interned with a film production company in New York City (NYC) during the summer before her senior year. This internship, which she found through the career development office, did not go as she expected. She was exposed to a post-production facility (where film is edited) that felt more like a rental space where she didn't get to meet the editors or sit in on the process; rather, she worked as a personal assistant, getting the staff whatever they needed, such as making coffee or cleaning the space. Through this experience, she realized that she did not want to do work (as she did in this internship) that did not advance her professional goals.

During her fourth-year interview, I asked Elis what she gained from this internship. She replied:

I think the biggest thing [I gained] was that it was really kind of where I was seeing myself going when I graduated. And participating in that for a short amount of time, for two months, really allowed me to see that wasn't where I

wanted to go. Which was great because I didn't end up moving there and doing that and then investing more than two months of practice time into it. So that was kind of a huge deal actually. And I think it really informed not only thinking what I want to do after college but also how to approach my senior project which is a way to really fully take on a film the way I want to and see if that's something that I want to continue doing. That's another option. It's kind of like trying out a different film internship in a way. If that makes sense.

Specifically, she had "been looking at going into film as a business" and this internship made her feel "a little bit disenchanted about Hollywood film making." She realized getting into Hollywood is hard and that she'd have to work someplace that she didn't want to work in the process of trying to be successful. Prior to this experience, Elis "expected to graduate and move into New York City;" however, she described NYC as "kind of dirty and claustrophobic and a little bit unfriendly" and considered living in a warmer and friendlier place in the South instead. Participating in this internship allowed Elis to try out a career option during college that not only helped her refine her career goal (i.e., by eliminating a career option from consideration), but also, helped her decide that she didn't want to live in NYC after graduation. Moreover, as a result of this internship, Elis had a major career-related revelation and decided she wanted to make her own films as opposed to working on an aspect (e.g., editing, set design) of a Hollywood film team. Subsequently, this internship informed her senior project that I discuss next.

**Senior Project.** Elis was in the process of working on her senior project during her fourth-year interview. She saw this project as "a different film internship in a way" in which she was a "one-woman production" making "an installation with a few different videos." Creating such films was another option she considered for her career after graduation. She was excited to try out this potential career option during college, so

she could decide if she wanted to professionally continue making films like this in the future. She chose to examine coming-of-age stories based on her interest in “the representation of the mind and how that happens in films.” She described this interest during her senior year interview:

I realized that what I've kind of always been interested in all along, what I've always had an extreme passion for and never really let drop were coming of age stories. And on top of that the other thing I was really interested in was the representation of the mind and how that happens in film, whether it's literal, it's psychological and how directors choose to portray that. And I wanted very much to try and portray that myself. So I realized that my kind of very close relationships, these coming of age stories really had a chance to pan out in the space of the mind that I was interested in.

Her advisor helped her improve this project through regular meetings with feedback and helped her develop her technical skill set (e.g., determining which camera to use).

In Elis' own words, the senior project “affected me because I really had a chance to explore something I'm really excited about and kind of test out what it's like to be an artist working on a really, really big project...” Elis summarized what she gained from this CGFE:

And on top of that, not having any experience before [Hudson College] in film and leaving with an entire installation under my belt which is kind of a huge deal I guess to achieve in four years to come to this whole other skill set and knowledge set that did not exist at all before.

Through this project, she gained knowledge about herself related to her project management style and tendency to procrastinate even though she was so interested in this topic. This experience helped Elis select her area of interest as an artist and filmmaker. She also gained career-related knowledge and developed her skills by testing out what it felt like to be a freelance movie maker.

**Elis' post-graduation career decision.** Elis saw two possible options for post-graduation. She described these two options during her fourth-year interview as:

One of them would be making films in a Hollywood level where the breakdown becomes extreme. So you're making a film but you're only editing and there's ten other people who are also editing the film. So the kind of role that you play is very, very, very specific and from what I can tell (which probably happens case by case) is a little bit less creative. The other option is to make films for myself. To shoot it, edit it, and do all those little jobs that happen in Hollywood all by myself and then instead of trying to send it to a box office to put into art gallery spaces, to submit it to smaller festivals and try to make money that way, the same way that someone who is a painter is trying to make money. Which is to say they're probably trying to make paintings they can sell to get into museums and then sell to clients specifically. It's just kind of a hard way to make money that latter way.

She decided that she didn't want to pursue the first option related to Hollywood after participating in an internship with a film production company. She used her senior project to test out the second option she described above. Participating in CGFEs helped Elis decide that she wanted to pursue making films after graduation instead of performing and/or directing theater productions. Elis articulated during her fourth-year interview:

So with film, which the obvious thing is going into Hollywood, is I could teach film, I could make my own films to go into galleries, I could work with a small company and make films for them, which is actually what I'm doing a little bit now with the admissions office. I've been a tour guide for a while now and they've hired me on to make tours for their website, which is really exciting. I'm kind of opening up my option a little bit.

Elis kept her options open while she considered several different possible career paths.

In addition to CGFEs influencing Elis' post-graduation career path, her positive experience working with the career development office through guidance on career options and general career-related advice also shaped this decision. During her fourth-

year interview, she spoke specifically about the impact of career development services on her career goal formation:

I've also been speaking to the career development office. They've helped me a lot initially getting the interest in the first place, but I also presume we spoke probably at least five times last year about finding an internship. I've been talking to them about what I've taken away from the internship and how that has been informing where I want to go and then on top of that, what are my options...So they've been really great to speak with.

Elis' experience with career development services was reflective of her career-related attitude overall. In particular, she weighed different career options and appreciated considering many possibilities.

Also, during her fourth-year interview, she articulated the value of transferable skills she gained through her liberal arts training:

You come here and you learn a lot of different things and no matter what you're studying your learning skills totally go into anything. So because of that studying film doesn't even mean that I have to go into film. Not only that, it doesn't mean if I do go into film I can only do it one way. So that kind of attitude about how you're studying things and how it affects what you're going into really allowed me to think about opening up my options and not just looking at it one sided.

She didn't see her undergraduate major as limiting her career options; rather, she saw her college education as a foundation for choosing a career path that was right for her. Participating in the CGFEs helped Elis pursue meaningful career goals that aligned with her identity, interests, and desires.

**Relationship between Elis' career goal formation and self-authorship development.** This section studies the link between Elis' self-authorship development and career goal formation over time (see Table 5.3 for an overview of Elis' meaning-making assessment). Specifically, I examine the interaction of self-authorship development and career goal formation throughout Elis' college career. In this section, I

reference ten meaning-making positions (see Figure 2.17 for a description of each of the ten positions) that are organized within three structural levels: Solely External (Ea, Eb, Ec), Crossroads: entering the crossroads (E(I), E-I) and leaving the crossroads (I-E, I(E)), and Solely Internal (Ia, Ib, Ic) (Baxter Magolda & King, 2012).

Elis started college operating from a Solely External position (Eb). Even though she relied on authorities at that time (i.e., as she entered college), she experienced tensions as she explored who she was and what she wanted to become. For example, during Elis' first-year interview, she spoke to her anticipated clarity of identity and purpose: "I'm at college to question who I am and figure out who I am and, it's a huge process and that's why I'm here. I'm here for a reason and I know that's the reason..." Elis' words reflect her questioning outlook during college. Identity development was a theme that permeated her entire college experience. She started college identifying herself as an actor and ended up seeing herself as an artist. Selecting her major was more than just an academic decision: it was tied to her identity as an artist and whether she wanted to be identified as a "theater person" or a "film person." In high school, she was viewed as a "theater kid" who had already chosen her career path:

And I think what's difficult for me is that in high school, kids would be like, "you're so lucky, you already know what you want to major in, in college, you don't need to worry about it at all."

In college, she resisted this external definition by her high school peers identifying her as a "theater kid" when she experienced a "slump" with theater and decided to pursue a different major leading to another career path. Specifically, she described that "I'm feeling a kind of disconnect, I think it might personally just be because I've been doing it [theater] for so long and I've slowly just kind of fallen out of love with it." In particular,

reflecting a fixed mindset, she had a hard time letting go of her identity associated with being a “theater kid” even though film felt more aligned with her interests and professional aspirations. This took place during her second and third years of college as she struggled to make sense of her identity and career aspirations, and is reflective of Elis’ early Crossroads meaning making, E(I), in which her internal voice was coming into play/was present/discernible in her description.

