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Encouraging Student Involvement and Engagement to Foster a Deep Sense of Calling

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ENCOURAGING STUDENT INVOLVEMENT AND ENGAGEMENT TO FOSTER A DEEP SENSE OF CALLING

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CERTIFICATE OF APPROVAL

MASTER'S THESIS

This is to certify that the Thesis of

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Abstract

Because college students consistently explore questions of meaning and purpose, the present study aimed to further equip calling and career counselors to intentionally join students in this pursuit. Using data from the Cooperative Institutional Research Program's Freshman Survey and College Senior Survey, the study sought to distinguish between forms of involvement and engagement associated with positive change as compared to negative change in a student's sense of calling. The researcher developed an operational definition of calling by combing two critical components: an internal sense of self and an external sense of purpose. The study employed the definition to create an experimental scale, *Philosophy of Life,* that—combined with CIRP constructs of Academic Self-Concept, Social Self-Concept, and Social Agency—measured a student's longitudinal change in their sense of calling. The researcher utilized these change scales as the dependent variables in four multiple regression analyses and used four CIRP involvement constructs as predictor variables. The results of the present study do not distinguish between forms of involvement and engagement associated with negative change compared to positive change. However, multiple regression outcomes revealed Leadership, as a form of involvement and engagement, has unique explanatory value beyond the other three involvement constructs with regard to calling indicators.

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Chapter 1

Introduction

College Students' Pursuit of Calling

Few students enter college with a clear sense of direction or purpose. "The most common concerns college students raise with career counselors often boil down to a single question: 'What am I going to do with my life?'" (Thompson & Feldman, 2010, p. 12). This question illustrates a yearning for meaning and purpose, for a deep sense of calling. In this pursuit, "Today's students are grappling with the more philosophical questions. What is my life's purpose? What can I do to serve the greater good? What is my personal calling?" (Braun, 2005, p. X).

These questions of meaning, purpose, and calling emerge prevalently during the college years since students change their career plans and majors frequently (Pascarella & Terenzini, 1991). Among a variety of developmental pursuits, college students search for unique personal and vocational identities (Chickering & Reisser, 1993). Feenstra (2011) described this developmental endeavor, claiming, "students need to understand themselves in order to understand where their gifts and passions can best serve the world" (p. 67). Consequently, institutions of higher education provide important venues for student development, especially as students strive for a unique sense of identity and a deep sense of calling.

However, "little has been written in the psychological literature about the role of

calling in college student development or how to apply it to career counseling" (Adams, 2012, p. 66). This gap in the literature highlights a critical need for research that provides further clarity on the development of calling among college students. Without this clarity, career and calling counselors remain limited in their understanding of how to support students in the pursuit of calling. Daloz and Parks (2003) emphasized the importance of practitioners, positing,

> More than in any other era of our lives, it is during young adulthood that mentors can play a vital role as they encourage questions that upend the givens of youth and offer bridges to a worthy dream of a life distinctively one's own. (p. 20)

In order to equip calling and career practitioners to serve as mentors who challenge college students to continue asking the questions of meaning, purpose, and calling, institutions of higher education must seek to develop a more comprehensive understanding of variables that contribute to a sense of calling (Galles & Lenz, 2013).

This recognition of calling as a prominent developmental pursuit for college students also emphasizes the need for establishing a conceptual definition of this construct. Palmer (2000) provided a foundational definition of calling in connection to vocation: "Vocation does not mean a goal that I pursue. It means a calling that I hear. Before I can tell my life what I want to do with it, I must listen to my life telling me who I am" (p. 4). This definition highlights the necessity of developing a deep sense of calling before students can answer the question, "What am I going to do with my life?" (Thompson & Feldman, 2012, p. 12).

The definition of vocation by Buechner (1973) provided support for the pursuit of calling as applicable in both religious and nonreligious contexts. Buechner

conceptualized vocational calling as "the place where your deep gladness and the world's deep hunger meet" (p. 95). Although calling seemed originally considered as strictly a religious concept (Dik, Duffy, & Eldridge, 2009), Buechner's definition supports the general description of calling as, "a strong sense of inner direction – work that would contribute to a better world" (Hall & Chandler, 2005, p. 160). Therefore, calling has grown to include a variety of meanings, making it relevant outside of distinctly religious contexts (Duffy & Sedlacek, 2010).

Furthermore, the study by Duffy and Sedlacek (2010) on the salience of calling among college students found that, of approximately 5,000 first-year students, 44 percent indicated having a calling, and another 28 percent reported currently searching for a calling. These findings suggested most incoming college students would endorse the pursuit of calling as important, therefore supporting another finding that students who endorsed a career calling more likely view their lives as meaningful. Additional positive outcomes of the presence of calling include greater occupational and life satisfaction, increased commitment to one's profession, greater self-concept, and decreased stress and depression (Dik & Duffy, 2009). Therefore, calling appears particularly relevant to college student development, providing "a context in which a variety of benefits are experienced" (Dik et al., 2009, p. 626).

Involvement and Engagement in the Pursuit of Calling

Involvement and engagement continually have had positive influences on student development outcomes in higher education. Astin (1984) posited that the amount of student involvement in college directly correlates to the amount of learning and personal development a student experiences. Understanding the role of involvement in the pursuit

of calling necessitates utilizing Astin's definition of student involvement as "the amount of physical and psychological energy that the student devotes to the academic experience" (p. 518). Kuh (1995) described this involvement principle: "the more time and energy students expend in educationally purposeful activities, the more they benefit" (p. 125).

The 1995 reference by Kuh to the involvement principle provided noteworthy differentiation between involvement and engagement, with involvement as the extent of psychological and physical energy utilized and engagement as the specific activities in which this energy becomes expended. Previous research on involvement and engagement revealed their valuable role in the development of calling among college students. Specifically, career development courses, counseling and mentoring relationships, study abroad experiences, and service learning opportunities have become recognized as forms of involvement and engagement that positively influence college students' sense of calling (Daloz & Parks, 2003; Dik et al., 2009; Feenstra, 2011; Johnson, Nichols, Buboltz Jr., & Riedesel, 2002; Miller-Perrin & Thompson, 2010; Thompson & Feldman, 2010).

However, Astin (1984) indicated the necessity of further inquiry in this realm: "the connection between particular forms of involvement and particular outcomes is an important question that should be addressed in future research" (p. 527). Kuh (1995) also presented an impetus for research on forms of involvement and engagement associated with change: "Students, and those who advise them (for example, parents, counselors), could use such information when deciding to which out-of-class activities to devote time" (p. 124).

Impetus for Further Research on the Pursuit of Calling

Because college students consistently inquire about what they will do with their lives (Thompson & Feldman, 2010) and seek an answer through more philosophical questions of meaning and purpose (Braun, 2005), the pursuit of calling evidently proves a prominent aim on college and university campuses across the nation. The study by Duffy, Bott, Allan, Torrey, and Dik (2012) reinforced this claim, indicating "calling appears to be endorsed by a substantial percentage of the population, lending support to the importance of exploring this construct in greater depth" (p. 50). Further research on the development of calling among college students will provide institutions of higher education with increased opportunities for holistic student development. Career and calling counselors, especially, will become equipped to challenge and support students in their journey toward answering the questions of meaning and purpose, thereby encouraging change in students' sense of calling. Parks (2000) supported this pursuit:

> If adults are willing to undergo this critical re-examination of young adult dreams, there is the possibility that a deepened, more mature and wiser passion becomes available. The self is renewed so as to beckon the promise of the next generation of young adults. (p. 222)

Research Questions and Hypotheses

Such an impetus for further research provided a foundation for the research questions and hypotheses that guided this study.

