

LEADERSHIP MOTIVATIONAL FACTORS OF STUDENTS IN AGRICULTURAL  
COLLEGIATE ORGANIZATIONS

By

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To my Father, if I amount to a portion of the man you are, I will be a great man.

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## LIST OF ABBREVIATIONS

CALS	College of Agricultural and Life Sciences
DTDM	Dillman Tailored Design Method
SDT	Self-Determination Theory

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LEADERSHIP MOTIVATIONAL FACTORS OF STUDENTS IN AGRICULTURAL  
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The four years spent in college are one of the most important developmental time periods for leaders in the agricultural industry. This research measures the leadership motivational factors of students in colligate organizations in colleges of agriculture. This study will aid in motivating students to seek out and accept leadership roles. The theoretical frameworks used in this study were Self-determination Theory and Servant Leadership Theory.

The population of this of all undergraduates in student organizations in the College of Agricultural and Life Sciences (CALs) at the University of Florida (UF) for the fall of 2010 semester. Participants were administered a researcher designed face-to-face survey. Eight constructs were measured during this study. The three constructs associated with Self-determination Theory were autonomy, competence, and relatedness. The five constructs associated with Servant Leadership were altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship.

The study found that of the three constructs measured under Self-determination Theory, relatedness was the only construct that was statistically significant with

distinguishing leaders versus non-leaders. Furthermore, the study found that of the five constructs measured under Servant Leadership, altruistic calling and organizational stewardship were the two constructs of servant leadership that had statistically significant differences between leaders and non-leaders.

The study found that of the three constructs measured under Self-determination Theory, relatedness was the only construct that was statistically significant with distinguishing leaders versus non-leaders in collegiate agricultural organizations. Furthermore, the study found that of the five constructs measured under Servant Leadership, altruistic calling and organizational stewardship were the two constructs of servant leadership that had statistically significant differences between leaders and non-leaders.

These results indicate the greater connection an individual has between members of their organizations the more likely they are to be motivated to take leadership positions. The results also indicate leaders possess higher levels of altruistic calling and organizational stewardship.

## CHAPTER 1 INTRODUCTION

Today's workforce is as demanding as ever of recent college graduates. The world's workforce is more connected, complicated, and dependent on knowledge, creating an increased demand on the skills of college graduates. In addition to these demands, globalization and changing demographics have generated a new level of applied skills graduates must possess in order to succeed (Schumacher & Swan, 1993). In conjunction with these shifting trends, technology and access to information have grown exponentially in the past two decades and continue to expand. Industry standards continue to place many workplace environments under pressure incorporating new accountability standards for new workers in both private sector and governmental realms (Jorion, 2000). Trends like these influence the demand for college graduates to possess not only technical knowledge but also an ability to display analytical, communication, group work and leadership skills (Association of American Colleges and Universities, 2002).

The success of the agriculture industry depends on colleges of agriculture graduates to be competent with skills employers are seeking (Kaufman, 2007). Colleges of agriculture prepare graduates through various venues, including classroom instruction, leadership development experiences, and technical skills training. More specifically, colleges of agriculture at land-grant universities have the potential to supply graduates with leadership skills for the agricultural workforce (von Stein, 2008).

Graduates must have an increased number of skills to deal with the complexities of the agricultural industry (Birkenholz & Schumacher, 1994). Among other skills, including technical expertise, graduates must possess a greater understanding and

ability to demonstrate leadership skills (Andelt, Barrett, & Bosshamer, 1997; Graham, 2001). According to Casner-Lotto (2006) one-quarter of four-year college graduates entering the workforce are deficient in leadership skills. Graduates need proficiency in leadership skills in order to have a successful impact in agriculture (Kaufman, 2007; Suvedi & Heyboer, 2004). The more graduates that possess leadership skills, the greater impact colleges of agriculture will have on the agricultural industry.

One response to the greater demand for leadership skills in students is a focus on creating a greater amount of student leader development opportunities in higher education, more precisely, in colleges of agriculture (Estevez, 2007; von Stein, 2008). Colleges of agriculture strive to advance students through academic programs and student development experiences. Those students who are motivated to become civically engaged to serve in collegiate leadership organizations show the greatest amount of personal and professional development (Foubert & Grainger, 2006).

Numerous scholars have suggested that student leadership experiences as an undergraduate are crucial for the development of leadership and other skills needed later in life (Astin, 1977, 1993; Pascarella & Terenzini, 2005; Sommers, 1991). In fact, the greatest student development of skills including leadership occurs through student involvement in student organizations (Astin, 1993; Ewing, Bruce, & Ricketts, 2009). Intuitively, involvement in student organizations provides a platform for students to network, build confidence, and builds their skills.

Due to the nature of student organizations, student involvement in organizations as members or leaders occurs in a servant leadership role. Servant leadership, a term devised by Greenleaf (2002), is a leader who desires to serve first, and then lead. This

leadership theory has developed over the past four decades and has been used to measure leadership skills. It is appropriate to use servant leadership to assess leadership levels in colleges of agriculture because students are serving the organizations by volunteering for leadership positions.

The College of Agricultural and Life Sciences (CALs) at the University of Florida (UF) provide environments that develop students' skills through student enrichment opportunities (von Stein, 2008; Estevez, 2007). Enrichment opportunities include participation in student organizations, developmental seminars, and leadership development programs (*Agricultural and Life Sciences College Council, 2009*). Providing opportunities for student leadership development aligns with the goal of colleges of agriculture to serve students through development opportunities outside the classroom (Love & Yoder, 1989).

CALS has 32 undergraduate student organizations registered with the Agricultural and Life Sciences College Council (ALSCC), which acts as an umbrella organization and liaison to the UF student government (*Agricultural and Life Sciences College Council, 2009*).

### **Statement of the Problem**

The agriculture industry needs competent graduates that possess leadership skills. Graduates who are more affluent in leadership skills have a greater chance of contributing to the agricultural industry's needs (Kaufman, 2007). Furthermore, colleges of agriculture provide opportunities for students to develop leadership skill sets (Andelt, Barret, & Bosshamer, 1997).

Students enrolled in colleges of agriculture have the most potential for leadership development by becoming involved in student organizations during their four years in

college (Astin, 1977; Astin, 1993; Birkenholz & Schumacher, 1994). In addition, involvement in collegiate agricultural organizations contributes to the development of leadership skills (Estevez, 2007).

Although the importance of student involvement and development has been stated, there is still a gap in the research that clearly identified why students get involved (Foubert & Grainger, 2006). Minimal research has been conducted in how colleges of agriculture faculty and staff can motivate students to seek out and accept leadership roles within colleges of agriculture.

### **Purpose**

The purpose of this study is to discover the motivating factors of students in the CALS at the UF to seek or accept leadership roles in student organizations.

### **Objectives**

This research will address the following objectives:

1. Describe the motivational leadership factors of student leaders and non-leaders in undergraduate students in CALS at UF who are involved in collegiate agricultural organizations
2. Describe the ability to lead of both leaders and non-leaders by members of collegiate agricultural organizations
3. Compare differences in motivational factors in leaders and non-leader members of collegiate agricultural organizations
4. Examine the relationship between desire to lead and demographic characteristics

## **Significance of the Study**

This study makes a contribution to the field of undergraduate student leadership development by increasing the knowledge of collegiate leadership development. The study identified factors that explain the motivation of members in collegiate organizations to take on leadership roles. Understanding what motivates students to participate in leadership roles will give faculty and staff a better understanding of how to serve and motivate students to take leadership positions.