Elis became interested in film due to several external influences; these included her boyfriends during high school and college:

I got into film junior, senior year [of high school] because I had a boyfriend who was really into film. And then this past year, I had a boyfriend who's also really into film, and so I've been able to just pull from their resources because they were the kind of people who were interested in it since they were four.

She wanted advice from her film and theater professors to help her choose her major and let her know if she was making “a smart decision” by indicating “how good of a director” she was since she was working off her instincts instead of what she had learned in the field and wanted to know if her instincts were “way out in left field.” Even though she turned to her professors for guidance, she articulated that her professors’ opinions are just their own opinions and that she ultimately needed to make this decision based on what was best for her. During her junior year, she echoed this Crossroads thinking and the emergence of her internal voice when she said, “So, I'd like to talk to my professors and see if they can give me any advice and at the same time, I don't want to let what one professor says make my decision.” Taking an influential film class helped Elis solidify her decision to pursue film both academically and professionally.



She also consulted her parents and career counselors since they provided her with options and didn't force her to make an immediate choice, as reflected in her words during her fourth-year interview:

And the nice thing about them [career development office staff] is that they really give me a lot of options and they don't make me feel like I have to decide anything now. I can consider a lot of different things and come to one of them next year and then always come back to something else and that picking a career doesn't mean picking a career for the rest of your life, but for the moment, and being flexible with that changing.

She relied on external sources even though she was aware of the need to listen to her own internal voice. She recognized that these external sources just presented their opinions and options. She didn't feel compelled to make a choice immediately; not choosing immediately gave her time to evaluate the options, which is consistent with early Crossroads thinking in that seeing these options as legitimate was still a fairly new idea to her as she reconsidered how to make a career decision. Taking an influential film class helped Elis solidify her decision by listening to her internal voice to pursue film both academically and professionally.

To understand what contributed to Elis' development, it is important to point out that three of the six career-related experiences that influenced Elis' career goal formation highlighted in this case study were coded as developmentally effective experiences (DEEs), or experiences that trigger forward movement towards becoming self-authoring. Throughout college, Elis struggled with determining who she was as an artist, what she wanted to pursue for her career path, and how she processed advice from others (especially peers and professors). For example, the developmentally effective experience of choosing her major and desired career path led Elis to reflect

and grow as she reconciled conflicts between what others expected of her and listening to her internal voice. Specifically, prior to her internship with a film company in New York City, Elis had positive expectations for this experience and thought she knew what she wanted to pursue professionally and where she wanted to live after graduation. However, at the conclusion of the internship, Elis reevaluated how she made sense of herself as an artist and realized that she wanted to pursue a personally meaningful career path that reflected her interests and desires even though this would be more challenging and less profitable than working on a Hollywood-style production. After she finished her internship, Elis utilized her senior project (another DEE) to test out her career-related interest of making her own films and explored her passion and identity as an artist. The demands of these career-related experiences (i.e., her internship and senior project) prompted the emergence of her internal voice.

Elis developed a more internally-oriented interest in film through her own research on films and directors. Her efforts establishing her identity as an artist pursuing film prompted her development. She also benefited by making developmental gains through her classes and internship. For example, by listening to her internal voice during her internship, she reconsidered a career within the film industry, and realized that she didn't want to live in a city as large as New York City. This experience also allowed Elis to recognize that she didn't want to be a film editor; rather, she wanted to make and manage her own films. The career related contexts of these featured experiences that provided rich environments for Elis that challenged her understanding and expectations of knowledge, self, and relationships, and that through these experiences, she not only developed a career focus, but also developed from Solely

External to Leaving the Crossroads. Furthermore, developing a strong sense of an artistic identity that reflected her internal voice helped her negotiate different obstacles and challenges during her college career.

**Conclusion.** Elis made a comment during her fourth-year interview that indirectly speaks to the relevance and importance of participating in CGFEs during college:

I would assume for a lot of people, it's kind of difficult to evaluate what it is that you want and what it is that you're passionate about and then on top of that, once you even discover what it is, to kind of figure out how you are able to do that and how to find time to do that and how to find the resources to do that and how to find the energy to do it.

Elis' CGFEs, for example, allowed her to evaluate what she wanted to do and clarify how she wanted to pursue her career goals. Participating in the career exploration process led Elis to select her major, refine her career choice, and gain knowledge about herself that led her to think about herself and her career options in more complex ways that drew upon her internal voice, leading to her identity development.

Elis started college operating from a Solely External orientation; however, through her CGFEs (particularly DEEs), she started constructing her internal voice and used this as a guide as she finished her collegiate journey and embarked on her professional pursuits. Elis' career exploration and self-authorship development was intricately tied to her CGFEs that led to her identity transformation from an actor studying theater to an artist studying film with the desire to make her own films after graduation. Even though Elis participated in three DEEs that influenced her career goal formation, by the end of college she was still discovering her internal voice and had not yet become self-authored.

## **Cross-Case Thematic Analysis**

I begin this section by offering some observations about my three case studies to provide context for my thematic analysis. Then, I discuss themes that emerged across these case studies. All three of the students highlighted in my case studies described the impact of participating in CGFEs on their career goal formation.

**Theme 1: Evaluating interests and talents through first-hand exposure to the field.** Students gained exposure to career options through CGFEs that they had not previously considered, due in part to a lack of awareness. For example, Larry participated in a physics research experience since he was approached by his professor to engage in a summer research opportunity. This exposure to research led to knowledge about himself (i.e., that he enjoyed doing research) and knowledge about careers (i.e., a job as a physics faculty researcher). Often exposure can lead students to gain knowledge about themselves and/or knowledge about careers. This awareness and knowledge led students chosen for these case studies to reevaluate their interests and talents. As an engineering student, Gavin participated in an accounting internship at a Big Four accounting firm that led to a job offer he accepted after graduation. Gavin didn't think he could work in the accounting field without a business degree; by participating in this internship, he realized that a student's undergraduate major doesn't preclude them from pursuing a career in another field. Undergraduate degrees help students gain knowledge and skills that are transferrable to other fields and areas of students' interest. Like Gavin, Larry was interested in engineering and never realized

he could consider a career in medicine or research until he participated in internships and research experiences that led him to realize his interest in research. This interest led him to desire a career in research after serving in the Navy.

For some students, career choice refinement is based on clarifying interests and talents. For example, Elis came to college with an interest in a performance art; however, she was unsure whether she wanted to pursue theater or film. She started college with an interest in theater and realized her true passion was with filmmaking. She realized she was interested in making films on her own after she participated in an internship that opened her eyes to Hollywood-style filming. Essentially, she decided not to pursue filmmaking in this capacity since the internship was very disappointing, she felt that the realization of *not* wanting to pursue a career path is beneficial in that it can save students time and grief after graduation. On the other hand, her senior project allowed her to test out her desire to explore “the representation of the mind and how that happens in films.” This experience captured the essence of what she wanted to do after graduation and through this experience, she gained the knowledge and skills she needed to turn her interest into an achievable and personally meaningful career goal. Elis did not make this decision in isolation: she consulted others such as counselors in career development services during this process (as I discuss in the next theme below).

**Theme 2: Impact of advising and counseling.** All three students at least briefly mentioned career development services in their interviews; all the references to this support service were positive. Elis spent the most time during her interviews recounting the valuable impact of career development services on her career goal formation. She described multiple meetings in which she met with counselors who not

only helped her identify an internship, but also, helped her process what the internship meant regarding her interests and potential careers.

Interestingly, out of nineteen CGFEs reported by Gavin, Larry, and Elis collectively, only one of these was related to advising (e.g., academic, career-related, personal). The one advising-related experience reported by Gavin was about peer-to-peer advising (i.e., talking with friends at major engineering companies). None of these students talked about academic advisors influencing their career goals, nor did this show up in the larger data set. In some cases, students discussed the impact of faculty advisors and their peers on their career goal formation. It is possible that students didn't see the administrative distinction between university-wide academic advisors, counselors, and department advisors (faculty). In part, not hearing about experiences with academic advisors might have resulted from using a secondary data set that didn't focus on career-related issues. It's remarkable that enough students described their career goal formation during their interviews (without being prompted for this discussion) to warrant a sufficient sample for my study.