1. What forms of involvement and engagement are associated with positive change that deepens a college students' sense of calling?
2. How do those forms of involvement and engagement contrast to the forms that are

associated with negative change that minimizes a college student's sense of calling?

Investing in academic coursework, seeking mentorship from faculty and staff, having a study abroad or service-learning experience, and participating in leadership opportunities—as represented by Cooperative Institutional Research Program (CIRP) constructs—all represent forms of involvement and engagement associated with positive change that deepens a college student's sense of calling. Those four forms of involvement and engagement all minimally correlate with negative change that minimizes a college student's sense of calling.

Chapter 2

Literature Review

Definitions of Calling

"Common to all definitions of calling is the importance of listening to one's life and surrendering to a deep sense of mission" (Bolman & Gallos, 2011, p. 207). Frederick Buechner (1973) broadly defined vocational calling as "the place where your deep gladness and the world's deep hunger meet" (p. 95). Palmer (2000) also provided a foundational definition of calling: "Vocation does not mean a goal that I pursue. It means a calling that I hear. Before I can tell my life what I want to do with it, I must listen to my life telling me who I am" (p. 4). An additional definition from Palmer (2000) further clarified the concept of calling: "Vocation at its deepest level is, 'this is something I can't not do, for reasons I'm unable to explain to anyone else and don't fully understand myself, but that are nonetheless compelling'" (p. 25).

Connections to identity. Research on the development of calling among college students has affirmed the relevance of these conceptual definitions. Studies by Daloz and Parks (2003), Duffy and Dik (2009), Feenstra (2011), and Phillips (2011) all emphasized the necessity of knowing oneself and one's identity and connecting that understanding with what the world needs. Feenstra and Brouwer (2008) supported this definition of vocation, describing it as a combined process of "discovering one's identity, understanding the world, and discerning one's purpose" (p. 83). Feenstra (2011) posited,

"students need to understand themselves in order to understand where their gifts and passions can best serve the world," (p. 67). Without understanding themselves, students will have incomplete understandings of their calling and vocation (Feenstra, 2011).

Hall and Chandler (2005) asserted that the processes of self-exploration and discernment toward the pursuit of calling require the person to "have a clear sense of identity, or self-awareness" (p. 163). Galles and Lenz (2013) described a similar form of self-awareness called "vocational identity" where the person possesses "a clear and stable picture of one's goals, interests, personality, and talents" (p. 242-243). These descriptions both highlight the essential nature of identity development and self-awareness in the process of calling exploration.

Connections to meaning and purpose. Additional research specifically highlighted the relevance of meaning and purpose in the pursuit of calling. Adams (2012) defined calling as "a sense of purpose or meaning leading individuals toward personally fulfilling and socially significant work" (p. 66). Seligman's theory of the pursuit of meaning involved "using one's signature strengths and talents to belong to and serve something one believes is bigger than the self" (Seligman, Rashid, & Parks, 2006, p. 777). Steger (2009) conceptualized meaning as "the extent to which people comprehend, make sense of, or see significance in their lives, accompanied by the degree to which they perceive themselves to have a purpose, mission, or over-arching aim in life" (p. 680).

Palmer's (2000) aforementioned explanation of calling as "nonetheless compelling" further supported the understanding of calling as purposeful (p. 25). Findings by French and Domene (2010) reinforced the compelling nature of calling, as

most students described "being drawn toward their calling in a way they could not fully explain" (p. 9). Likewise, Galles and Lenz (2013) referred to calling as "the extent to which individuals feel summoned or called to enter a particular career or life role" (p. 241). Common to all of these descriptions emerges an illustration of calling as a deeply meaningful pursuit.

A study by Duffy and Sedlacek (2010) found students more likely viewed their lives as meaningful if they endorsed a calling. Chen (2001) posited the nature of one's life and vocation as coexistent: "meaning making in one's vocational inquiry and effort is always connected with his or her search for meaning in other aspects of life" (p. 322). In the study by French and Domene (2010), one student participant described the nature of calling as encompassing all aspects of life:

> I think a career can be your job, but a life calling is who you are, becoming what you do. . . I don't think someone's life calling is to work as an environmentalist, well maybe it is, but I think you're called to be a person that cares about the environment. (p. 4)

This description illustrates that, by allowing who one is to shape what one does, a life calling becomes rich with meaning and purpose.

Summary of definitions. The aforementioned literature and research upheld the claim by Bolman and Gallos (2011) that all definitions of calling reveal the "importance of listening to one's life and surrendering to a deep sense of mission" (p. 207). The first aspect of this definition—listening to one's life—has become included frequently in conceptual definitions of calling, especially those previously connected to identity (Buechner, 1973; Daloz & Parks, 2003; Duffy & Dik, 2009; Feenstra, 2011; Feenstra &

Brouwer, 2008; Galles & Lenz, 2013; Hall & Chandler, 2005; Palmer, 2000; Phillips, 2011). The idea of listening to one's life illustrates an internal process of identity exploration and discovery, and therefore, this component of calling will be characterized as an internal sense of self.

The second aspect of Bolman and Gallos' (2011) definition—surrendering to a deep sense of mission—also often correlates with conceptual definitions of calling, particularly those previously connected to meaning and purpose (Adams, 2012; Buechner, 1973; Daloz & Parks, 2003; Dik & Duffy, 2009; Duffy et al., 2012; Feenstra, 2011; French & Domene, 2010; Galles and Lenz, 2013; Palmer, 2000; Phillips, 2011). The idea of surrendering to a deep sense of mission denotes an external process of purpose exploration and discovery, and therefore, the present study characterized this component of calling as an external sense of purpose. Consequently, a comprehensive definition of calling includes two components: an internal sense of self and an external sense of purpose.

Calling as a Process

In addition to having an awareness of one's calling and the way it serves others, Weiss, Skelley, Hall, and Haughey (2003) claimed a vital aspect of calling comes as "a process of introspection or discernment as a method of arriving at a career choice, to know the right path for oneself" (p. 161). Similarly, Hall and Chandler (2005) characterized this process of career exploration and discernment as an "ongoing, cyclical process, involving deep exploration of personal goals, trial efforts, and reflection of success" (p. 165). They posited that an effective application of goals and purpose creates opportunity for increased self-confidence, identity change, and a deeper sense of calling.

This ongoing cycle of "meaning exploration and meaning making" (Chen, 2001, p. 324) necessitates significant self-reflection and tremendous effort in order to deepen one's understanding of calling (Novak, 1996).

Galles and Lenz (2013) posited that most of these theories about college student career and calling development "have in common the notion that both internal and external factors play important roles in determining how individuals make career decisions" (p. 240). Therefore, "exploring variables that may contribute to the presence of calling is an important gap in the literature" (p. 240). In order for institutions of higher education to effectively challenge and support students in discovering their calling, calling and career practitioners must develop a more comprehensive understanding of the types of experiences associated with a deep sense of calling. Exploring the relationship between calling and involvement may prove relevant and influential in this pursuit.

Definitions of Involvement and Engagement

Student involvement. Astin (1984) provided a case for the relevance of involvement in studying various facets of student development, positing that the amount of learning and personal development students experience in college directly correlates to the quality and quantity of their involvement. This work by Astin (1993) "underscores the tremendous potential that student involvement has for enhancing most aspects of the undergraduate student's cognitive and affective development" (p. 394).