“More research is needed on the intricacies and possible direction of the relationship between student involvement in organizations and student leadership and personal development,” (von Stein, 2008, p. 33). Understanding these factors can help develop more effective leadership programs for undergraduate students and help increase leadership capacity within these organizations. The information would also be beneficial for student organizations that have had a history of limited leadership development experiences by providing, “aspiring leaders with unique opportunities to assume leadership roles by simultaneously meeting both follower’s needs and organizational requirements” (Isaac, Zerbe, & Pitt, 2001, p.1). Furthermore, research on student leadership provides a better understanding of how to motivate students who have not been leaders to take more leadership roles in the future. This will create more student leaders, which will impact the agricultural industry.

This research coincides with the National Research Agenda for Agricultural Education and Communication (Osborne, n.d.). This study provided advancement in the following areas under the Agricultural Education in University and Postsecondary Settings:

RPA1: “Recruit and prepare students for the future workforce in the agricultural and life sciences” (p.16).

RPA2: “Improve the success of students enrolled in agricultural and life sciences academic and technical programs” (p.16).

Overall, this research is consistent with the national agenda by helping the sustainability and succession of academic agricultural leadership programs (Osborne, n.d.).

### **Definition of Terms**

1. Servant Leadership – behavior that exceeds self desire to serve the needs of others (Greenleaf, 1977)
2. Student Leaders – members of a collegiate organization who hold positions in their respective organizations or have been identified as leaders by their advisors
3. Active Member – an individual who is involved in the workings of the organization and has a stake in the activities that are being conducted
4. CALS student organization – a CALS club/organization registered with the Agricultural and Life Sciences College Council
5. Motivation – in this study motivation is defined as, “an awareness of a need of the organism” (Deci & Ryan, 1985) and measured as a score on Self-Determination scale
6. Motivational Factor – a factor that drives an individual to move themselves or others to act (Deci & Ryan, 1985)

### **Limitations**

In an attempt increase the credibility of this research, the following are acknowledged as limitations:

1. Generalizability of the study to other colleges of agriculture in different universities is limited. The research methodology used in this study only allows the results to be generalized to CALS students.
2. Sampling errors will occur because the complete population could not be surveyed (Agresti & Finlay, 2009). The use of the names provided by the college of agriculture may not all be current or updated with actual club officers and leaders.
3. Coverage error may occur because some of the leaders assessed in CALS student organizations do not include those who do not have access to their e-mail accounts or are traveling abroad and may not be able to take the survey.

### **Chapter Summary**

Colleges of agriculture have an opportunity to make a difference in the agricultural industry by developing students' leadership skills. Graduates of colleges of agriculture have the chance to make a difference in communities through serving in leadership roles and being civically engaged.

Student leadership skills are grown through involvement in student organizations. In addition, student organizations are the best place for students to potentially hold a leadership role and develop leadership skills.

However, full understanding of what factors motivate students to take on leadership experiences was unknown. These motivational factors are important to understand so the faculty and staff can better motivate students to accept leadership positions.

The purpose of this study was to discover what motivates students to take leadership positions in student organizations in CALS at UF. For organizations in CALS that are lacking in providing leadership developmental experiences for undergraduate students, understanding motivational factors will help facilitate more developmental experiences in the future.

## CHAPTER 2 REVIEW OF LITERATURE

The previous chapter illustrated the importance of discovering the motivating factors of leaders in collegiate agricultural organizations. This study will fill a gap in the research of what motivates students to seek out and accept leadership roles. Understanding these motivators will help faculty and staff better able to serve the needs of students, encourage more students to seek out and accept leadership roles, and also stimulate more effective leadership in student organizations.

This chapter examines background information and presents a review of literature on two theories, self-determination theory (SDT) and servant leadership , that will be combined into a framework utilized for this study. The conceptual model for this study suggests various relationships among the variables that may influence a student's decision to accept a leadership role. The purpose of this study was to understand the motivating factors that lead CALS students to accept leadership roles. The findings will allow UF faculty and staff to develop better student leadership programs and develop stronger student leaders.

### **Theoretical Framework**

#### **Self-Determination Theory**

The first of the two directing theories for this research is Self-Determination Theory. It is a meta-theory consisting of five motivational theories: cognitive evaluation theory, organismic integration theory, causality orientations theory, basic psychological needs theory, and goal contents theory (Deci & Ryan, 1985, 2002). These five theories provide the theoretical groundwork for the three main components of Self-Determination Theory, which are relatedness, competence, and autonomy. Combined, these three

components lead to sustainable motivation. Sustainable motivation is enduring motivation that stems from within an individual (Stone, Deci, and Ryan, 2009). It is appropriate to use a theoretical framework that incorporates sustainable motivation because the researcher is looking at behavior that is exhibited over the course of four years.

### **Formal SDT mini-theories**

**Cognitive evaluation theory (CET).** The first meta-theory of self-development theory was developed over the past half-century. CET stemmed from Richard De Charm's research published in *Personal Causation: The internal affective determinants of behavior*. De Charm's (1968) study examined the locus of causality tied to human motivations, establishing a separate and distinct difference between motivation emerging from within an individual and motivation stemming from an external force. De Charm's work showed that a decrease in intrinsic motivation took place when the locus of causality shifted from internal to external. For example, when an external motivator was added to a task originally motivated from within, the individual assigned the task felt lower motivation to accomplish the work.

Deci (1999) demonstrated this effect in an experiment with a group of college students. In the study, two groups of students were timed while working on puzzles during two different sessions. In the first session, the two groups worked on the puzzles for a set amount of time. In the second session, the control group continued working on the puzzles without external motivators. However, during the second session, students in the experimental group were offered \$1 for each puzzle they completed. After the sessions, both groups were given the option to continue working on the puzzles in a third session. Students in the experimental group chose not to continue working on the

puzzles, while students in the control group opted to continue their work with the puzzles. Results indicate that the addition of an external motivator – monetary compensation – resulted in decreased intrinsic motivation and autonomy for students in the experimental group. This example illustrates external motivators, such as paying a college student to complete a task, might have negative effects on their intrinsic motivation.

Deci and Ryan (1985) further built upon CET by stating that certain types of rewards lower intrinsic motivation because external rewards lower self-determination. Autonomy is a key aspect of motivation and when an individual perceives little or less autonomy, personal motivation was greatly reduced (Deci, 1980). Other studies, including Lepper and Greene (1975), expanded upon Deci's work with CET by examining other factors, conducting experiments with conditions that included surveillance on participants and external rewards. During this work the effects on intrinsic motivation were measured.

To expand CET further, Anderson, Manoogian, and Rezick (1976) studied the ways in which individuals reacted to positive reinforcement. Research showed that intrinsic motivation increased when individuals received an outside stimulus that supported the individual's competence in a task. When pre-school aged children were given affirmative feedback when completing a task, their intrinsic motivation was increased (Anderson, Manoogian, & Rezick, 1976).