**Theme 3: Connection between CGFEs and DEEs.** This theme gets at the heart of understanding the relationship between career goal formation and self-authorship development. Of the nineteen career goal formation experiences reported by Gavin, Larry, and Elis collectively, eight of these experiences (42%) were assessed as developmentally effective (DEEs), that is experiences that promoted complexity of meaning making. Some of these experiences facilitated developmental growth by prompting students to see their sense of career identity in more complex terms. For example, Elis' participation in an internship with a film company in New York City helped

shape her identity as an artist and subsequently led to reflection about how she saw her identity fitting with her post-graduation career goals. Elis took what she learned about herself in this internship and applied it to her senior project (another DEE) to further mold her career goals as related to her identity. Her internal voice emerged through the demands of these career-related experiences (e.g., the disconnect between her optimistic expectations about her internship and the reality of working on a Hollywood style film production as essentially a personal assistant). Gavin's case provided another example of identity development connected to career goal formation through developmentally effective experiences. Specifically, his accounting internship led him to think more complexly about how his identity (i.e., who he thought he was) fit with his professional goals; assessing this fit caused him some dissonance. Gavin struggled with whether he valued or defined himself through his potential financial success and charitable contributions. He moved away from external notions of financial success based on how much wealth he accrued towards a more internally defined sense of professional success based on what was important to him (e.g., service work, philanthropic contributions).

In addition to promoting identity development, DEEs also helped students rely less on external authorities and listen more to their emerging internal voices. Although all three students grew from a developmental perspective, none of these students became fully self-authored during college. However, they did show notable developmental gains throughout their college years, entering as Solely External and ending college in the Crossroads (see Figure 2.17 for a description of the 10 meaning-making positions). For example, by the end of college, Gavin moved four positions,

from being Solely External (Ea) to Entering the Crossroads (E-I); Larry moved three positions from being Solely External (Ec) to Leaving the Crossroads (I-E); and Elis moved four positions from being Solely External (Eb) to Leaving the Crossroads (I-E). Some of the DEEs exposed students to dissonance that promoted their developmental growth through reflection. Larry, for example, was struck by the social issues children from broken homes faced; reflecting upon this experience, he said that he didn't have "the heart to every day deal with social problems and deal with broken homes and not take that home" with him. The dissonance he experienced working with such children led to his decision to pursue a career in medicine to help others in a different capacity.

Gavin, Larry, and Elis all participated in a series of career-related experiences that were formative towards their career goal formation. Sometimes these students participated in experiences that helped them discover their career-related passion, other times, the experience helped them eliminate a career option from consideration. Nonetheless, each of their career-related experiences had a role in their career goal formation journeys. Regarding their development towards self-authorship, these students participated in career-related experiences that prompted their growth. For example, during a research internship, the faculty member's faith in Gavin's research abilities led him to rely more on himself for knowledge construction and less on external sources for knowledge. In all three case studies, these students' career goal formation and self-authorship development journeys were woven together to help them construct personally meaningful career goals.



## **Chapter 6: Implications and Conclusion**

The purpose of this study was to explore the relationship between meaning-making capacity and career goal formation through college students' interpretations of their career-related experiences. Specifically, this study examined these experiences from the student's perspective to better understand how students construct and understand their career goals. In this chapter, I first provide a reconceptualization of my conceptual model based on the data in this study and then offer implications and recommendations for higher education theory, research, and practice.

### **Revised Conceptual Model**

The model captured in Figure 6.1 is a revised version of the Model of Career Exploration I introduced in Figure 2.15. This section will describe the components and the relationships among the components depicted in this model. Please note that Figure 6.1 is only the part of my conceptual model that focuses on career goal formation. I conclude this section by presenting a more complete conceptual model that incorporates both career goal formation and self-authorship development.

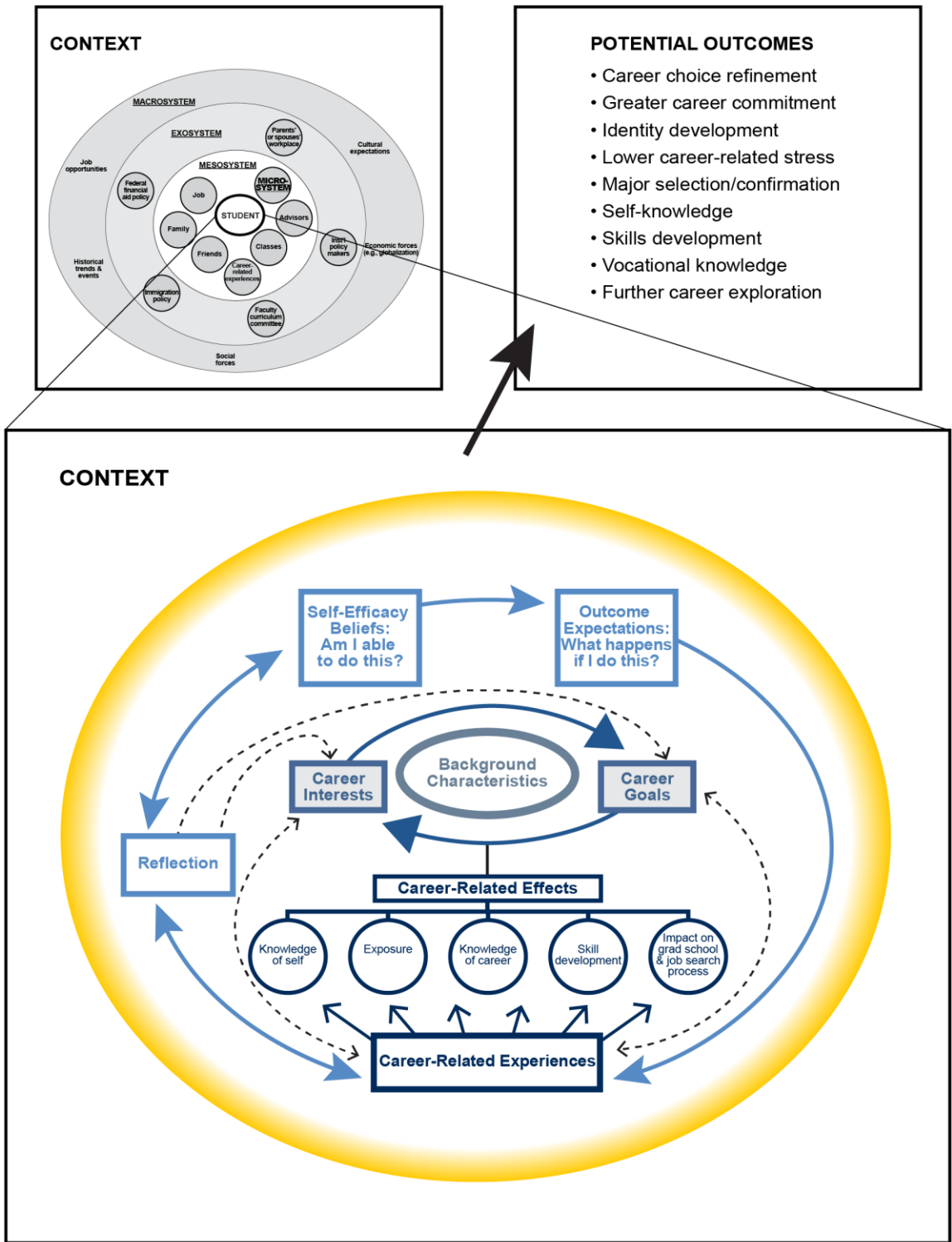


Figure 6.1. Model of Career Goal Formation.

After analyzing 216 career-related experiences reported by 73 students and the three case studies, I was able to identify a different array of elements to inform the career exploration process. Based on the empirical data from my study, I revised my earlier Model of Career Exploration; this is presented in Figure 6.1. This model attempts to capture a continuous process that evolves; it's literally capturing a snapshot in time. It includes a pictorial representation of what encompasses context for college students (Figure 2.14) that identifies a variety of contextual influences that are particularly relevant to discussions of career goal formation as related to college student development. The interplay and complexity of career exploration is depicted within a web of contextual influences that affect or are affected by the student (see Chapter 2 for more details describing contextual influences affecting career exploration and self-authorship development). The relations among the elements are shown by the arrows to capture the fluid and dynamic nature of career goal formation. The use of double-headed arrows conveys that none of these components function in isolation since they influence and are influenced by each other.