Astin (1984) defined student involvement as "the amount of physical and psychological energy that the student devotes to the academic experience" (p. 518). More specifically, Phillips (2011) described Astin's definition as referring to participation in both curricular and extracurricular activities. Astin (1984) provided an

example of a highly involved student: “one who, for example, devotes considerable energy to studying, spends much time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students” (p. 518).

Student engagement. In examining “the other curriculum,” or out-of-class experiences that contribute to student learning and personal development, Kuh (1995) referred to the involvement principle by Astin (1984) as “simple but powerful: the more time and energy students expend in educationally purposeful activities, the more they benefit” (p. 125). In this description, Kuh (1995) made an important distinction between engagement and involvement, in which engagement emphasizes the specific activities in which students expend the psychological and physical energy of involvement. He also provided specific forms of engagement positively correlated with college outcomes, including participation in extracurricular activities, living in the residence halls, and conversations with faculty and peers. Like involvement, student engagement has proved a critical factor of student learning and personal development (Kuh, 1995).

In considering engagement, Kuh (1995) extended Astin’s definition of involvement through five propositions: (a) “involvement is the expenditure of psychological and physical energy;” (b) different students invest in different activities to varying extents; (c) involvement has both quantitative and qualitative aspects; (d) the impact of involvement combines the quality and quantity of energy students expend; and finally, (e) “the effectiveness of any educational policy or practice is related to the extent to which it encourages students to take initiative and become actively engaged in the activity” (p. 126). These five propositions—especially the last one—point to the need for educators to challenge students to pursue active involvement and engagement.

Kuh (1995) asserted the cumulative effect of involvement and engagement during the formative years of college "is the crystallization of a diverse set of attributes into a sense of identity" (p. 123-124). However,

> Except for a handful of single-institution studies, little is known about which out-of-class activities (for example, volunteerism, student government, on-campus job) are linked with what outcomes . . . Students, and those who advise them (for example, parents, counselors), could use such information when deciding to which out-of-class-activities to devote time. (p. 124)

Similarly, Astin (1984) posited, "the connection between particular forms of involvement and particular outcomes is an important question that should be addressed in future research" (p. 527). Therefore, there remains a critical need to provide evidence of connections between desired outcomes and "particular, manipulable aspects" of the college experience (Ewell, 1988, p. 70). With further inquiry, calling and career practitioners perhaps could determine the particular salience of involvement and engagement as means of students understanding a deeper sense of calling.

Impact of Involvement and Engagement on Calling

Through extensive research on college outcomes, Pascarella and Terenzini (1991) discovered "not all students benefit equally from the same experience" (p. 634). This finding provides increasing motivation for studying the impact of various forms of involvement and engagement on the development of calling among college students. Recognizing some forms of involvement and engagement associate with a deep sense of calling highlights the need to make distinctions between these types of involvement and engagement and those forms associated with a minimized sense of calling.

Research on involvement and engagement. Astin (1993) provided a foundation for beginning to work toward this goal through his research on positive and negative correlations between forms of involvement and degree aspirations in an identified realm of study. His research revealed that working on group projects for class and spending time on hobbies both negatively correlated with students' degree aspirations. In contrast, the results pointed to the importance of student-faculty interaction outside of class in raising students' degree aspirations.

Additional positive correlations to student outcomes emerged in research by Kuh (1995):

> More than other activities, leadership roles, internships, and work experiences encouraged students to develop skills needed to be competent in the work place (that is, decision making, group processes and teamwork, understanding fundamental structures and processes of organizations in addition to critical thinking and written and oral communication). (p. 147)

Furthermore, the research by Kuh (2008) identified a set of high-impact teaching and learning practices—also considered as opportunities for student involvement—that highly benefit college students. These practices include the following: first-year seminars and experiences, collaborative assignments and projects, service-learning, internships, and capstone courses and projects. All of these preliminary distinctions between forms of involvement or engagement that had positive and negative effects on student outcomes emphasize the critical nature of research that seeks to make such distinctions.

The Higher Education Research Institute (2012) conducted surveys of freshman and senior students that revealed communicating regularly with professors, getting

tutoring, seeking personal counseling, participating in student clubs and groups, becoming a community leader, taking courses that include community service, and studying abroad have all proved important opportunities for building students' academic and social self-efficacy (Hurtado, Pryor, Palucki Blake, Eagan, & Case, 2013; Pryor et al., 2013). Because self-efficacy, or an internal sense of self, serves as a key component of one's calling, many of these same forms of involvement and engagement likely also influence a college student's sense of calling.

Research on calling. Previous research on the development of calling among college students reinforced this proposition. Various studies indicated career development courses, counseling and mentoring relationships, study abroad experiences, and service-learning opportunities as all forms of involvement or engagement associated with positive change that deepens college students' sense of calling.

Career development courses. The work of Johnson et al. (2002) demonstrated the value of engagement in a "career and life planning course on the career development of college students" (p. 11). The course developed around a holistic trait and factor approach, which encourages students to increase self-knowledge, increase knowledge of the world of work, and then integrate that knowledge to make a decision. The study assessed the relevance of the course for career development and found it increased students' vocational identity and career decision-making self-efficacy. In comparison to students in the control group, "students who completed the career and life planning course had significantly greater change from pretest to posttest on all career measures" (p. 11). This course described career development as a process, therefore highlighting the need for career development practitioners to focus on students' career and life plans

rather than on making firm occupational decisions (Johnson et al., 2002).

Thompson and Feldman (2010) assessed a course designed to help college students explore meaning, purpose, and calling; the study confirmed the impact of a career development course on a student's sense of calling. The Career Center at Santa Clara University established an elective course titled Let Your Life Speak to "support students in discerning their vocational callings and to provide an intentional environment for students to pause, reflect, and make meaning of their experiences as they articulate their interests, talents, and aspirations" (p. 18). The course succeeded in cultivating change: deepening students' understanding of themselves, clarifying their understanding of the meaning of vocation, and developing greater awareness of their own personal vocation. Students reported "a deepened and elaborated philosophy or framework of life meaning" (p. 17), which indicated the exemplary nature of this course. The study concluded by encouraging career development practitioners to implement aspects of this course into their work with college students in order to "effectively support students' exploration of questions of meaning, purpose, and calling" (p. 18).

Counseling and mentoring relationships. Additional research on calling has pointed to the influence of counseling and mentoring relationships on the development of calling among college students. Dik et al. (2009) emphasized the value of counselors taking a "a calling- and vocation-infused approach," as it may help students deepen their understanding of "the connections between work activity and their larger sense of meaning or purpose in life" (p. 627). Results of a study by Dik and Steger (2008) supported this claim, revealing significant increases in students' career decision self-efficacy following a calling-infused career decision-making workshop.

Daloz and Parks (2003) posited that most college students seek "something more authentic—not simply a job, but a career . . . not easy belief or cheap cynicism, but enduring meaning" (p. 20). They emphasized the value of counseling and mentoring relationships in order to foster this authenticity:

> More than in any other era of our lives, it is during young adulthood that mentors can play a vital role as they encourage questions that upend the givens of youth and offer bridges to a worthy dream of a life distinctively one's own. (p. 20)

Although not specifically addressing calling, the research highlighted the necessity of mentoring to aid students in developing worthy dreams and enduring meaning, which certainly can apply to the calling development process. Daloz and Parks (2003) concluded, "If our lives are to have enduring meaning, it is not enough that we merely satisfy our own needs; we must know that the world needs us" (p. 22).