CET plays an important role in Self-Determination Theory by, "specifically addressing the effects of social contexts on intrinsic motivation, or how factors such as

rewards, interpersonal controls, and ego-involvement impact intrinsic motivation and interest” (“Self-Determination Theory,” 2008).

**Organismic integration theory (OIT).** SDT is grounded in the belief that humans are organisms that strive for development and growth, internalization of our behaviors and those behaviors become integrated within our sense of self (Deci & Ryan, 2002). The OIT, “Addresses the topic of extrinsic motivation in its various forms, with their properties, determinants, and consequences” (“Self-Determination Theory,” 2008). Individuals have a natural tendency to grow and develop, and a person’s actions cannot be measured simply by examining motivators or actions independently, rather these actions must be measured in a more holistic fashion (Deci & Ryan, 2002). The idea of holism, a concept at the heart of OIT, can be traced back to Aristotle’s *Metaphysics*, in which he suggests that the whole is more than the sum of its parts. Angyal (1965) expanded the idea of holism to integrate autonomy and homonymy - the combination of holistic self-regulation and integration. This integration laid an important base for the development of OIT and SDT. Deci and Ryan (2002) expressed that OIT involves complementary functioning of ideas autonomy and homonymy – a connection between extrinsic motivators and an internal determination.

Examining the extrinsic motivators of individuals in this organismic view, Deci and Ryan (1985) explored the importance of shifting from extrinsic factors, which may be regulating or controlling an individual’s behavior, to intrinsic motivators that will allow the individual to be the locus of control. This control, in accordance with SDT, enhances the motivation of an individual in completing a task. This process is known as internalization. Deci and Ryan (1985) divided the concept of internalization into a

classification of four subtypes. These four subtypes are on a continuum of internalization: external regulation, introjections, identification, and integration. Phelan (2008) suggested that internalization could range from controlled to autonomous within the four extrinsic motivation subtypes. However, OIT is not a stage theory in which an individual progresses from one subtype to the next, but rather the subtypes occur concurrently.

External regulation blends the concepts of self-regulation and anticipation (Deci & Ryan, 1985). An individual will self-regulate behavior in anticipation of consequence or reinforcement in connection to an action. This subtype was the least self-determining, and according to Deci and Ryan (2002), was usually in accordance with an external force or social pressure.

Introjection regulation refers to a behavior that has been internalized to a certain extent but not accepted by oneself. These behaviors coincide with avoidance, guilt, or satisfaction of a social norm so as to avoid lowering one's self esteem (Deci & Ryan, 2002). Individuals who conduct behaviors in accordance with introjection motivation are doing so to avoid lowering self-worth (Phelan, 2008).

Identified regulation, which has a higher degree of autonomy, "...is a more self-determined form of extrinsic motivation, for it involves a conscious valuing of a behavioral goal or regulation..." (Deci & Ryan, 2002). In other words, this type of motivation provides a greater sense of control over one's actions.

The final subtype, with the greatest amount of self-determination, is integrated regulation. Integrated regulation occurs when individuals are motivated by an extrinsic

motivator, and the motivator is in sync with their previously established values, goals, and needs (Deci & Ryan, 1985, 2002).

The internalization process is facilitated by a sense of relatedness (Deci & Ryan, 2002). Extrinsic motivators are more likely to be internalized if the individual feels socially related to others in the environment (Deci, 1985). Social adopting through relatedness to others in the environment is a supported perception of internalization (Self-Determination Theory, 2008).

**Causality orientations theory (COT).** COT “describes individual difference in people’s tendencies to orient toward environments and regulate behavior in various ways” (Self-Determination Theory, 2008). COT is broken into three types of causality orientations: autonomy, control, and impersonal or amotivated. Deci & Ryan (1985) stated that every individual demonstrates a dominant orientation.

The first of these types is autonomy orientation. Autonomy orientation is the ability to make a choice uninfluenced by reinforcements or consequences. Individuals who fall into the autonomy orientation seek out environments that allow them to have choice over their own decisions (Deci & Ryan, 1985).

The second type of causality orientation is the control oriented individual persons who favor environments in which they would feel pressure to act accordingly (Deci & Ryan, 1985). Individuals who are control oriented focus on rewards, gains, and approval (“Self-Determination Theory,” 2008). This type of COT demonstrates an external locus of causality (Phelan, 2008).

Finally, the third type of COT is impersonal or amotivated orientation. Amotivation is the lack of an individual’s intention on a certain task (Phelan, 2008). Individuals who,

for the most part, fall within this category perceive that they have very little effect on the outcome of situations. Feeling that the outcome is out of their hands, individuals with impersonal or amotivated orientation perceives that it does not matter what their intentions may be and, therefore, do little to regulate their behavior (Deci & Ryan, 1985). As a result, motivation is all but extinguished, and this results in amotivation. This orientation leads to high anxiety and often can lead individuals to behave with little or no intention, learning the behavior to happen accidentally or not at all (Deci & Ryan, 1985).

**Basic psychological needs theory (BPNT).** Fundamentally, BPNT is based off the assumption that all people have basic intrinsic and extrinsic needs to thrive. BPNT as related to SDT focuses on three basic psychological aspects of needs theory. These three components are competence, relatedness, and autonomy. According to SDT, basic needs are universal and are “innate requirements rather than acquired motives” (Deci & Ryan, 2002). According to BPNT, environments that support the health and prosperity of these three components will foster the psychological development and motivation of the individual (Self-Determination Theory, 2008).

Competence guides people to seek out new challenges and through these challenges they experience development (Phelan, 2008). An individual who experiences a high level of competence finds confidence in him or herself, as a result, will be effective in action (Deci & Ryan, 2002).

Relatedness refers to, “feeling connected to others, to caring for and being cared for by those others, to having a sense of belongingness...” (Deci & Ryan, 2002, p. 7) Relatedness has a two-fold association; connected to interpersonal feelings of

connection, but also to social connections. Individuals have an innate sense to want to be connected to other people (Deci & Ryan, 2002).

Autonomy is the perception that oneself is the source of his or her own actions (de Charms, 1968; Deci & Ryan, 1985, 2002). Deci & Ryan (2002) clarified how autonomy relates to SDT by arguing that autonomy is not freedom or independence, but rather the perception that an individual's actions are his or her own choice. Furthermore, the term choice is meant as a motivational concept (Deci & Ryan, 1985).

**Goal contents theory (GCT).** GCT is the fifth theory, and is the newest addition to SDT research. This theory “grows out of the distinctions between intrinsic and extrinsic goals and their impact on motivation and wellness” (“Self-Determination Theory,” 2008). Examining how extrinsic factors are different from internal factors, SDT research studies how these factors are related to an individual's well being (“Self-Determination Theory,” 2008). GCT has been researched in new settings that have expanded the application:

“The distinction between intrinsic and extrinsic goals was used initially to predict psychological health and well-being, but most recently it has been related to learning, achievement, and persistence at learning activities” (Vansteenkiste, Lens, & Deci, 2006, p. 10)

### **Constructs of SDT**

**Relatedness.** Using empirical processes, Deci and Ryan (2000) found that being connected to those in a particular social network enhanced an individual's motivation levels. Relatedness is a construct in this study examining how connected members feel to their peers.