At the center of this model are students' *background characteristics* that affect how students perceive the world, identify themselves, and interact with others. These characteristics represent a student's unique traits, such as ability, age, ethnicity, gender, health/disability, personality, race, and sexual orientation. In addition to these traits, background characteristics also include other aspects of a student's life, such as experiences during childhood and kindergarten through high school.

The concept of career interests represents what the student desires as related to career goal formation. The box labeled *career goals* represents the occupational goals

that a student is interested in pursuing after graduation. The concept of *career interests* in this conceptual model is connected to *career goals* since career interests are affected by and affect career goals through *reflection*. There are dotted lines with an arrow from *reflection* to both *career interests* and *career goals* since students process their *career-related experiences* through reflection when developing their career interests and career goals. There are dotted lines with double-headed arrows linking *career interests* and *career goals* to *career-related experiences* since sometimes career interests and/or career goals influence a student's participation in career-related experiences that align with their career interests and career goals. On the other hand, career-related experiences sometimes shape a student's career interests and subsequently their career goals.

There are multiple sets of solid and dotted lines going in and out of the box labeled *reflection* to represent the important role of reflection in the career goal formation process. Students reflected on their career-related experiences either on their own or during the WNS interviews, and doing so seemed to help them realize their true interests and passions; this in turn led them to construct personally meaningful career-related goals. Sometimes students reflected on their interests and/or goals prior to engaging in a career-related experience.

While reflecting on career-related experiences, students described career-related effects that arose from participating in these experiences. These are shown in the circles under the box labeled *career-related effects* (knowledge of self, exposure, knowledge of career, skill development, and impact on graduate school and the job search process). (For definitions and details describing these career-related effects,

see Chapter 4). The role of self-efficacy in this conceptual model is important to discuss and clarify since the self-efficacy construct emerged as an influence on career goal formation for students participating in career-related experiences. Interestingly, students not only talked about career-related experiences having an effect on their self-efficacy beliefs, but their descriptions revealed details that I was able to use to identify and code four different sources of self-efficacy: mastery, modeling, social persuasion, and physiological state (see Chapter 4 for further details and examples of these four sources of self-efficacy effects). Instead of including the impact on self-efficacy beliefs as a career-related effect (i.e., as a circle above the box labeled career-related experiences), I chose to leave *self-efficacy beliefs* as a separate component within my conceptual model due to the important role of self-efficacy beliefs in the career exploratory process as identified by my literature review.

Furthermore, *self-efficacy beliefs* and *outcome expectations* are included in this figure in separate boxes to show the interplay of these components in influencing students' interest development and career goal formation. Within this model, career-related experiences affect self-efficacy beliefs, which are "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). Subsequently, self-efficacy beliefs affect outcome expectations, which are the consequences or expected results from performing certain behaviors. Self-efficacy beliefs are concerned with abilities (e.g., am I able to do this?), whereas outcome expectations focus on anticipated outcomes or consequences of actions (e.g., what happens if I do this?). There is a double-headed arrow between *self-efficacy beliefs* to *reflection* and then between *reflection* and *career-*

*related experiences* since upon reflection, self-efficacy beliefs can influence the choice of career-related experiences by students. On the other hand, sometimes students reflect on their participation in career-related experiences and this affects their self-efficacy beliefs. Reflecting on self-efficacy beliefs can lead to outcome expectations for students. Reflection seemed to play an important role in helping students realize their own self-efficacy beliefs and outcome expectations that influenced their career goal formation.

In this study, the career exploration process produced the following potential outcomes: career choice refinement, greater career commitment, identity development, lower career-related stress, major selection/confirmation, self-knowledge, skills development, vocational knowledge, and further career exploration. These outcomes are based on my literature review and were confirmed by the data collected and analyzed in this study. There are two changes in the box containing potential outcomes from the original Model of Career Exploration (Figure 2.15) to the revised version (Figure 6.1). The first change is that *potential outcomes* are now alphabetized except for further career exploration which captures the ongoing nature of this process. The second change is that term *career* was added to further exploration, so this potential outcome is noted as *further career exploration* in the revised model.

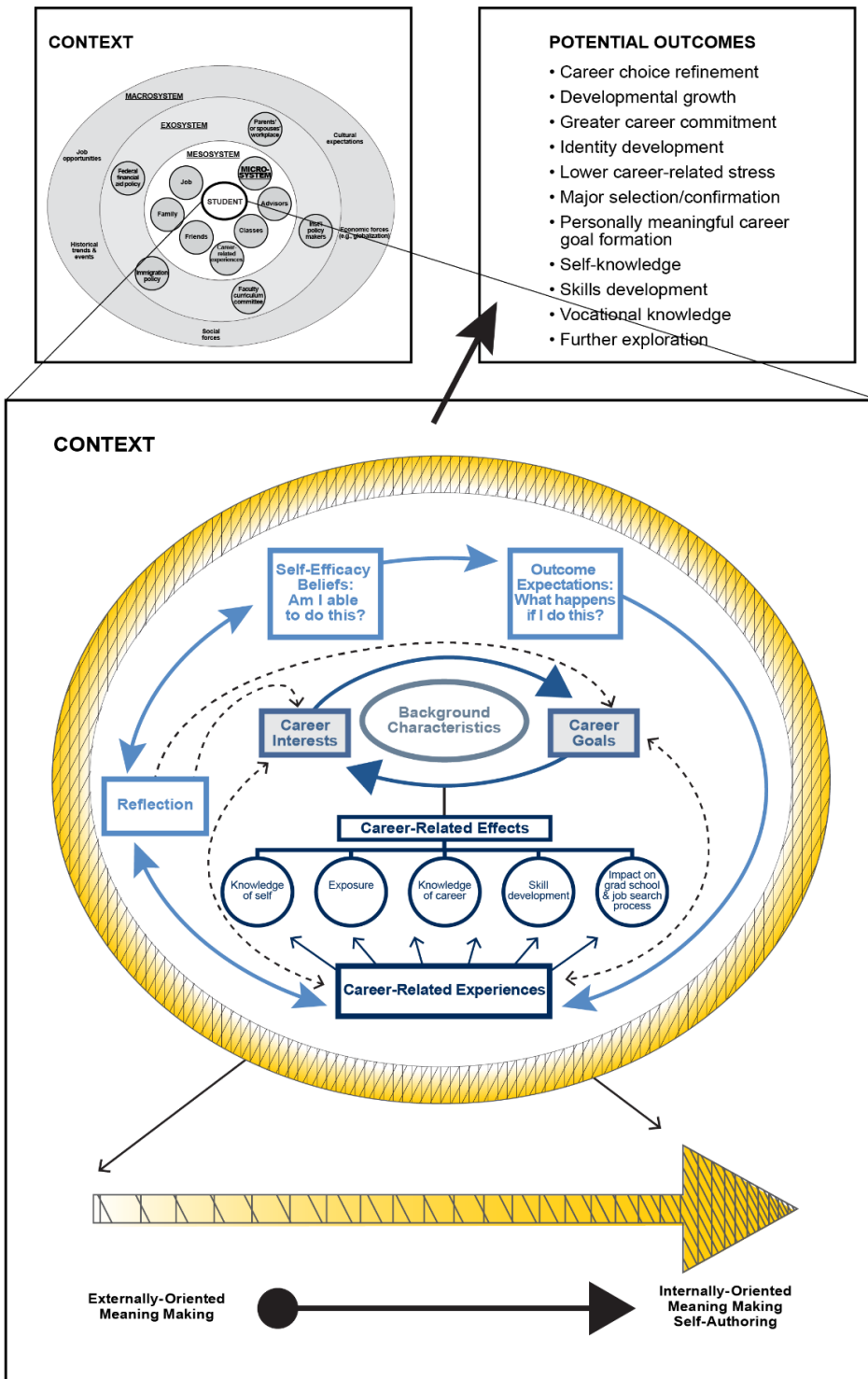


Figure 6.2. Career Goal Formation: Integrative Model of Career Exploration and Student Development.