Study abroad experiences. Miller-Perrin and Thompson (2010) identified the relevance of involvement in study abroad for guiding students to answer the question, "What am I supposed to do with my life?" (p. 88). Their findings indicated, "The understanding of vocational calling, and having the inclination to serve others, were both significantly affected by a study abroad experience" (p. 96). Specifically, Miller-Perrin and Thompson (2010) explained these international study environments engage students to a greater extent than do traditional classroom learning environments, providing students with an opportunity to deepen their sense of identity and self-awareness. Study abroad experiences offer a setting in which students "grow strong in a sense of certainty of life direction and in resolve to serve others" (p. 96).

Service-learning opportunities. Like study abroad experiences, service-learning

opportunities have also proved "uniquely suited to address the requirements both for self-knowledge and for world knowledge in understanding of vocation" (Feenstra, 2011, p. 71). Although the study by Feenstra (2011) only considered Christian college students and their understanding of God's calling on their lives, the opportunities for both self and world exploration, and therefore, vocational exploration, provided through service-learning indicate the relevance of applying her claims to a non-religious setting. Astin (2004) claimed reflection as the key to a meaningful service-learning experience, asking students, "What did the service experience mean to you . . . in terms of . . . what kind of life you want to lead?" (p. 40-41). This question holds value in all calling development contexts, whether faith-based or not.

Motivation for Further Research

The aforementioned research highlighted the impact of involvement and engagement in career development courses, counseling and mentoring relationships, study abroad experiences, and service-learning opportunities on deepening a college student's sense of calling. However, Dik and Duffy (2009) posited that many factors can serve as "constraints or motivators [of career development] depending on the particulars of the situation or circumstance" (p. 39). Therefore, there remains a critical need for further inquiry to determine which forms of involvement and engagement associate with positive change compared to those forms associated with negative change in a student's sense of calling. Although learning about the factors that negatively affect career decision-making has become a focus of career counseling and practice (Niles & Harris-Bowlsbey, 2005), learning about the forms of involvement and engagement that negatively affect calling remains a noteworthy gap in the literature.

This gap inspired the present research, which sought to distinguish between forms of involvement and engagement associated with positive change toward deepening a student's sense of calling in comparison to those forms associated with negative change in a student's sense of calling. As French and Domene (2010) posited,

> Clearly, the empirical evidence for life calling-based career guidance activities in university student populations is limited at the present time. However, as additional future research is conducted in this area, the knowledge base of what life calling means in young adulthood, the potential benefits of promoting a life calling perspective in career guidance, and the most effective ways of doing so will become more evident. (p. 12)

Their vision created an impetus for the current study: to equip calling and career counselors with knowledge of the forms of involvement and engagement associated with a deep sense of calling, so that these caring professionals can encourage students to pursue their calling through such experiences. Ideally, the present study resulted in students pursuing involvement and engagement throughout their college journey in ways that allow them to develop a unique sense of identity, an enduring sense of meaning, a compelling sense of purpose, and a deep sense of calling.

Chapter 3

Methodology

Purpose and Design for Research

The present study sought to make distinctions between forms of involvement and engagement associated with positive change in college students' sense of calling and forms associated with negative change. In this pursuit, the researcher employed a quantitative correlate design using multiple regression analyses (Creswell, 2008). This correlational study explored the relationship between change in students' sense of calling as the dependent variables and forms of involvement and engagement as the predictor variables. Specifically, the study utilized a prediction research design in hopes of identifying contrasting forms of involvement and engagement associated with a deepened or minimized senses of calling in the lives of college students.

Context for Research: Definitions of Calling

The conceptual definition of calling by Palmer (2000) provided a foundation for this research: "Vocation does not mean a goal that I pursue. It means a calling that I hear. Before I can tell my life what I want to do with it, I must listen to my life telling me who I am" (p. 4). After an extensive literature review on calling, Bolman and Gallos (2011) concluded, "Common to all definitions of calling is the importance of listening to one's life and surrendering to a deep sense of mission" (p. 207). This holistic description of calling paired with Palmer's (2000) specific conceptual definition provided the

foundation for developing the present study's operational definition of calling, comprised of two critical components: an internal sense of self and an external sense of purpose.

Description of Methodology

Measures. The study measured an internal sense of self and external sense of purpose through data from the Cooperative Institutional Research Program's (CIRP) Freshman Survey (TFS) and College Senior Survey (CSS) out of the Higher Education Research Institute (HERI) of UCLA. The study explored the potential longitudinal influence of student involvement and engagement in connection to CIRP scales comprised of self-rating and goal variables—Academic Self-Concept, Social Self-Concept, and Social Agency—as well as an experimental scale.

Academic Self-Concept and Social Self-Concept functioned as the constructs used for measuring an internal sense of self. Based upon self-rating items, both scales measure students' beliefs about their abilities and confidence in academic and social settings (Hurtado et al., 2013). The researcher used the CIRP construct of Social Agency to measure an external sense of purpose. This scale measures students' goals based on the extent to which they value political and social involvement in forming their goals (Hurtado et al., 2013). Finally, the experimental scale, called *Philosophy of Life*, sought to measure a holistic sense of calling by incorporating self-rating and goal items that collectively represent an internal sense of self and an external sense of purpose (see Appendix A for a complete list of items that comprise each scale).

The CIRP constructs measuring student involvement and engagement include Habits of Mind, Student-Faculty Interaction, Civic Awareness, and Leadership. These scales measure students' levels of curricular and co-curricular involvement and

engagement based on responses to questions about involvement frequency in a number of activities.

Participants. As participants, the researcher selected 180 graduating senior respondents—from a small, private, faith-based, liberal arts institution in the Midwest—from the 2012 College Senior Survey (CSS) and the corresponding matched cases from the CIRP Freshman Survey (TFS). Participants took the Freshman Survey during orientation weekend, while the College Senior Survey functioned as an exit survey in a capstone course for graduating seniors.

Procedure. The researcher used multiple regressions to explore the relationship between each dependent variable—*Philosophy of Life Change,* Academic Self-Concept Change, Social Self-Concept Change, and Social Agency Change—and the CSS involvement constructs as predictor variables—Habits of Mind, Student-Faculty Interaction, Civic Awareness and Leadership. For conceptual clarity, the researcher blocked the CIRP scales used to measure longitudinal change.

Initially, the researcher subtracted students' TFS scores on each scale from their CSS scores to create new change scales—Academic Self-Concept Change, Social Self-Concept Change, Social Agency Change, and *Philosophy of Life Change*. The multiple regression analyses indicated the predictive ability of the Habits of Mind involvement scale, for example, on change in Academic Self-Concept. Done with each change scale, the procedure highlighted the relationships between the four involvement constructs and each of those scales. In this way, the results sought to determine which forms of involvement and engagement correlated with a deeper sense of calling among college students in contrast to the forms associated with a minimized sense of calling.

Chapter 4

Results

The results presented below include a univariate analysis and multiple regression analyses.

Univariate Analysis

As shown in Table 1, the mean score for Academic Self-Concept Change, subtracting the students' TFS Academic Self-Concept scores from their CSS Academic Self-Concept scores, registered at -0.96 points. The score for Social Self-Concept Change averaged at 2.39 points, the greatest value among the mean change scores. In addition, the mean score for Social Agency Change emerged at 0.57 points. Finally, the experimental scale, *Philosophy of Life Change*, showed a mean score of 0.67 points.