**Competence.** Deci and Ryan (2000) found that optimal motivation levels and competence in abilities are correlated. This construct was appropriate to use in this research to measure how competent individuals in organizations feel in their leadership abilities.

**Autonomy.** This construct is part of SDT in that "...inherent growth tendencies and innate psychological needs that are the basis for their self-motivation" (Deci & Ryan, 2000, p. 68). Autonomy in this study will measure the levels of self-direction from student leaders.

### **Servant Leadership**

In collegiate student affairs, leadership was difficult to narrow down from a broad topic into a single precise definition. Ricketts (2005) believed that leadership was particularly challenging to conceptualize because the definition of leadership is complex. Servant leaders are believed to possess the knowledge and experience needed to facilitate organizational choices and change (Bierly, Kessler, & Christensen, 2000). Students who hold a leadership position in an organization are servant leaders to their organization. Robert Greenleaf established the concept of servant leadership in 1977, believing that:

The servant-leader is servant first. It begins with the natural feeling that one wants to serve, to serve *first*. Then conscious choice brings one to aspire to lead. The best test is: do those served grow as persons; do they, while being served, become healthier, wiser, freer, more autonomous, more likely themselves to become servants? (Greenleaf and Spears, 1998, p. 1).

Over the past four decades servant leadership has been examined and researched for theoretical and practical applications. Greenleaf's initial work laid the

foundation for researchers interested in investigating how true leaders can maximize their potential in a servant role in institutions (Barbuto Jr. & Wheeler, 2006). Spears (1995) posits servant leaders serve those around them through foresight, conceptualization, stewardship, and community building.

Barbuto and Wheeler (2006) refined previous work in servant leadership into five factors that appear conceptually and empirically distinct: altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship. These five factors were the second theoretical framework used in this research.

**Altruistic calling.** The first of Barbuto and Wheeler's (2006) five-dimensional construct of servant leadership stemmed from Greenleaf's (1970) original essay, *The Servant as Leader*. Altruistic calling was defined as, "a leader's deep-rooted desire to make a positive difference in others' lives" (Barbuto & Wheeler, 2006, p. 318). Avolio and Locke (2002) discussed a number of important virtues which leaders have that effect an individual's desire to have a positive impact on others including: honesty, integrity, independence, productiveness, justice, and pride. These character traits describe the self-sacrificing aspects of a leader's personality that are needed in order to establish an altruistic calling. Self-sacrificing leadership has been shown to have positive behavioral effects between followers and leaders of an organization (Choi & Mai Dalton, 1998). Kanugo and Conger (1993) suggested altruism was key to success of the individual leadership within an organization.

Developing an altruistic calling, however, does not occur for every leader because it develops out of intrinsic motivating factors. Fry (2003) stated that through a reflective process, leaders who operated based on a spiritual or internal sense of

motivation – altruistic motives – were better suited to meet follower needs. Accordingly, Bass (2000) posited that the most likely leader to embrace altruistic objectives was the servant leader.

**Emotional healing.** Emotional healing, the second factor of Barbuto and Wheeler's (2006) five dimensions of servant leadership, is defined as, "a leader's commitment to and skill in fostering spiritual recovery from hardship or trauma" (Barbuto & Wheeler, 2006, p. 318). One of the most powerful tools for developing effective leadership is emotional healing (Emmerich, 2001). Accordingly, Weymes (2002) stated that one of the most crucial aspects of leadership is developing emotional relationships with followers. Successful leaders create forums for followers to voice their concerns and views (Emmerich, 2001).

A large part of emotional healing is listening. Greenleaf (1970) suggested that listening was the first action a leader should take in any situation. Listening can foster feeling of forgiveness and humility, both of which are important for the healing process (Fry, 2003).

**Wisdom.** Wisdom is defined as "a combination of awareness of surroundings and anticipation of consequences" (Barbuto & Wheeler, 2006, p. 318-319). The combination of awareness of surroundings and anticipation of consequence results in leaders who are better in tune with what is taking place in the environment around them (Barbuto & Wheeler, 2006; Sternberg, 2003). Bierly, Kessler, and Christensen (2000) stated that leaders who have a high level of wisdom have the ability to be observant in any environment. One facet of wisdom is emotional intelligence, which includes having a high awareness of other's emotional states. Individuals who possess higher levels of

emotional intelligence showed better leadership potential (Sosik & Megerian, 1999; Barling, Slater, & Kelloway, 2000).

**Persuasive mapping.** The fourth element of Barbuto and Wheeler's five-dimensional construct, persuasive mapping, is defined as "the extent that leaders use sound reasoning and mental frameworks...they encourage others to visualize the organization's future and are persuasive, offering compelling reasons to get others to do things" (Barbuto & Wheeler, 2006, p. 319).

Mental models have been used in self-managed teams and have been shown to produce more positive outcomes in an organization (Druskat & Pescosolido, 2002).

Spears (1995) stated a good leader must use foresight to anticipate future events. With foresight the leader may establish a vision. A leader must align followers to the vision of the organization to increase performance (Awamleh & Gardner, 1999). A large part of persuasive mapping is visioning. Visioning skills have been linked to leadership performance (Tower, 2003).

**Organizational stewardship.** Organizational stewardship is defined as, "the extent that leaders prepare an organization to make a positive contribution to society through community development, programs, and outreach" (Barbuto & Wheeler, 2006, p. 319).

Stewardship is defined as an organization's responsibility to contribute to society, and is important for a leader to stand for this legacy (Barbuto & Wheeler, 2006).

Leaders have a responsibility to guide their organizations as responsible stewards, as well as to attempt to improve and grow the organizations (Coleman, 1998). A leader's

legacy, according to Giltmier (1990), is to be cognizant of the externalities of his or her organization.

### Conceptual Model

A conceptual model (Figure 2-1) was created by the researcher to demonstrate the relationships between SDT, servant leadership, and the developmental outcomes related to seeking out and accepting a leadership role. This conceptual model shows the cyclical stages and influences that affect the acceptance of a leadership role.

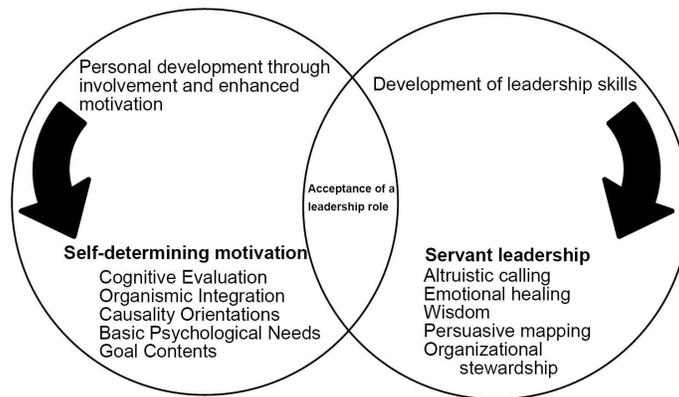


Figure 2-1. Acceptance of a leadership role conceptual model.