All the information described above regarding the Model of Career Goal Formation (Figure 6.1) also applies to this conceptual model (Figure 6.2). Career Goal Formation: Integrative Model of Career Exploration and Student Development depicts the relationship between self-authorship development and career goal formation. A student's *self-authorship filter* is represented by the use of a lattice in the outermost circle. The use of a lattice to illustrate a meaning-making filter was introduced by Abes and Jones (2004) and has also been used by King, Barber, & Perez (in preparation) to describe the Interactionist Model of College Student Learning and Development. Note that the large arrow with a lattice at the bottom of the model is more open on the left-hand side and becomes more tightly knit towards the right-hand side of the arrow near the arrowhead. The left-hand side of the arrow represents more externally-oriented meaning making (where external influences play a larger role in meaning making) and the right-hand side of the arrow represents more internally-oriented meaning making (where external influences at least can be filtered out and people become more self-authoring). Students move along a continuum of self-evolution over time as depicted by the continuum shown by the arrow. This journey itself does not always occur in one direction: sometimes students regress, and every student's self-authorship developmental journey is unique. I was inspired by Shim's (2013) use of an arrow with gradations of color (from a lighter to a darker shade of yellow in this model) to depict the development of self-authorship over time. Having a circular lattice around the conceptual model captures the idea that self-authorship is not a separate process that is outside of the student, but rather it's an internal and pervasive process in which



students make sense of the world (e.g., beliefs), themselves (i.e., identity), and their relationships.

As demonstrated in this study, there is a connection between career development and meaning-making capacity, particularly through the influence of developmentally effective experiences on students' career goal formation (ideally, by students' creating personally meaningful career goals). In summary, the revised figure (Figure 6.2) reflects the following changes: First, I added a text box to my revised model for *career-related effects* to make these easier to identify. Second, I added a career-related effect that emerged from my data: *impact on graduate school and job search process*. Third, I differentiated between two types of knowledge in this model, *knowledge of career and knowledge of self*. Fourth, I changed the order of the listing of career-related effects to reflect the most to least frequently mentioned. Fifth, I incorporated *reflection* into the model as an important part of the career goal formation process based on its role in students' descriptions. Sixth, I specified the nature of the interconnectedness of the various components of this model through the use of dotted and solid lines with single and double-headed arrows. Seventh, I reconceptualized the representation of *self-authorship* (the meaning-making filter) within my model as described above. Eighth, I added the two additional potential outcomes that emerged from my data that acknowledge self-authorship's relationship with career goal formation: *developmental growth* and *personally meaningful career goal formation*. Taken together, these changes resulted in a model that more fully captures the career goal formation process I observed in the data I analyzed for this study. Individuals

cognitively construct their career goals through a process of career exploration based on their meaning-making capacity as reflected in the model presented here (Figure 6.2).

This conceptual model (Figure 6.2) makes several contributions. First, it provides a visual depiction of the relationships among multiple key constructs involved in the career goal development process, including elements related to career exploration (e.g., career-related experiences, career goals, career interests) and self-authorship development (e.g., depiction of an evolving meaning-making filter). Second, it acknowledges the importance of context within the career goal formation process (i.e., the student is depicted as embedded within contextual influences). Third, it includes the role of reflection for both career exploration and self-authorship development. Fourth, it depicts the influence of self-efficacy beliefs and outcome expectations within the career goal formation process.

Questions that follow from this model include: (1) What are the connections between self-efficacy and self-authorship processes and their influence on career goal formation? (2) How do outcome expectations relate to self-authorship development? (3) How does context influence the relationship between career exploration and self-authorship development? Even though I acknowledged and attempted to answer these questions in my study, a more in-depth investigation of these questions in the future can lead to a richer and more nuanced understanding of these relationships and the role of these constructs from both career goal formation and self-authorship development perspectives. In the next section, I identify implications from this study that can help answer these questions more fully.

## **Implications for Theory, Research, and Practice**

**Theory.** The construct of career is still relevant, but it has changed since it was initially conceptualized (see Chapter 2 for details about the evolution of career over time). Thus, additional research can further our understanding of the conceptualization of career as this construct keeps adapting in response to societal, cultural, and political changes. This study contributes to better understanding and applying self-authorship, career exploration, and career development theories. Although there are many inquiries into these constructs studied separately (see Chapter 2 for examples of these studies), this is the first known study to put these three literatures in conversation with each other. Furthermore, other studies examine career development among college students (e.g., Germeijs & Verschueren, 2007; Kracke & Schmitt-Rodermund, 2001), but only a few use career development as a context for studying self-authorship development (e.g., Boes, 2006; Creamer & Laughlin, 2005; Du, 2007; Laughlin & Creamer, 2007). Consequently, there is a need for more research to advance our theoretical understanding of the relationship between self-authorship development and career goal formation.

For example, utilizing different streams of theories related to student development could lead to a more nuanced understanding of some constructs undergirding the processes of career goal formation and self-authorship development. To illustrate, building upon Bandura's (1977, 1986) conceptualization of self-efficacy, future research could examine the relationship between self-efficacy beliefs and self-authorship development. What are the similarities and differences between these two constructs? Moreover, Dweck's (2016) work on growth and fixed mindsets is related to

the construct of self-efficacy. Self-efficacy focuses on beliefs associated with ability (e.g., Am I able to do this?). Fixed and growth mindsets provide an understanding of how dynamic or static individuals perceive their own abilities. Future research could examine the impact of mindset on the development of self-efficacy beliefs and subsequently the influence of mindset on career goal formation and self-authorship development. Students' mindsets could affect their consideration of and participation in career goal formation experiences during college. Moreover, future research could study the influence of fixed and growth mindsets on students' perception of their purpose in life and their career goal formation. Specifically, researchers could explore how "purpose in life" relates to "authoring your life" in the context of career exploration.

**Research.** Prior to this study, there was no taxonomy of post-secondary career-related experiences. The taxonomy presented here (see Table 4.1) can be used as a guide for organizing further research on these categories. As others investigate students' career-related experiences, they can refine, or revise these categories to better capture these important experiences.

Limited research exists examining the connections between self-authorship development and career goal formation (e.g., Boes, 2006; Creamer & Laughlin, 2005; Du, 2007; Laughlin & Creamer, 2007). Students in this study described the value of participating in experiences during college that influenced their career goal formation, and in some cases, that also served to promote their self-authorship development. For example, 42% of the career goal formation experiences examined via case studies were coded as being developmentally effective (i.e., they promoted development). This indicates that many career-related experiences are not only important for their role in

helping students identify potential career paths, but also provide important contexts for development. I recommend designing a study in the future that uses the WNS methodology and focuses explicitly on the relationship between career goal formation and self-authorship development, asking students to discuss experiences that are important to their career goal formation. Asking questions that elicit the effects of these experiences (e.g., exposure, knowledge, skill development) would enhance our understanding of the impact of these experiences in the process of career goal formation. It would be beneficial to learn more about the role of advising while students engage in career exploration. Using the WNS interview (Baxter Magolda & King, 2007) as a guide, providing prompts that encourage students to reflect on how they make sense of their experiences allows for interviewers to assess their meaning making. Essentially, these interviews could use career development as a context for assessing their self-authorship development.

Since context is important to consider when examining career goal formation and self-authorship development, I recommend including questions in the interview that specifically ask about the influence of context on these processes. Sample questions could explore the role of others (e.g., family, peers, faculty) in the formulation of career goals. Also, interviewers could ask about the participants' perception of the influence of culture and/or race on their career interest and career goal formation. The answers to these questions can help researchers assess their meaning-making capacity in ways that explicitly attend to contextual factors. It is also important to recognize that the interview itself can be an intervention since it asks students to reflect on their career exploration. An example of contextual influences that influence career goal formation

include evolving life structures (Levinson et al., 1978) or life roles (Super, 1990) since both change throughout life as individuals progress through different stages of development. Subsequently, future research could examine the relationship between the adaptation of life structures and life roles with the evolution of meaning-making capacity.

Interviewing students all four years throughout college and following them for at least one year after college allows researchers to map students' career development and self-authorship journeys over time. It would be useful for theory development to see how students' career goals during college change over time, such as whether they come to fruition after graduation or are dropped to pursue other professional and/or academic pursuits and how circumstances affect these choices. Ideally, using (Baxter Magolda's 1992, 1999b, 2001, 2009) longitudinal model of studying students' development over several decades would help educators understand how the relationship between career goal formation and self-authorship development unfolds over students' lifetimes. Using a case study format, as she did and as used in this study, allows for a longitudinal analysis examining factors that affect the relationship between career goal formation and self-authorship development.