Table 1

Descriptive Statistics

Variable	*N*	*M*	*SD*	*Min*	*Max*
CSS Academic Self-Concept Change	180	-0.96	5.44	-14.4	14.1
CSS Social Self-Concept Change	180	2.39	5.23	-10.5	16.2
CSS Social Agency Change	180	0.57	8.40	-31.5	22.2
CSS Philosophy of Life Change	180	0.67	4.49	-12.0	13.0
CSS Habits of Mind	180	49.0	10.9	8.59	75.3
CSS Student-Faculty Interaction	180	51.2	7.09	34.0	67.0
CSS Civic Awareness	180	50.8	8.22	22.3	64.7
CSS Leadership	180	55.0	7.86	28.5	67.7

Multiple Regression Analyses

The researcher performed a multiple regression analysis to determine the predictive ability of each of the four CSS constructs—Habits of Mind, Student-Faculty Interaction, Civic Awareness, and Leadership—on each of the four dependent variables—Philosophy of Life, Academic Self-Concept, Social Self-Concept, and Social Agency.

Philosophy of life scale.

Table 2

Results of Multiple Regression Model for Dependent Criterion Variable Philosophy of Life Change

Predictor Variable	*B*	*S.E.*	*β*	*t*	*Sig.*
Constant	-8.177	3.265	-	-2.504	0.013
Habits of Mind	0.043	0.031	0.105	1.406	0.162
Student-Faculty Interaction	-0.042	0.049	-0.066	-0.849	0.397
Civic Awareness	-0.041	0.039	-0.075	-1.054	0.293
Leadership	0.200	0.043	0.349	4.636	0.000

Note. B = unstandardized regression coefficient; *S.E.* = standard error; *β* = Beta, standardized regression coefficient; *t* = t-statistics; Sig. = significance (p-value).

Table 2 shows the regression coefficients of longitudinal change in *Philosophy of Life.* As displayed in the table, for each unit on Habits of Mind, the model predicted an increase in *Philosophy of Life Change* by 0.043 units, adjusting for all other predictors in the model, t = 1.406, p = 0.162. However, for each Student-Faculty Interaction unit, the model predicted a decrease in *Philosophy of Life Change* by 0.042 units, adjusting for all other predictors in the model, t = -0.849, p = 0.397. For each Civic Awareness unit, the model predicted a decrease in *Philosophy of Life Change* by 0.041 units, adjusting for all other predictors in the model, t = -1.054, p = 0.293. For each Leadership unit, the model predicted an increase in *Philosophy of Life Change* by 0.200 units, adjusting for all other predictors in the mode, t = 4.636, p = 0.000. Finally, with the Habits of Mind, Student-Faculty Interaction, Civic Awareness, and Leadership scores all at zero, the model predicted a decrease in *Philosophy of Life Change* by 8.177 units, t = -2.504, p = 0.013.

Academic self-concept scale.

Table 3

Results of Multiple Regression Model for Dependent Criterion Variable Academic Self-Concept Change

Predictor Variable	*B*	*S.E.*	*β*	*t*	*Sig.*
Constant	-7.179	4.107	-	-1.748	0.082
Habits of Mind	0.031	0.039	0.063	0.812	0.418
Student-Faculty Interaction	0.025	0.062	0.033	0.404	0.687
Civic Awareness	-0.080	0.049	-0.121	-1.629	0.105
Leadership	0.136	0.04	0.196	2.509	0.013

Note. B = unstandardized regression coefficient; *S.E.* = standard error; β = Beta, standardized regression coefficient; t = t-statistics; Sig. = significance (p-value).

Table 3 shows the regression coefficients of longitudinal change in *Academic Self-Concept.* For each Habits of Mind unit, the model predicted an increase in Academic Self-Concept Change by 0.031 units, adjusting for all other predictors in the model, t = 0.812, p = 0.418. For each Student-Faculty Interaction unit, the model predicted an increase in Academic Self-Concept Change by 0.025 units, adjusting for all other predictors in the model, t = 0.404, p = 0.687. For each Civic Awareness unit, the model predicted a decrease in Academic Self-Concept Change by 0.080 units, adjusting for all other predictors in the model, t = -1.629, p = 0.105. For each Leadership unit, the model predicted an increase in Academic Self-Concept Change by 0.136 units, adjusting for all other predictors in the model, t = 2.509, p = 0.013. With Habits of Mind, Student-Faculty Interaction, Civic Awareness, and Leadership scores at zero, the model predicted a decrease in Academic Self-Concept Change by 7.179 units, t = -1.748, p = 0.082.

Social self-concept scale.

Table 4

Results of Multiple Regression Model for Dependent Criterion Variable Social Self-Concept Change

Predictor Variable	*B*	*S.E.*	*β*	*t*	*Sig.*
Constant	-3.867	3.883	-	-0.996	0.321
Habits of Mind	-0.002	0.037	-0.005	-0.059	0.953
Student-Faculty Interaction	-0.009	0.059	-0.013	-0.161	0.872
Civic Awareness	-0.077	0.046	-0.121	-1.659	0.099
Leadership	0.196	0.051	0.294	3.822	0.000

Note. B = unstandardized regression coefficient; *S.E.* = standard error; *β* = Beta, standardized regression coefficient; *t* = t-statistics; Sig. = significance (p-value).

Table 4 shows the regression coefficients of longitudinal change in Social Self-Concept. For each Habits of Mind unit, the model predicted a decrease in Social Self-Concept Change by 0.002 units, adjusting for all other predictors in the model, t = -0.059, p = 0.953. Similarly, for each Student-Faculty Interaction unit, the model predicted a decrease in Social Self-Concept Change by 0.009 units, adjusting for all other predictors in the model, t = -0.161, p = 0.872. For each Civic Awareness unit, the model predicted a decrease in Social Self-Concept Change by 0.077 units, adjusting for all other predictors in the model, t = -1.659, p = 0.099. For each Leadership unit, the model predicted an increase in Social Self-Concept Change by 0.196 units, adjusting for all other predictors in the mode, t = 3.822, p = 0.000. Finally, with Habits of Mind, Student-Faculty Interaction, Civic Awareness, and Leadership scores all at zero, the model predicted a decrease in Social Self-Concept Change by 3.867 units, t = -0.996, p = 0.321.

Social agency scale.

Table 5

Results of Multiple Regression Model for Dependent Criterion Variable Social Agency Change

Predictor Variable	*B*	*S.E.*	*β*	*t*	*Sig.*
Constant	-16.187	6.359	-	-2.545	0.012
Habits of Mind	0.018	0.060	0.023	0.294	0.769
Student-Faculty Interaction	-0.025	0.096	-0.021	-0.261	0.795
Civic Awareness	0.113	0.076	0.110	1.483	0.140
Leadership	0.208	0.084	0.195	2.483	0.014

Note. B = unstandardized regression coefficient; *S.E.* = standard error; *β* = Beta, standardized regression coefficient; *t* = t-statistics; Sig. = significance (p-value).