First, the model shows the five major components of Self-Determination Theory on the left side. As discussed in this chapter, cognitive evaluation, organismic integration, casual orientation, basic psychological needs, and goal contents are the five major components derived from Greenleaf’s (1977) work in servant leadership. An individual who is motivated by these five mini-theories will be more motivated to take a leadership position and receive the benefits from holding that position – including personal development through involvement and enhanced motivation. As seen in the

model, higher levels of motivation are likely to influence the student to accept additional leadership roles.

The second part of the model was the integration of servant leadership. Barbuto and Wheeler (2006) established a framework using servant leadership that includes five factors. These five factors listed on the right side of the conceptual model are: altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship. An individual who demonstrates proficiency in these five areas is more inclined to accept a leadership role. The acceptance of the leadership position leads to development of leadership skills. Subsequently, the development of leadership skills is likely to influence the student to accept additional leadership roles.

## **Student Development**

### **History of Student Development**

The study of post-secondary student development has origins in psychology. At the turn of the last century, psychological theorists started to examine behavior in terms of human psychological development. During the 1920s, the vocational guidance movement began. Frank Parsons, known as the father of vocational guidance, described a “best fit” between an employee and employer (Evans, Forney, & Guido-DiBrito, 1998). This progression led to vocational placement being one of the main purposes in student development over the next half-century (Evans, Forney, & Guido-DiBrito, 1998). The next contributing movement to student development came in 1937 from the American Council on Education (ACE). The ACE released a document, “Student Personnel Point of View” that was the first time that educators viewed student development as assisting a student to become a whole person (Evans, Forney, & Guido-DiBrito, 1998).

Between the 1960s and the 1970s three major theories developed. First, in 1968, William Perry introduced an intellectual developmental theory within student affairs. Then Arthur Chickering proposed questions in relation to identity and development in 1969. Finally, Lawrence Kohlberg's theory of moral reasoning, proposed in 1969, became prevalent in student affairs (Evans, Forney, Guido, Renn, & Patton, 2010).

In the 1970s, during turbulent social times, student development in post secondary education reached another milestone and began to grow in awareness and theory base. Student affairs were reinvented, as groups such as the Council of Student Personnel Association (COSPA) and the Hazen Foundation re-envisioned student affairs to encompass human development (Evans, Forney, Guido-DiBrito, 1998).

A sudden increase of development theories began to appear in literature in the late 1990s and early 21<sup>st</sup> century. The American College Personnel Association (ACPA) began to investigate the developmental theories by establishing Tomorrow's Higher Education Project (Evans, et al., 1998). The project found that student affairs education should "increasingly emphasize academic outcomes, teaching-learning experiences, reorganizing student affairs offices and functions, being accountable by conducting outcome assessments, and developing a new set of competencies" (Evans et al., 2010, p.12). Emphases on cross-cultural and cognitive developmental theories have appeared, resulting in examination of new dimensions of student development (Evans et al., 2010).

### **Importance of Student Development**

The academic experience should be holistic, accentuated by development outside the classroom. The undergraduate years of a leader's college career are the most critical to his or her development (Astin, 1993, 1985). In those four years, students

have the opportunity to get involved in collegiate organizations that supplement their learning experiences. These include student government, departmental organizations, college level organizations, clubs relating to a student's major, and honors organizations. The more a student is involved during their collegiate career, the greater their leadership development is enhanced (Cooper, Healy, & Simpson, 1994).

Student involvement results not only in leadership development, but personal, social, professional, and academic development, as well (Astin, 1993). Pascarella and Terenzini (2005) posited student involvement was the combination of college experiences and interconnectedness of activities that students participate in that result in their development.

Student development cannot be viewed as a general experience, but rather, must be examined on an individual case basis. Sanford (1962) stated that successful student development was not measured in comparing students, but rather as an individual.

### **Summary**

Self-Determination Theory (SDT), developed by Deci and Ryan (1985), and servant leadership, developed by Greenleaf (1977), has been used as the guiding theories of research in servant leadership. These two theories provided the basis in this study for the theoretical framework that examines what motivates students to accept leadership roles.

SDT examines how individuals are motivated intrinsically and extrinsically with the three main concepts from this theory which influence motivation being autonomy, relatedness, and competence (Deci, Koestner, & Ryan, 1999). Servant leadership is a leadership theory that provided the basis in this study for defining leadership in

collegiate organizations within colleges of agriculture. The five factors used in this study on servant leadership were: altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational leadership (Barbuto Jr. & Wheeler, 2006).

Student development spawned from research at the turn of the twentieth century in the field of psychology. Over the past century, student development went from vocational placement to holistic development of students. Previous research conducted showed that student involvement develops students in many facets including development in leadership skills (Astin, 1977). These leadership skills were crucial for the success of graduates in the agricultural industry.

## CHAPTER 3 METHODOLOGY

### **Introduction**

Chapter one explained the importance of colleges of agriculture producing graduates with competence in subject matter and leadership. Chapter one also established the importance of college students becoming engaged in and involved in collegiate organizations.

Chapter two presented a discussion on the theoretical and conceptual frameworks utilized in this study. SDT and servant leadership were the foundational theories used in the development of the conceptual model for this study. A review of literature on SDT and servant leadership was also conducted. Involvement in organizations has been shown to promote student development.

This chapter describes the methods exercised in this study, including the research design, population, instrumentation, data collection, and data analysis procedures.

### **Research Design**

This study utilized a quantitative, non-experimental, causal comparative survey research design. A quantitative study is defined by McMillan & Schmacher (2010) as a research design that measures and describes phenomena. A non-experimental research design is defined as having “no active or direct intervention” (McMillan & Schmacher, 2010, p. 22). A causal comparative design was used because this study investigated the relationship of two variables. Operating through a postpositivism epistemological viewpoint, this research philosophical approach “allows for limitations,

contextual factors, and use of multiple theories within which research findings are interpreted” (McMillan & Schmacher, 2010, p. 5).

The researcher took every effort to limit the sources of errors in this study. Potential types of error include measurement error, response bias, Type I and II sampling errors, and nonresponse bias. According to Dillman, Smyth, and Christian (2009), measurement error occurs when a respondent’s answer is imprecise. Response bias stems from poorly worded questions or confusing questions that may cause the participant to give an incorrect response (Agresti & Finaly, 2009). The researcher followed Dillman Tailored Design Method (DTDM) in building a sound questionnaire to avoid response bias. The researcher also took every effort to limit nonresponse error. Agresti and Finlay (2009) stated that nonresponse error appears when participants cannot be reached or refuse to participate. The researcher contacted members of the population in accordance to the DTDM reduce nonresponse error from the population. Type I statistical error occurs when the null hypothesis is rejected and it should not have been. Type II error occurs when the null hypothesis should have been rejected and was not. Another step the researcher took in designing the research instrument was getting access to an expert in survey design to review the survey for graphical, structural, and flow aspects.

### **Population**

The population for this study consisted of all undergraduates in student organizations in the College of Agricultural and Life Sciences (CALs) at the University of Florida (UF) for the fall of 2010 semester. In this study a student organization was defined as an organization registered with the Agricultural and Life Sciences College Council (ALSCC) or recognized as affiliated with CALs. There are 60 student

organizations are associated with CALS, 32 of those registered with the ALSCC (C. Carr, personal communication, October 12, 2010).