Designing a future study that controls for institutional type would provide insight into the potential influence of institutional characteristics on the process of career goal formation. In the current study, the analytic sample consisted of students from a variety of institutional types (i.e., religiously affiliated, single-gender, public, private) since I wanted to identify all references to career-related experiences throughout the WNS data to ensure an adequate number and range of experiences. Some institutional types

(e.g., four-year research-intensive universities) might have resources to fund career development centers, whereas smaller institutions may not have the ability to provide such services. Controlling for the complexity of career services offered would allow for a more in-depth examination of the impact of career centers on career goal formation.

Another interesting research direction would be to examine the influence of culture on the relationship between career goal formation and self-authorship development. Questions that could be addressed include these: How does membership in an individualistic versus a collectivist culture affect the relationship between self-authorship development and career goal formation? How does parental influence affect the relationship between career goal formation and self-authorship development in such cultures? How does acculturation influence this relationship? One way to study the impact of acculturation on these processes is to sample first-generation and second-generation students to see if there are notable differences in this population of students when compared with non-immigrant students.

Studies that have examined minoritized students' experiences from a self-authorship perspective (Pizzolato 2003, 2004; Torres, 2003; Torres & Baxter Magolda, 2004; Torres & Hernández, 2007) could be extended to better understand the relationship between self-authorship development and career goal formation for underrepresented and/or minoritized students. Within this study, about one-third of the sample included students of color. Since this was not a focus of this study, the influence of ethnicity was not examined and this did not emerge as a salient factor. Future research could explore how ethnicity influences the relationship between self-authorship development and career goal formation. To help answer this question,

researchers could compare students who identify as being from different ethnicities to examine what meaning-making patterns emerge in minoritized students' career goal formation.

As identified by Hernández (2016) and Perez (2018), another area of further exploration could be tied to exploring minoritized students' experiences to examine the influence of race, racism, power, privilege, and/or oppression on their self-authorship development by utilizing a critical theory lens (e.g., critical race theory) to examine these influences. Perez (2018) suggested adapting Baxter Magolda's questions designed to holistically assess self-authorship development by incorporating power, privilege, and oppression into these questions:

How do I make meaning in a world where power, privilege, and oppression exist (i.e., cognitive)? How do power, privilege, and oppression affect how I think about and understand myself (i.e., intrapersonal)? What kinds of relationships do I want with others in a world where power, privilege, and oppression exist (interpersonal)?

Hernández (2016) offered the following revisions to Baxter Magolda's questions to ask students about the influence of social forces (e.g., racism, power) on their meaning making:

How do I make meaning of my social world (cognitive dimension)? How does my social world shape my sense of self as a racialized being (intrapersonal dimension)? What relationships do I want with others for the benefit of my social world (interpersonal dimension)?

How does race, racism, power, privilege, and oppression affect students' career goal formation? In order to answer these questions, researchers could use Hernández' and Perez' recommendations, future studies could use an adapted version of these



questions focusing on career goal formation to better assess students' meaning making within the context of career decision-making.

**Practice.** This study provides several examples of career goal formation experiences (CGFEs) promoting self-authorship development, it raises the question of how educational institutions can further promote self-authorship development while students discover and shape their career goals. Based on what I learned about CGFEs through this research project, I offer five suggestions to promote students' career goal formation and improve their developmental progress towards self-authorship by intentionally designing CGFEs, enriching advising sessions, enhancing academic courses, increasing collaboration among professional organizations, and identifying best practices for promoting both career development and self-authorship development.

1. **Intentionally designing CGFEs.** CGFEs can be constructed by higher education professionals to promote self-authorship development by providing both challenge and support during and after the experience. For example, academic and career counselors can promote growth for college students by working together to design, implement, and offer CGFEs. Specifically, at universities and colleges with both academic advising and career advising centers, having a close relationship between these two student support services provides an opportunity to create CGFEs (e.g., a career-related exploratory course) that might be used for elective academic credit to help students refine their career goals through strategically-designed activities that promote career-related reflection to gain knowledge about themselves and about potential career options. Another idea is for educators (e.g., these advisors/counselors) to work with students to develop a learning partnership designed to enhance career

goal formation (Baxter Magolda 2001, 2004; see Chapter 2 for more details about learning partnerships).

**2. Enriching advising sessions.** In this study, only 13% of the 216 CGFEs reported were based on information seeking that included seeking out advising professionals. Some of these advising sessions positively influenced students' career goal formation. Academic advisors can benefit from familiarity with self-authorship theory or other human development theories to meet students where they are developmentally and help promote psycho-social growth. Students can benefit from having strategically-designed advising sessions that focus on students' career goal formation, by discussing the importance of engaging in CGFEs, and helping students find CGFE opportunities tailored to their career-related interests and goals.

According to Atkinson and Murrell (1988), "the career counselor attempting to guide someone through a program of career investigation may employ Kolb's model in prescribing activities in assessing the world of work as well as the individual's own aspirations, needs, wants, and values" (p. 375; see Chapter 2 for further details about Kolb's model). Schön's (1983, 1987) work related to reflective practice can guide advising professionals to focus on two types of reflection that occur during or after an event/action. Schön applied his theory to practice by encouraging practitioners to become aware of their knowledge base and for them to learn from their experiences. He discussed the following three types of reflective practice: knowing in action, reflection in action, and reflection on action. Knowing in action is based on knowledge that you already possess. Reflection in action is reflecting while you are doing a particular action. Reflecting on action is reflection on what you did. Advisors can

encourage students to utilize these three types of reflection to process their career-related experiences when formulating their career goals.

**3. Enhancing academic courses.** Some colleges and universities have required first-year seminar courses for students; in some cases, advising centers manage the curriculum taught within these courses. These are sites for promoting career goal formation and self-authorship. For example, as the Director of an advising center, I helped design and approved the curriculum taught in a required first-year seminar course for all science and technology students at a university in Philadelphia. This course provided an opportunity to engage students in CGFEs; however, we did not use a developmental lens to design the curriculum. Using a developmental lens could enhance a course such as this to work with students at their developmental levels while providing challenge and support to promote growth as they explore potential career paths. I specifically highlighted first-year seminar courses; however, using a developmental lens to promote career goal formation can help enhance other courses students take in college as well, particularly since courses were reported by students as the most frequent career goal formation experience.

**4. Collaboration among professional organizations.** There are multiple professional organizations with a focus on career development (e.g., National Career Development Association), higher education/student affairs (e.g., American College Personnel Association, American Educational Research Association, Association for the Study of Higher Education), and academic advising (e.g., National Academic Advising Association). Allowing opportunities for cross-fertilization of ideas among these organizations could promote researchers to work together across disciplines. Having

been a member of several of these organizations, I find that these professional organizations tend to operate more in silos within their own area of focus.

Organizations like the American Educational Research Association and the Association for the Study of Higher Education have overlapping members so there are opportunities for sharing of ideas and information. However, organizations like the National Academic Advising Association and the National Career Development Association focus on their own areas of academic advising and career development, respectively. While it is difficult to have communication among all the relevant professional organizations, researchers and/or practitioners interested in bridging scholarship that currently exists in separate streams examining career development and student development could look for opportunities to collaborate across pertinent professional organizations.

**5. Identify best practices for promoting both career development and self-authorship development.** In order to identify best practices for career development that also promote student development, a task force could be formed that draws on the insights of researchers and practitioners from a variety of contexts and areas of expertise. Optimally, memberships on this task force would include faculty, student and academic affairs administrators, academic advisors, career counselors, students, and other pertinent individuals. Also, members should represent different disciplines and different institutional types (e.g., 4-year colleges, community colleges, religiously affiliated institutions). Areas for best practices include: how to promote career goal formation during college; how career goal formation experiences can be structured to promote both growth mindsets and self-authorship development; what kinds of experiences are best suited to promote career goal formation for students during

college; how to integrate career goal formation experiences within students' academic requirements; identifying the key players who can collaborate at different institutions to design and implement these kinds of experiences; how to promote reflection on students' sense of purpose in life as related to their career-related decisions. This task force could promote collaboration among faculty from different institutions in terms of future research projects and allow for sharing strategies for designing courses to incorporate career goal formation experiences to promote personally meaningful goal formation for students. Findings from the task force could inform local, state, and/or national policy changes that might influence inclusion of requirements for providing certain types of career goal formation experiences at educational institutions across the country. The report from this task force could be widely distributed across colleges and universities in the form of an electronic advising manual to have the greatest impact possible.