Table 5 shows the regression coefficients of longitudinal change in *Social Agency.* For each Habits of Mind unit, the model predicted an increase in Social Agency Change by 0.018 units, adjusting for all other predictors in the model, t = 0.294, p = 0.769. However, for each unit on the Student-Faculty Interaction scale, the model predicted a decrease in Social Agency Change by 0.025 units, adjusting for all other predictors in the model, t = -0.261, p = 0.795. For each unit on the Civic Awareness scale, the model predicted an increase in Social Agency Change by 0.113 units, adjusting for all other predictors in the model, t = 1.483, p = 0.140. For each Leadership unit, the model predicted an increase in Social Agency Change by 0.208 units, adjusting for all other predictors in the mode, t = 2.483, p = 0.014. Finally, with the Habits of Mind, Student-Faculty Interaction, Civic Awareness, and Leadership scores all at zero, the model predicted a decrease in Social Agency Change by 16.187 units, t = -2.545, p = 0.012.

Chapter 5

Discussion

The present sought to explore the forms of involvement and engagement associated with positive change that deepens a student's sense of calling as compared to those forms associated with negative change that minimizes a student's sense of calling. Toward this end, the following section discusses the implications of the preceding results. This discussion includes an examination of the research questions and hypotheses and an evaluation of the experimental scale. In addition, the researcher offers limitations of the study as well as implications for future research and practice.

Research Questions and Hypotheses

The results of the study indicated student involvement and engagement as influential in the development of calling among college students. However, the multiple regression outcomes did not provide distinction between the forms of involvement and engagement associated with positive change that deepens a college student's sense of calling as compared to those forms of involvement and engagement associated with negative change that minimizes a college student's sense of calling. However, the multiple regression outcomes did indicate that Leadership predicts an increase between 0.136 and 0.208 units in each of the four longitudinal change variables.

For example, the results of the multiple regressions with the *Philosophy of Life Change* scale demonstrated Leadership, as a form of involvement and engagement, has

unique explanatory value in this model, with an increase of 0.200 units in *Philosophy of Life Change* for each unit on the Leadership scale. Conversely, the Habits of Mind, Student-Faculty Interaction, and Civic Awareness scales did not have significance in association to *Philosophy of Life Change.* Thus, the researcher rejected the hypothesis that all four predictor variables—Habits of Mind, Student-Faculty Interaction, Civic Awareness, and Leadership—would correlate with positive change in calling indicators.

Such a finding about the lack of clarity regarding the relationship between specific forms of involvement and change indicators supported the literature on involvement and engagement. This finding, therefore, reinforced the critical need for evidence of connections between desired college outcomes and aspects of the college experience to which students dedicate their time (Astin, 1984; Ewell, 1988; Kuh, 1995). The results of the present study also highlighted the necessity of further inquiry to determine the factors of the college experience, and specifically, the forms of involvement and engagement, positively associated with change as compared to those forms negatively associated with change in a college student's sense of calling (Dik & Duffy, 2009; French & Domene, 2010).

Furthermore, the current study found only one form of involvement, leadership, correlates positively with change indicators and therefore did not produce results that confirmed previous literature about beneficial forms of involvement and engagement—career development courses, counseling and mentoring relationships, study abroad experiences, and service-learning opportunities; however, the study also did not negate such research. The statement by Kuh (1995)—"Little is known about which out-of-class activities . . . are linked with what outcomes"—remains largely true (p. 124). Therefore,

additional inquiry must determine the influence of specific forms of involvement and engagement on the development of calling among college students.

Experimental Scale: *Philosophy of Life*

In an attempt to make such a distinction through quantitative analysis, the researcher developed an experimental scale, *Philosophy of Life*, to express the presence of a calling in college students' lives. The claim by Bolman and Gallos (2011) provided the grounds upon which to build an operationalized definition of calling with two components: an internal sense of self and an external sense of purpose. Consequently, the researcher created the experimental scale with this definition as its foundation, seeking to measure a student's internal sense of self through self-rating items and a student's external sense of purpose through goal items.

The self-rating items measured changes in a student's intellectual self-confidence, social self-confidence, self-understanding, spirituality, leadership ability, and understanding of others. In addition, the goal items selected measured changes in a student's goals of developing a meaningful philosophy of life, influencing social values, helping others in difficulty, and becoming a community leader. The researcher conducted a reliability analysis on the *Philosophy of Life* scale with both the TFS and CSS, revealing Cronbach's Alpha scores of 0.730 and 0.753, respectively, which indicate a moderate coefficient of reliability.

Furthermore, the fact that this experimental scale did produce a moderate reliability score demonstrated the effectiveness of an operationalized definition of calling comprised of an internal sense of self and an external sense of purpose. Because items within this *Philosophy of Life* scale conceptually aligned to measure those two

components of calling but (by original design) did not measure such components—and therefore, did not measure a sense of calling—their output of moderate coefficients of reliability proved noteworthy. Therefore, this operationalized definition of calling merits further exploration to develop a scale purposefully designed to measure a student's collective sense of calling.

Limitations of the Study

The present study revealed multiple limitations worth considering in pursuit of future research on the development of calling, including one inherent in the previous evaluation of the experimental scale. The scales used to measure longitudinal change in a student's sense of calling—both the *Philosophy of Life* scale and the CIRP-constructed scales—did not comprehensively measure the operationalized definition of calling revealed in the literature. While not implemented into the TFS or CSS to measure a sense of calling—or even an internal sense of self or external sense of purpose—individual items became utilized here toward those ends. Consequently, the moderate reliability scores inhibited the potential for widespread application of the results.

Another limitation that anyone making conclusions or recommendations based upon the results must consider comes with the self-report nature of the Freshman Survey and the College Senior Survey. Because all items utilized in this analysis drew on self-report, the data reflected perceived, rather than actual, changes in *Philosophy of Life*, Academic Self-Concept, Social Self-Concept, and Social Agency. Previous literature on calling also wrote about self-report as limitations, because "relationships were likely elevated" (Galles and Lenz, 2013, p. 246) and "results may be affected by social desirability" (Feenstra and Brouwer, 2008, p. 91). However, self-report data remains

pervasive in higher education literature and certainly does not completely undermine of this study but simply inhibits its conclusive nature.

The small sample size of 180 students and the fact that these students only represent one higher education institution bring further limitation to the study. Finally, the attempt to quantitatively measure calling, a construct quite vague conceptually, remains inherently limited in its capacity to encompass the compelling nature of a student's sense of calling.

Implications for the Future

Future research. These limitations, therefore, certainly have implications that create an impetus for further inquiry on the development of calling among college students. Most foundationally, future studies could imitate the present study exactly in its procedure and conducted at larger institutions to produce greater sample sizes or at multiple institutions to provide comparison data. A similar study could also focus on a public, non-faith-based institution's campus, given the salience of calling at a variety of institutional types across the country.

Perhaps of most imminent need, though, a qualitative research could seek to capture the compelling nature of calling and develop a scale more representative of its operationalized definition. Through interviews with students at faith-based and non-faith-based institutions, scholars will become best prepared to either affirm the operationalized definition in the present study or create a new operationalized definition that better reflects the essence of what having a sense of calling means. Such research ultimately will equip caring professionals to explore questions of identity, meaning, and purpose with students in ways that nurture a deep sense of calling in their lives.

Future practice. In this regard, the results of the current study also have implications for practice worth considering if higher education practitioners want to effectively foster the development of calling in the lives of the students with whom they work. In direct response to the original research questions and hypothesis, the study only revealed leadership as a specific form of involvement and engagement that practitioners ought to encourage students to pursue if they want to increase the likelihood that they will grow to a deepened sense of calling. However, the results certainly did not negate the relevance of the four specific forms of involvement and engagement revealed in the literature. Calling and career counselors, therefore, discover increasing motivation for encouraging students to pursue such forms— career development courses, counseling and mentoring relationships, study abroad experiences, and service-learning opportunities— in order to further explore the positive impact these forms of involvement and engagement might have on a college student's sense of calling.