Five student organizations, Animal Sciences Graduate Student Association, Masters of Agribusiness Student Organization, Agricultural Education and Communication Graduate Student Association, School of Natural Resources and Environmental Council, and the Statewide Student Organization were eliminated because they did not fall under the classification of undergraduate student organizations. The organizations were chosen for the study because of the common structure and attributes. Each was required to have a constitution, officers, and an advisor. This provided consistency across the population. A complete list of organizations and officers of these student organizations was obtained from the CALS dean's office (Cathy Carr, personal communication, 2010).

A convenience sample was taken from the population (see appendix A for a complete list of CALS student organizations). A convenience sample is "a group of subjects selected on the basis of being accessible or expedient" (McMillan & Schumacher, 2010, p. 137). The sample was student organizations registered with ALSCC. Student organizations registered with ALSCC and met qualifications of this research are listed below:

Agricultural and Life Sciences College Council

- Agricultural Communicators and Leaders of Tomorrow
- Agricultural Economics Club
- Agronomy/ Soils Club
- Alpha Zeta
- The Campus Kitchens Project

- Collegiate 4-H
- Collegiate Farm Bureau
- Collegiate FFA/Agricultural Education and Communication Society
- Dairy Science
- Entomology
- Environmental Horticulture
- Ethnoecology Society
- Equestrian Club
- Family, Youth, and Community Sciences
- Forestry Club
- Gator Citrus
- Gator Collegiate Cattlewomen's Association
- Marine Biology
- Microbiology and Cell Sciences Student Organization
- Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS)
- Organic and Sustainable Agriculture Club
- Pre-Veterinary Medicine Club
- Sigma Alpha
- Society for Viral Studies
- Wetlands Club
- Wildlife Society

### **Instrumentation**

The researcher found no single, established instrument that measured the factors which motivate undergraduates in student organizations to seek out and accept

leadership positions. The researcher adapted two existing instruments and followed Dillman's Tailored Design Method (DTDM) that grouped questions and flowed to maximize participant response rate. This study utilized a 52-item questionnaire to examine the research objectives. The questionnaire focused on three sections: servant leadership, self-determination, and demographics of the population.

The researcher adapted an existing instruments to measure student levels of motivation. The Basic Need Satisfaction at Work Scale (BNSWS) measures an individual's level of competence, relatedness, and autonomy, which was developed by Deci and Ryan (2000). The researcher adapted the questionnaire to pertain to student organizations. This instrument was used in the following studies: Deci, Ryan, Gagné, Leone, Usunov, & Kornazheva, 2001; Ilardi, Leone, Kasser, & Ryan, 1993; Kasser, Davey, & Ryan, 1992.

The researcher also utilized an existing instrument to measure student levels of servant leadership. The Servant Leadership Questionnaire (SLQ) was developed by Barbuto and Wheeler (2006) to measure levels of altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship. This instrument has been utilized in the following studies: Dannhauser & Boshoff, 2006 ( $\alpha = .981$ ); Liden, Wayne, Zhao, & Henderson, 2008 measured the emotional healing construct ( $\alpha = .89$ ); Sendjaya, Sarros, & Santora, 2008. The instrument was developed from Spears (1995) work from Greenleaf's (1970) original essay, where Spears developed ten attributes of the servant leader.

The questionnaire began with an informed consent form requesting the participants to voluntarily participate. A few preliminary questions were asked to

determine whether or not the participant held an office in the organization. Students were instructed to take the survey through the experience with the organization they were a member. Cronbach alphas reported on constructs in this section are from Barbuto and Wheeler's (2006) *Scale Development and Construct Clarification of Servant Leadership*.

Questions 1-44 on the survey instrument were on a likert scale. The first 23 questions measured the five constructs of servant leadership. Questions 1, 2, 3, and 4 measured the participant's altruistic calling in a student organization ( $\alpha = .83$ ). Questions 5, 6, 7, and 8 measured the participant's levels of emotional healing ( $\alpha = .88$ ). Questions 9, 10, 11, 12, and 13 measured the participant's levels of wisdom ( $\alpha = .82$ ). Questions 14, 15, 16, 17, and 18 measured the participant's levels of persuasive mapping ( $\alpha = .83$ ). Questions 19, 20, 21, 22, and 23 measured the participant's levels of organizational stewardship ( $\alpha = .87$ ).

Questions 22-44 measured the levels of competence, relatedness, and autonomy of the participants. Survey questions 24, 27, 31, 34, 37, 40, and 43 measure the participant's level of autonomy in their student organizations. Survey questions 26, 28, 33, 36, 38, and 42 measure the participant's level of competence in student organization(s). Survey questions 25, 29, 30, 32, 35, 39, 41, and 44 measure the participant's level of relatedness in student organization(s).

The researcher developed questions 45-52 to measure the leadership involvements, academic classification, age, gender, grade point average, ethnicity, transfer students, and major of the participants.

Lastly, the SLQ describes the factors that motivate individuals from a servant leadership perspective (Barbuto & Scholl, 1998). Questions from the SLQ measure the five variables from the servant leadership framework. Barbuto and Wheeler (2006) identified five variables: altruistic calling ( $\alpha = .82$ ), emotional healing ( $\alpha = .91$ ), wisdom ( $\alpha = .92$ ), persuasive mapping ( $\alpha = .87$ ), and organizational stewardship ( $\alpha = .89$ ).

An expert panel composed of academic faculty familiar with this study reviewed the instrument for content and face validity. According to McMillan and Schumacher (2010), face validity is the confidence that items on the questionnaire are relevant to the study. This panel also examined potential construct underrepresentation. Construct underrepresentation is, "if the assessment fails to capture important aspects of the constructs" as established in the conceptual model (McMillan and Schumacher, 2010, p. 174). The panel examined for construct validity refers to, "to inferences that are made from the nature of the measurement and interventions used to the constructs they purportedly represent" (McMillan and Schumacher, 2010, p. 115). A proposal to conduct this study was approved by the University of Florida Institutional Review Board: IRB-02 Protocol #2010-U-819.

Before the collection of data, a pilot study was conducted with one undergraduate student organizations not registered with ALSCC. Alpha Gamma Rho, an agricultural fraternity associated with CALS was used for the pilot study because of the similarities it shared with the sampling population. Through this pilot study the reliability of the instrument was established by using Cronbach's alpha efficient for the response items. Cronbach alpha measured .85.

## **Data Collection**

The researcher administered the survey instrument face-to-face during club meetings. This distribution method was preferred over online survey methods due to low response rates by undergraduates (Dommeyer, Baum, Hanna, & Chapman, 2004).