## **Conclusion**

I pursued this study since I was interested in learning more about the relationship between career goal formation and self-authorship development. Specifically, I was interested in examining how these developmental processes evolve over time for undergraduate students. By better understanding these processes, my intention was to provide post-secondary educators and administrators with knowledge that can be used to design interventions to promote students' development while students are ideally creating personally meaningful career goals. Based on the data analyzed for this study, I presented a taxonomy of collegiate career-related experiences that academic professionals can use as a tool when advising students. I also identified and presented

the frequency of six career-related effects of participating in experiences that affect students' career goal formation.

Nick's comments reveal the centrality of career goal formation for many college students. As a junior, Nick shared the following comments about his worst experience over the past year and how this experience was linked with his identity:

I think the worst thing about my life, and still true to this day, not a distinct experience at all, it's just that I don't know what I want to do. I could be perfectly happy doing what I'm doing now or something completely different. I could see myself going in so many different directions, whether conventional or unconventional, I know who I am but it's almost, like, it's tough on my identity not knowing what I want to do...I have no idea where my life is headed after I graduate, and that's what's really tough for me. It's not a sense of insecurity. I've always been a very secure person in whatever I do, and I still am confident in myself and I know it's going to work out to be good, whatever it is. I just have no idea where it's headed at all. So that's a – [pause] that's a tough decision growing up...Because I really want to find something that's meaningful to me. And I think that is going to be part of it, part of who I am. But there's just that openness there. And if you think about it, and it's true with any student, up until they graduate college – and I'm talking for students – all society has really expected them to do is go to school and get good grades. Then get to good high school and get to good college. And then they're, like, okay, now you're free; go do anything. And there's absolutely no precedent. I mean, yeah, sure, there's the go out and get a job, but it's so wide open. I mean, so many people in my generation are so blessed. We can go do anything we want to. But I have led a very blessed life in that I have many, many options of possibilities open, and I don't know what I want to do.

Despite being blessed with “many options of possibilities open,” Nick described that there is “no precedent” and getting a job is “so wide open” that he still didn't know what he wanted to do. Nick's words resonate with the value of this study. The following potential outcomes associated with participating in CGFEs can benefit students like Nick while they are formulating their career goals: career choice refinement, identity

development, lower career-related stress, and personally meaningful career goal formation. As the examples presented here show, participating in experiences during college that promote career goal formation and self-authorship development can help students figure out “something that’s meaningful” for them to do after they graduate.

## APPENDICES

### Appendix A: Characteristics of WNS Interview Institutions (Shim, 2009)

College	Size in 2006	Type	Control	Other Information	Location
Azalea College	900	Liberal Arts (Master L)	Private	All female college; about half African- Am, half White	South
St. Bernadette University	8,300	Research (RU VH)	Private	Catholic affiliation	Midwest
Hudson College	1,400	Liberal Arts (Bac A&S)	Private		Northeast
Golden State University	17,189	Regional (Master L)	Public	Hispanic Serving Institution	West
Wabash College	900	Liberal Arts (Bac A&S)	Private	All male college	Midwest
Greenleaf College	1,427	Liberal Arts (Bac A&S)	Private	Hispanic Serving Institution	West

Source: Adapted from Shim, W. (2009). Description of research methods and sample, years 1, 2, 3, and 4: Interview portion, Wabash National Study (edited by Poisson, K. in 2011).



## Appendix B: WNS Interview Study Informed Consent

### WNSLAE Interview Study Informed Consent

#### Project Description

This research project is designed to examine the practices and conditions that help students gain the knowledge and skills they and their colleges believe reflect the purposes of a college education. This study will be examining collegiate outcomes such as leadership, well-being, problem solving, multiculturalism, integrated learning, and moral character. This study is being jointly administered by the Center of Inquiry in the Liberal Arts at Wabash College, the University of Michigan, the University of Iowa, and Miami University of Ohio.

This study is designed to benefit educators in many kinds of institutions who teach college students by increasing our understanding of the practices, programs, and pedagogies that help students succeed. Study participants may find that the interviews are enjoyable and provide a unique opportunity to reflect upon the college experience. There is no risk associated with this project where the probability of harm or discomfort is greater than that encountered in daily life.

#### Participant Informed Consent

I volunteer to participate in this interview for the Wabash National Study of Liberal Arts Education.

Participation involves being interviewed each fall for the next four years (2006-2009), to the extent that this is possible for both study participants and researchers. Individual interviews will last approximately 60-90 minutes. Notes will be taken during the interview.

I understand that I must be at least 18 years of age to participate.

My participation in this project is voluntary and I may withdraw or discontinue participation at any time without penalty. Participants will be compensated with \$30 for each interview.

I understand that I will be asked reflective and thought-provoking questions. However, I have the right to decline to answer any question or to end the interview at any time.

Due to the nature of this research, all interviews will be audio recorded. The audio recordings will be securely stored on a computer in the research office at the University of Michigan or the office of a researcher from the project team. I agree to be audio recorded and understand that should I choose not to be audio recorded, I will not be able to participate in the interview but will still be compensated \$30 and excluded from future interviews.

My confidentiality as a participant in this study will remain secure through the assignment of a pseudonym. A separate list matching participants' names with their pseudonym will be filed and secured in a locked file cabinet in a restricted access office at the University of Michigan. All information collected will remain confidential except as may be required by law.

I understand that this research study has been reviewed by the Institutional Review Board at the University of Michigan. Should I have questions about this research project, I may contact Dr. Patricia M. King, the project's Principal Investigator, at 610 East University, 2117 SEB, Ann Arbor, MI 48109-1259, (734) 615-6740, email: [patking@umich.edu](mailto:patking@umich.edu). Should I have questions regarding my rights as a participant in research, I may contact the Institutional Review Board, 540 East Liberty, Suite 202, Ann Arbor, MI 48104-2210, (734) 936-0933, email: [irbhsbs@umich.edu](mailto:irbhsbs@umich.edu).

I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

I have been given a copy of this consent form which includes a description of the research project.

Please sign below if you are willing to participate today and be re-contacted for later participation in this study:

\_\_\_\_\_  
Participant's Name (Please print.)

\_\_\_\_\_  
Participant's Signature

\_\_\_\_\_  
Date

*For further information, please contact: Wabash National Study of Liberal Arts Education, University of Michigan, 3116 School of Education Building, 610 E. University Ave., Ann Arbor, MI 48109-1259, 734-647-8753*

\_\_\_\_\_  
Interviewer's Name (Please print.)

\_\_\_\_\_  
Interviewer's Signature

\_\_\_\_\_  
Date

## Appendix C: WNS Interview Protocol

### In-Depth Interview: Wabash National Study of Liberal Arts Education Fall 2006

<p><b>Introduction to the Interview:</b> Greet student as he/she arrives, ask his/her name, thank him/her for coming, put at ease and begin completion of consent form</p>	
<p>Provide student a written description of the study and provide a copy of a consent form that you sign; collect the one that student signed</p> <p>“I will reintroduce the study to you but before we begin there is a consent form that I would like to review with you and, if you are willing to participate, I need you to sign.”</p>	<p>Review the consent form and ensure he/she consents to both the participation and audio recording.</p> <p>Highlight:</p> <ul style="list-style-type: none"> <li>✓ your role as the interviewer</li> <li>✓ voluntary participation, they can refuse to answer or end interview at any time</li> <li>✓ confidentiality</li> <li>✓ 90 minute time commitment (confirm interview end time)</li> <li>✓ opportunity for questions at the end</li> <li>✓ how interview will be used and by whom</li> <li>✓ confirm the process of payment</li> </ul>
<p>Reintroduce the study verbally and why they have been chosen as a participant</p>	<p>e.g., “Our purpose in meeting today is to learn about you &amp; your experiences in college so that we can better understand how students approach and gain from educational experiences. Because every student is different and brings a unique perspective and set of experiences we believe it is important to hear about your experiences from your point of view.”</p> <p>e.g., “You have randomly selected from a list of students...”</p>
<p>Provide an overview of the organization of the questions</p>	<p>e.g., “Specifically we will ask you to talk about your experiences, I will provide the structure but I will let you steer the conversation. I will begin by asking a little bit about you and your background, your expectations coming to college and of [INSTITUTION] in particular. I’d like to hear about your specific experiences since coming to college. Overall I will want to hear how you make sense of all you are experiencing and learning...”</p>