Additionally, because of the need for practitioners to educate and mentor students in ways that increase clarity in a conceptual understanding of a calling—and also in their own individual sense of calling—the operationalized definition of calling provided in the study ought to receive exploration in practice. Because Braun (2005) wrote that "today's students are grappling with the more philosophical questions," (p. X), providing a more tangible way of exploring such questions with students could serve as a meaningful pursuit. Therefore, higher education practitioners can fully embrace the opportunity to help students discover a sense of calling through first exploring their understanding of their internal sense of self and their understanding of the world in order to develop an external sense of purpose, ultimately combining those understandings in order to nurture

a deep sense of calling in the lives of students.

Inherent in this exploration of students' internal sense of self and external sense of purpose lies the necessity of reflection as a central component of such exploration. However, most forms of involvement and engagement do not naturally provide opportunities for reflection. Consequently, higher education practitioners have a significant responsibility to create space for the intentional, systematic reflection that invites students to make meaning of their involvement and engagement in ways that nurture a deep sense of calling.

However, given the stage of emerging adulthood in which college students live, higher education practitioners face significant challenges in creating this space for reflection toward a deep sense of calling. Smith (2009) described the nature of emerging adulthood as highly transient and filled with possibilities, and the emerging adults navigating these transitions appear relativistic, self-focused, and minimally committed. Furthermore, the faith-based contexts in which many emerging adults live—and that influenced the participants in the study—can perpetuate these characteristics of emerging adults, as religious beliefs often imply one cannot commit without certainty. Because emerging adults face seemingly endless possibilities, few of them have certainty, and therefore, even fewer of them believe they can make a grounded commitment.

These elements of emerging adulthood and faith-based contexts, consequently, make reflection toward an internal sense of self and an external sense of purpose—that make up a sense of calling—difficult, because few college students willingly commit to a deep sense of calling, if they even come to discover one. Today's college students lack both the opportunities as well as the models to make an enduring commitment to a deep

sense of calling, highlighting further necessity of higher education institutions providing such opportunities and models. In this pursuit, colleges and universities must first determine how they uniquely define the concept of calling in order to effectively engage students in the process of developing a sense of calling. With this conceptual clarity, higher education practitioners then must invite students into an ongoing process of reflection, creating the necessary time and space for intentional solitude, introspection, consideration, and conversation.

Similarly, Astin (2004) emphasized reflection as the key to meaningful involvement and engagement, asking students, "What did the . . . experience mean to you . . . in terms of . . . what kind of life you want to lead?" (p. 40-41). If caring practitioners commit to encouraging student involvement and engagement and consistently asking students these larger questions, students will feel invited into a rich exploration process that truly encourages them to develop a unique sense of identity, an enduring sense of meaning, a compelling sense of purpose, and a deep sense of calling.

References

Adams, C. M. (2012). Calling and career counseling with college students: Finding meaning in work and life. *Journal of College Counseling, 15,* 65–80.

Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, *25*, 297–308.

Astin, A. W. (1993). *What matters in college : Four critical years revisited* (1st ed.). San Francisco, CA: Jossey-Bass.

Astin, A. W. (2004). Why spirituality deserves a central place in liberal education. *Liberal Education*, *90*(2), 34–41.

Bolman, L. G., & J. V. Gallos. (2011). *Reframing academic leadership.* San Francisco, CA: Jossey-Bass.

Braun, P. (2005, March). Employers are looking for students who reflect on life's bigger questions. *Campus Career Counselor*, 6.

Buechner, F. (1973). *Wishful thinking: A theological ABC.* New York, NY: Harper & Row.

Chen, C. P. (2001). On exploring meanings: Combining humanistic and career psychology theories in counseling. *Counselling Psychology Quarterly, 14*, 317-330.

Chickering, A. W., & Reisser, L. (1993). *Education and identity* (2nd ed.) San Francisco, CA: Jossey-Bass.

Creswell, J. W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson/Merrill Prentice Hall.

Daloz, L. A. P., & Parks, S. D. (2003). Mentoring big questions and worthy dreams for young adults. *Adult Learning, 14*(1), 20-22.

Dik, B. J., & Duffy, R. D. (2009). Calling and vocation at work: Definitions and prospects for research and practice. *Counseling Psychology, 27,* 424-450.

Dik, B. J., & Steger, M. F. (2008). Randomized trial of a calling-infused career workshop incorporating counselor self-disclosure. *Journal of Vocational Behavior, 73*, 203-211.

Dik, B. J., Duffy, R. D., & Eldridge, B. M. (2009). Calling and vocation in career counseling: Recommendations for promoting meaningful work. *Professional Psychology: Research and Practice, 40,* 625-632.

Duffy, R. D., Bott, E. M., Allan, B. A., Torrey, C. L., & Dik, B. J. (2012). Perceiving a calling, living a calling, and job satisfaction: Testing a moderated, multiple mediator model. *Journal of Counseling Psychology, 59*, 50-59.

Duffy, R. D., & Dik, B. J. (2009). Beyond the self: External influences in the career development process. *The Career Development Quarterly, 58*, 29-43.

Duffy, R. D., & Sedlacek, W. E. (2010). The salience of a career calling among college students: Exploring group differences and links to religiousness, life meaning, and life satisfaction. *The Career Development Quarterly, 59*, 27-41.

Ewell, P. T. (1988). Outcomes, assessment, and academic improvement: In search of usable knowledge. *Higher Education: Handbook of Theory and Research, 4,* 53-

108.

Feenstra, J. S. (2011). Vocational exploration through service: The effect of service-learning on student understanding of God's calling. *Journal of Education & Christian Belief, 15*, 65–74.

Feenstra, J. S., & Brouwer, A. M. (2008). Christian vocation: Defining relations with identity status, college adjustment, and spirituality. *Journal of Psychology & Theology, 36*, 83-93.

French, J. R., & Domene, J. F. (2010). Sense of "calling": An organizing principle for the lives and values of young women in university. *Canadian Journal of Counselling and Psychotherapy, 44*, 1-14.

Galles, J. A., & Lenz, J. G. (2013). Relationships among career thoughts, vocational identity, and calling: Implications for practice. *The Career Development Quarterly, 61*, 240–248.

Hall, D. T., & Chandler, D. E. (2005). Psychological success: When the career is a calling. *Journal of Organizational Behavior, 26,* 155-176.

Hurtado, S., Pryor, J. H., Palucki Blake, L., Eagan, K., & Case, M. H. (2013). *Class of 2012: Findings from the college senior survey*. Los Angeles, CA: Higher Education Research Institute, UCLA.

Johnson, P., Nichols, C. N., Buboltz Jr., W. C., & Riedesel, B. (2002). Assessing a holistic trait and factor approach to career development of college students. *Journal of College Counseling, 5*, 4-14.

Kuh, G. D. (1995). The other curriculum: Out-of-class experiences associated with student learning and personal development. *Journal of Higher Education, 66*,

123–155.

Kuh, G. D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter.* Washington, DC: Association of American Colleges and Universities.