This study used the three-email contact strategy (Dillman, 2009). In addition, the researcher also employed face-to-face, telephone calls, and social media tools to contact and set up survey administration. The first contact with organizations was at the ALSCC meeting on October 12, 2010. The researcher was introduced to the organizations in attendance and gave a brief introduction to the research and the topics importance. After this contact, an email sent to officers/advisors on October 13, 2010 contained a brief introduction on the research and a request to set up logistics with each organization to administer the instrument. In addition, the first email discussed the importance of participation and the approximate length of the survey. The second email sent to officers and advisors on October 20, 2010 thanked the participants who had completed the survey and served as a reminder to those who had not yet completed the survey to reply with the time of the next meeting of their organizations. In between the second and third emails, the researcher contacted officers/advisors of organizations that had not yet responded to request participation. A third email sent out on November 2, 2010 individually addressed the officers and advisors who had not yet participated and acknowledged the short amount of time left to complete the survey and emphasized the importance of their response (Dillman, 2009). The researcher also followed up with each of the 27 organizations individually to set up logistics of meeting times and places.

If no e-mail response had been received from officers during these three contacts, the researcher utilized social media as a final attempt to communicate with these officers.

### **Data Analysis**

The data collected has been analyzed using descriptive and comparative statistics, using the Statistical Package for the Social Sciences 17.0 (SPSS). Frequencies ( $f$ ), means ( $\mu$ ), standard deviations ( $\sigma$ ), and other measures of central tendency were used to describe the motivational leadership factors of student leaders and non-leaders, and the desire to lead by both leaders and non-leaders. Frequencies are defined as the number of possible values for a variable (Agresti & Finlay, 2009). The mean of population is the “sum of the observations divided by the number of observations” (Agresti & Finlay, 2009). The mean is one of the most common measures at which to examine data. Agresti and Finlay (2009) define standard deviation measures the variability based on deviations of the data from an average. To satisfy the last objective of the study, to compare the leaders to the non-leaders, comparative statistics were used. Comparative statistics are used in a study where the researcher is examining whether a relationship between two groups exist (McMillian & Schumacher, 2010). When examining the response variables, parameters of the leader group and parameters of the non-leader group were compared using t-tests.

### **Summary**

This chapter summarized the methods used to reach the objectives discussed in chapter one. The research design was described as a quantitative, non-experimental, descriptive, survey research design. The population was identified an organization registered with the ALSCC in which a majority of the members were undergraduates in

the CALS at UF. Next, this studies instrument was adapted from the Servant Leadership Questionnaire and Basic Psychological Needs Scale. A detailed overview of the construction of the researcher-developed questionnaire was included. The methods for data collection included employing a three-email contact strategy to members of the population. The data has been analyzed using Statistical Package for the Social Sciences 17.0.

## CHAPTER 4 RESULTS

### **Introduction**

The purpose of this study was to discover the motivating factors that students in the College of Agricultural and Life Sciences (CALs) at the University of Florida (UF) possess to seek out or accept leadership roles in student organizations.

Chapter 1 explained the importance of colleges of agriculture producing graduates with competence; in subject matter and leadership, stated the importance of college students becoming involved in collegiate organizations and established this study's objectives:

1. Describe the motivational leadership factors of undergraduate in CALs at UF who are involved in collegiate agricultural organizations
2. Describe the ability to lead of both leaders and non-leaders by members of collegiate agricultural organizations
3. Compare differences in motivational factors in leaders and non-leader members of collegiate agricultural organizations
4. Examine the relationship between desire to lead and demographic characteristics

Chapter 2 presented a discussion on the theoretical and conceptual frameworks utilized in this study. Self-determination theory (SDT) and servant leadership were the foundational theories used in the development of the conceptual model for this study. A review of literature on SDT and servant leadership was also conducted. Also included in this chapter were studies that showed involvement in student organizations led to overall student development.

Chapter 3 described the methods established in this study, including the research design, population, instrumentation, data collection, and data analysis procedures.

This chapter presents the findings of the study. The chapter begins with a description of the demographics of the respondents. Following the analysis, this chapter will present the findings of the study for each objective.

The population of this study was comprised of all undergraduates that were members of in student organizations in CALS at UF for the fall of 2010 semester. Following the procedures established in Chapter 3, a convenience sample was taken of students that were members in student organizations registered with the ALSCC. In accordance to the data collection procedures discussed in Chapter 3, 27 organizations were contacted to participate in the study. Of those 27 organizations, 21 were surveyed and data was collected. This accounted for a 78% organizational response rate. In the 27 registered ALSCC organization there are 1,019 members during the fall 2010 semester. Of the 1,019 members of student organizations registered with ALSCC, there were 540 respondents. This accounted for a 53% response rate. This response rate was deemed acceptable based on the recommended response rate for a finite population, which is 28.6% (Israel, 2009).

### **Demographics of Respondents**

The study included seven demographic questions. Respondents listed their positions in their respective organizations and the researcher separated leader from non-leader based on whether the respondent was one of the following positions: president, vice president, treasurer, or secretary. Table 4-1 reported whether respondents held leadership roles in their respective organizations. Of those who responded 15.5% were leaders and 83.2% were non-leaders.

Table 4-1. Leader vs. Non-leader in Undergraduate Student Organizations

Leader vs. non-leader	<i>n</i>	<i>Percent</i>
Leader	74	15.7
Non-leader	397	84.3
Total	471	

*Note.*  $n=471$ ; Missing=6

The classification system in CALS uses the symbols “AG” to signify a college of agricultural and life science student. When asked to provide information regarding their classification respondents answered as follows: 45 (10.6%) identified themselves as a 1AG (freshmen), 63 (14.8%) identified themselves as 2AG (sophomores), 145 (34.1%) identified themselves as 3AG (juniors), 137 (32.2%) identified themselves as 4AG, and 34 (8.2%) identified themselves as other (see Table 4-2).

Table 4-2. Participants by Classification

Classification	<i>n</i>	<i>Percent</i>
1AG	45	10.6
2AG	63	14.8
3AG	145	34.1
4AG	137	32.2
Other	34	8.2
Total	424	

*Note.*  $n=424$ ; Missing=47

Table 4-3 provides a frequency distribution of respondents' ages. Of the 466 respondents, 86.9% ( $n=405$ ) of the respondents were between 18-23 years of age, 10.9% ( $n=51$ ) of the respondents were between the ages of 24-29. Finally, 2.1% ( $n=10$ ) were between the ages of 30-35 years of age.

Table 4-3. Participants by Age

Ages	<i>n</i>	<i>Percent</i>
18-23	405	86.9
24-29	51	10.9
30-35	10	2.1
35+older	0	0
Total	466	

Note. *n*=466; Missing=11

When asked to report gender, participants responded as shown in Table 4-4. Of the respondents, 77.7% (*n*=365) were female and 22.1% (*n*=104) were male.

Table 4-4. Participants by Gender

Gender	<i>n</i>	<i>Percent</i>
Female	365	77.7
Male	104	22.1
Total	469	

Note. *n*=469; Missing=7

Participants also identified if they were a transfer student into CALS. Of the respondents, 30.3% (*n*=128) were transfer students into the college, while 69.4% (*n*=293) were non-transfer students, as seen in Table 4-5.

Table 4-5. Participants by Transfer vs. Non-transfer Students

Transfer vs. non-transfer	<i>n</i>	<i>Percent</i>
Transfer	128	30.3
Non-transfer	293	69.4
Total	422	

Note. *n*=422; Missing=55

Participants reported their grade point average (GPA). Of those that responded, 61.6% (*n*=260) reported a GPA of 3.5-4.0; 33.1% (*n*=140) students a 3.0-3.4 GPA; 4.5% (*n*=19) a GPA ranging from 2.5-2.9; and three students responded with a GPA of 2.0-2.9 as seen in Table 4-6. The average GPA was 3.52.