	<p>NOTE: We want to acknowledge here that the student is in transition to college. Thus, an appropriate comment might be, “I know that you are in a transition to college. I want to hear about your experiences since coming to college, but I also want to hear about the most significant experiences you’ve had over the past year even if they are prior to coming here. I’ll ask you to be the judge of what is most important as we move through the conversation.”</p>
<p>Turn on recorder: State “This is [interviewer name], today’s date, interviewing at [institution].” Do NOT state the students’ name.</p>	

### Introduction Continued & Expectations Segment

<p><b>Basic Foundation:</b> To access meaning making at college entrance and build rapport</p>	
<p><b>Means to Access Foundation:</b> Expectations and degree to which they matched reality</p>	
<p><b>Multiple Ways to Approach:</b></p>	
<p>It would help me to <i>know a little about you</i>. Tell me about your background and what brought you to [institution].</p>	<p>Possible Probes:</p> <ul style="list-style-type: none"> <li>• Tell me about your high school experience – what was it like?</li> <li>• Tell me about your family.</li> <li>• Tell me about your friends.</li> <li>• What did you tell people here to introduce yourself when you arrived?</li> <li>• How did you decide to come to [institution]? [what were the other options, advantages/disadvantages of options, how did this one win out]</li> <li>• Tell me about any goals you have for this year [try to draw out both academic and personal goals].</li> </ul>
<p>Let's talk about <i>your expectations</i> coming to college in general and to [institution] in particular. What did you expect it to be like to be a college student here?</p>	<p>Possible Probes:</p> <ul style="list-style-type: none"> <li>• What did you expect [or hope] the learning environment to be like?</li> <li>• What did you expect would go well for you and what would be challenging in your courses?</li> <li>• What kind of relationships did you expect [or hope] to build with other students? With faculty?</li> <li>• How did you expect [or hope] you would grow or change coming to college?</li> <li>• In what ways did you expect [or hope] to get involved in campus activities?</li> </ul>

<p>I'm interested in your perspective on how the <i>reality of college compares with your expectations!</i> Let's talk about areas in which your experience matches your expectations and areas in which it does not. [Note: it may be artificial to separate expectations and reality – you won't need this if the interviewee already addressed it]</p>	<p>Possible Probes:</p> <ul style="list-style-type: none"> <li>• Using what the interviewee offered re expectations, return to each one asking to what degree experience matches [i.e., you said you expected classes to be pretty hard – what is your sense of that so far?] Draw out why the person sees it this way and what it means to her/him.</li> <li>• What has been your experience as a student at this institution? What has been your experience as a [race, ethnicity, gender] student at this institution [<i>only if person raised these dynamics</i>]?</li> <li>• What has surprised you most? Draw out the description, why it was surprising, how the person is making sense of it.</li> </ul>
<p>I'm interested in how you experienced the transition to college. What did you gain in high school [or prior experience if not coming directly from high school] that helped you as you began college?</p>	<p>Possible Probes:</p> <ul style="list-style-type: none"> <li>• How have your prior experiences influenced your transition to college?</li> <li>• How did your life prior to college affect your transition to college?</li> </ul>
<p>NOTE: It may be helpful when appropriate to use our basic Framework for drawing out meaning:</p>	<p><b>Framework</b> for drawing out meaning:</p> <ul style="list-style-type: none"> <li>• Describe the experience</li> <li>• Why was it important?</li> <li>• How did you make sense of it?</li> <li>• How did it affect you?</li> </ul>

**In-Depth Interview: Liberal Arts Education Study  
Making Sense of Educational Experiences Segment**

<b>Basic Foundation:</b> 3 dimensions by 7 outcomes chart	
<b>Means to Access:</b> meaningful experiences and how students made meaning of them	
<b>Multiple Ways to Approach:</b>	
Our conversation so far has given me some context to understand you, your prior experiences and your initial expectations of college. Let's talk more about important experiences. How would you describe your college life so far? NOTE: while we want to talk about college, we have to recognize that participants have been in college only a few weeks. So this segment may need to include high school experiences as well.	Probes: How do you think you will balance these various parts of college life? What are some of the ups and downs you've encountered so far?
Let's focus in specifically on the experiences you've had that you think have affected you most. What has been your <i>most significant experience</i> so far?	<b>Framework</b> for drawing out the dimensions and outcomes: <ul style="list-style-type: none"> <li>• Describe the experience</li> <li>• Why was it important?</li> <li>• How did you make sense of it?</li> <li>• How did it affect you?</li> </ul>
Tell me about your <i>best experience</i> ; <i>worst experience</i>	<b>Framework</b>
Tell me about some of the <i>challenges</i> you've encountered	<b>Framework</b> ; also inquire about challenges in other dimensions if response is uni-dimensional
Who/what are your <i>support</i> systems? Tell me about them.	Probes: when you need support, where do you find it? Who do you go to for help? Who do you trust to help when something important is on

	your mind?
Usually college is a place where you <i>encounter people who differ from you</i> because of different backgrounds, beliefs, preferences, values, personalities, etc. Have you had interactions with people who you perceive as different from you? If so, tell me about them.	What have these interactions been like? How have you made sense of them? What ideas have you gathered from these interactions?
Have you had to face any <i>difficult decisions</i> ?	<b>Framework:</b> also inquire about decisions in other dimensions (i.e., cognitive, intrapersonal, interpersonal) if response is uni-dimensional
Often college students report feeling <i>pressure</i> from multiple directions – pressure to study and succeed academically, pressure to belong socially, pressure re: family or work obligations, pressure to participate in campus activities, pressure to figure out career directions. Have you encountered any of these pressures?	If so, describe; how did you handle it, why, how did it affect you.
Has there been any time that what you wanted and what others wanted from you <i>conflicted</i> ?	If so, what was that like? How did you handle it?
Have you been in a situation where you struggled with doing the right thing?	If so, describe, how did you handle it, why, how did it affect you?
How do you think coming to college, to	What do you think prompted this? How do you

[institution] has <i>affected you?</i>	feel about it? Draw out possible challenges to beliefs, sense of self, relationships.



**In-Depth Interview: Liberal Arts Education Study**  
**Integration of Learning Segment**

<b>Basic Foundation:</b> access Integration of Learning outcome and synthesize the student's experience as shared in the interview	
<b>Means to Access:</b> how your collective experiences are influencing your thinking about what to believe, yourself, and relations with others	
<b>Multiple Ways to Approach</b>	
<b>Synthesis</b>	
You've talked about some of your important experiences [such as x, y, z] and what they've meant to you. How did the experiences you've shared influence your transition to college?	Draw out meaning.
As you have reflected on your experiences, has anything come up that you expect you'll want to <i>explore further</i> ?	Describe, why is this important, how do you anticipate you will explore this.
How has this past year experience helped you think about how you want to approach <i>this year</i> ?	Possible Probes: <ul style="list-style-type: none"> <li>• How has it shaped your goals?</li> <li>• How has it shaped your view of yourself?</li> <li>• How has it shaped how you learn?</li> </ul>
<b>Integration of Learning/Summary</b>	
We have about [x] minutes left and I'd like to be sure I have the key points you think are important. Thinking about your overall experience, what is the most important thing you <i>gained</i> from this past year?	Possible Probes: <ul style="list-style-type: none"> <li>• Where did this come from?</li> <li>• What prompted this?</li> </ul>
How has this <i>past year influenced</i> your everyday decisions and actions?	Possible Probes: <ul style="list-style-type: none"> <li>• How do these experiences influence</li> </ul>

	<p>your thinking about college? Your goals here?</p> <ul style="list-style-type: none"> <li>• How do these experiences influence your relations with others?</li> <li>• How do these experiences influence how you see yourself?</li> </ul>
<p>Tell me about any connections or themes you see among your experiences.</p>	<p>Draw out description and meaning.</p>
<p>How are you evaluating new ideas you've encountered thus far?</p> <p>Do any of the ideas you've encountered thus far conflict? If so, how are you thinking about that?</p>	
<p>Are there any <i>other observations</i> you would like to share?</p>	<p>Draw out description and meaning.</p>

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