Miller-Perrin, C., & Thompson, D. (2010). The development of vocational calling, identity, and faith in college students: A preliminary study of the impact of study abroad. *Frontiers: The Interdisciplinary Journal of Study Abroad, 19,* 87–103.

Niles, S. G., & Harris-Bowlsbey, J. (2005). *Career development interventions in the 21st century* (2nd ed.). Columbus, OH: Merrill Prentice Hall.

Novak, M. (1996). *Business as a calling: Work and the examined life.* New York, NY: The Free Press.

Palmer, P. J. (2000). *Let your life speak: Listening for the voice of vocation*. San Francisco, CA: Jossey-Bass.

Parks, S. D. (2000). *Big questions, worthy dreams: Mentoring young adults in their search for meaning, purpose, and faith.* San Francisco, CA: Jossey-Bass.

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research*. San Francisco, CA: Jossey-Bass.

Phillips, S. L. (2011). Path models of vocational calling in Christian college students. *Christian Higher Education*, *10*, 296–323.

Pryor, J. H., Eagan, K., Palucki Blake, L., Hurtado, S., Berdan, J., & Case, M. H. (2011). *The American freshman: National norms fall 2012*. Los Angeles, CA: Higher Education Research Institute, UCLA.

Seligman, M. E. P., Rashid, T., & Parks, A. C. (2006). Positive psychotherapy. *American*

Psychologist, 61, 774-788.

Smith, C. (2009). *Souls in transition: The religious and spiritual lives of emerging adults*. New York, NY: Oxford University Press.

Steger, M. F. (2009). Meaning in life. In S. J. Lopez (Ed.), *Handbook of positive psychology* (2nd ed., pp. 679–687). New York, NY: Oxford University Press.

Thompson, E., & Feldman, D. B. (2010). Let your life speak: Assessing the effectiveness of a program to explore meaning, purpose, and calling with college students. *Journal of Employment Counseling*, *47*, 12–19.

Weiss, J. W., Skelley, M. F., Haughey, J. C., & Hall, D. T., (2003). Calling, new careers and spirituality: A reflective perspective for organizational leaders and professionals. In M. Schwartz & H. Harris (Eds.), *Spiritual intelligence at work: Meaning, metaphor, and morals* (Research in Ethical Issues in Organizations, Vol. 5, pp. 175-201). San Francisco, CA: JAI Press.

Appendix A

Complete List of Items within Analyzed Constructs

Academic Self-Concept

Participants respond to items contributing to Academic Self-Concept on a 5-point scale with one of the following options: Lowest 10%, Below Average, Average, Above Average, or Highest 10%.

"Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself."

Self-Rating: Academic ability
Self-Rating: Drive to achieve
Self-Rating: Mathematical ability
Self-Rating: Self-confidence (intellectual)
Self-Rating: Writing ability

Social Self-Concept

Participants respond to items contributing to Social Self-Concept on a 5-point scale with one of the following options: Lowest 10%, Below Average, Average, Above Average, or Highest 10%.

"Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself."

Self-Rating: Leadership ability
Self-Rating: Public speaking ability
Self-Rating: Self-confidence (social)

Social Agency

Participants respond to items contributing to Social Agency on a 4-point scale with one of the following options: Not important, Somewhat important, Very important, or Essential.

"Indicate the importance to you personally of each of the following:"

Goal: Influencing the political structure
Goal: Influencing social values
Goal: Helping others who are in difficulty
Goal: Participating in a community action program
Goal: Helping to promote racial understanding
Goal: Keeping up to date with political affairs
Goal: Becoming a community leader
Goal: Improving my understanding of other countries and cultures

Experimental Scale: *Philosophy of Life*

Self-Rating Items – Participants respond to self-rating items contributing to *Philosophy of Life* on a 5-point scale with one of the following options: Lowest 10%, Below Average, Average, Above Average, or Highest 10%.

"Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself."

Self-Rating: Leadership ability
Self-Rating: Self-confidence (intellectual)
Self-Rating: Self-confidence (social)
Self-Rating: Self-understanding
Self-Rating: Spirituality
Self-Rating: Understanding of others

Goal Items – Participants respond to goal items contributing to *Philosophy of Life* on a 4-point scale with one of the following options: Not important, Somewhat important, Very important, or Essential.

"Indicate the importance to you personally of each of the following:"

Goal: Developing a meaningful philosophy of life
Goal: Influencing social values
Goal: Helping others who are in difficulty
Goal: Becoming a community leader

Habits of Mind

Participants respond to items contributing to Habits of Mind on a 3-point scale with one of the following options: Not at all, Occasionally, or Frequently.

"How often in the past year did you:"

Habits of Mind: Ask questions in class
Habits of Mind: Support your opinions with a logical argument
Habits of Mind: Seek solutions to problems and explain them to others
Habits of Mind: Revise your papers to improve your writing
Habits of Mind: Evaluate the quality or reliability of information you received
Habits of Mind: Take a risk because you felt you had more to gain
Habits of Mind: Seek alternative solutions to a problem
Habits of Mind: Look up scientific research articles and resources
Habits of Mind: Explore topics on your own, even though it was not required for a class
Habits of Mind: Accept mistakes as part of the learning process
Habits of Mind: Seek feedback on your academic work
Habits of Mind: Integrate skills and knowledge from different sources and experiences

Student-Faculty Interaction

Participants respond to items contributing to Student-Faculty Interaction on a 3-point scale with one of the following options: Not at all, Occasionally, or Frequently.

"How often have professors at your college provided you with:"

Faculty Provide: Encouragement to pursue graduate/professional degree
Faculty Provide: An opportunity to work on a research project
Faculty Provide: Advice and guidance about your education program
Faculty Provide: Emotional support and encouragement
Faculty Provide: A letter of recommendation
Faculty Provide: Honest feedback about your skills and abilities
Faculty Provide: Help to improve your study skills
Faculty Provide: Feedback about your academic work (outside of grades)
Faculty Provide: Intellectual challenge and stimulation
Faculty Provide: An opportunity to discuss coursework outside of class
Faculty Provide: Help in achieving your professional goals
Faculty Provide: An opportunity to apply classroom learning to 'real-life' issues
Faculty Provide: An opportunity to publish

Civic Awareness

Participants respond to items contributing to Civic Awareness on a 5-point scale with one of the following options: Much weaker, Weaker, No change, Stronger, or Much stronger.

"Compared with when you first entered college, how would you now describe your:"

Change: Understanding of the problems facing your community
Change: Understanding of national issues
Change: Understanding of global issues

Leadership

Change Item – Participants respond to the change item contributing to Leadership on a 5-point scale with one of the following options: Much weaker, Weaker, No change, Stronger, or Much stronger.

"Compared with when you first entered college, how would you now describe your:"

Change: Leadership ability

Self-Rating Item – Participants respond to the self-rating item contributing to Leadership on a 5-point scale with one of the following options: Lowest 10%, Below Average, Average, Above Average, or Highest 10%.

"Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself."

Self-Rating: Leadership ability

Opinion Items – Participants respond to the opinion item contributing to Leadership on a 4-point scale with one of the following options: Disagree strongly, Disagree, Agree, or Agree strongly.

"Please indicate the extent to which you agree or disagree with the following statements:"

Opinion: I have effectively led a group to a common purpose

Act in College Items – Participants respond to the act in college item contributing to Leadership on a 2-point scale with one of the following options: No or Yes.

"Since entering this college have you:"

Act in College: Been a leader in an organization
Act in College: Participated in leadership training