Table 4-6. Participants by Grade Point Average

Grade point average	<i>n</i>	<i>Percent</i>
3.5-4.0	260	61.6
3.0-3.4	140	33.1
2.5-2.9	19	4.5
2.0-2.4	3	.6
Total	422	99.8

Note. *n*=422; Missing=55

When asked to provide information on their ethnicity less than one percent responded they were American Indian or Alaskan, 5% (*n*=24) were Asian, 5.5% (*n*=26) responded Black or African American ethnicity, over 63% (*n*=304) responded White ethnicity, 9.9% (*n*=47) responded Spanish/Hispanic/Latino, over 2% (*n*=13) responded other, and over 1% (*n*=6) preferred not to answer. Responses can be seen in Table 4-7.

Table 4-7. Ethnicity of Participants

Ethnicity	<i>Number</i>	<i>%</i>
American Indian or Alaskan	3	.6
Asian	24	5.0
Black or African American	26	5.5
White	304	63.7
Spanish/Hispanic/Latino	47	9.9
Other	13	2.7
Prefer not to say	6	1.3
Total	423	88.7

Note: *n*=423; Missing=54

When asked to provide information on their majors, the following was data collected. The top three majors were Animal Sciences, Biology, and Agricultural Education and Communication, respectively. Results can be seen in Table 4-8.

Table 4-8. Participants by Major

Major	<i>n</i>	<i>Percent</i>
Agricultural and Biological Engineering	4	1.0
Agricultural Education and Communication	35	8.3
Agricultural Operations Management	3	.7
Animal Sciences	107	25.4
Biology	47	11.2
Entomology and Nematology	21	5.0
Environmental Management in Agriculture and Natural Resources	1	.2
Environmental Science	10	2.4
Family, Youth and Community Sciences	19	4.5
Food and Resource Economics	27	6.4
Food Science and Human Nutrition	12	2.9
Forest Resources and Conservation	5	1.2
Horticultural Science	6	1.4
Landscape and Nursery Horticulture	6	1.4
Microbiology and Cell Science	14	3.3
Natural Resource Conservation	4	1.0
Packaging Science	1	.2
Plant Science – Agronomy	2	.5
Plant Science – Plant Pathology	1	.2
Soil and Water Science	4	1.0
Statistics	1	.2
Total	421	78.3

Note: *n*=421

**Objective One: Describe the motivational factors of student leaders and non-leaders in undergraduate students in CALS at UF who are involved in collegiate agricultural organizations:**

Respondents indicated their level of motivation on a seven-point likert scale as indicated in Chapter 3. This scale ranges from “not at all true” as the lowest score (1), to “somewhat true” as the middle score (4), to “very true” as the highest score (7). Further description of the constructs can be found in Appendix B.

**Relatedness**

This variable selected for this objective is from the Self-Determination Theory framework. As discussed in previous chapters, relatedness is the individual’s “feeling

connected to others, to caring for and being cared for by those others, to having a sense of belongingness...” (Deci & Ryan, 2002, p. 7). Respondents, both leaders and non-leaders, indicated feeling connected,  $M=6.2$ ,  $SD=0.60$ , and  $M=5.9$ ,  $SD=0.82$ , respectively. The relatedness was to those in their student organizations within CALS at UF as seen in Table 4-8.

Table 4-8. Level of Relatedness of Leaders and Non-leaders

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Leader	51	6.2	.60	.08
Non-leader	289	5.9	.82	.05

*Note:* 1=Not at all true, 4=Somewhat true, 7=Very true,  $n=340$ ; Missing=37

### **Competence**

The competence variable selected was selected under this objective in accordance with the SDT framework. As discussed in previous chapters, an individual who experiences a high level of competence finds confidence in him or herself, as a result, will be effective in action (Deci & Ryan, 2002). Respondents, both leaders and non-leaders, indicated feeling between somewhat competent and very competent,  $M=5.8$ ,  $SD=0.60$  and  $M=5.7$ ,  $SD=0.96$ , respectively, in the actions taken in their student organizations as seen in Table 4-9.

Table 4-9. Level of Competence of Leaders and Non-leaders

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Leader	59	5.8	.60	.08
Non-leader	271	5.7	.96	.06

### Autonomy

The level of autonomy measures the perception of an individual over their choices. This construct measured the levels of self-direction a student feels while acting within the constraints of the student organization (Deci & Ryan, 2002). Respondents, both leaders and non-leaders, indicated feeling just above somewhat autonomous,  $M=5.3$ ,  $SD=0.78$  and  $M=5.1$ ,  $SD=0.75$ , in their organizations as seen in Table 4-10.

Table 4-10. Level of Autonomy of Leaders and Non-leaders

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Leader	40	5.3	.78	.12
Non-leader	199	5.1	.75	.05

### Objective Two: Describe the ability to lead of both leaders and non-leaders by members of collegiate agricultural organizations:

Questions 1-44 on the survey instrument were on a likert scale. The first 23 questions measured the five constructs of servant leadership and measured the ability to lead. Questions 1, 2, 3, and 4 measured the participant's altruistic calling in a student organization. Questions 5, 6, 7, and 8 measured the participant's levels of emotional healing. Questions 9, 10, 11, and 12 measured the participant's levels of wisdom. Questions 14, 15, 16, 17, and 18 measured the participant's levels of persuasive

mapping. Questions 19, 20, 21, 22, and 23 measured the participant’s levels of organizational stewardship.

As discussed in Chapter 3, five constructs were measure from the servant leadership framework. Barbuto and Wheeler (2006) refined previous work in servant leadership into five factors that appear conceptually and empirically distinct: altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship.

Respondents indicated their ability to lead on a five-point likert scale as indicated in Chapter 3. This scale ranges from “never” as the lowest score (1), “rarely” (2), “sometimes”(3) as the middle score, “often” (4), to “always” as the highest score (5). Respondents were asked to measure their ability to lead by rating their level of altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship abilities.

**Altruistic calling**

Altruistic calling was defined as, “a leader’s deep-rooted desire to make a positive difference in others’ lives” (Barbuto & Wheeler, 2006, p. 318). Respondents, both leaders and non-leaders, indicated feeling somewhat altruistic,  $M=3.7$ ,  $SD=0.62$  and  $M=3.6$ ,  $SD=0.54$ , respectively, called to their organizations as seen in Table 4-11.

Table 4-14. Level of Altruistic Calling of Leaders and Non-leaders

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Leader	74	3.7	.62	.07
Non-leader	393	3.6	.54	.03

Note: 1=Not at all true, 4=Somewhat true, 7=Very true, n=467; Missing=10

## Emotional Healing

Emotional healing, the second factor of Barbuto and Wheeler's (2006) five-dimensions of servant leadership, is defined as, "a leader's commitment to and skill in fostering spiritual recovery from hardship or trauma" (Barbuto & Wheeler, 2006, p. 318). Leaders responded between sometimes and often,  $M=3.6$ ,  $SD=0.73$ . Non-leaders also responded between sometimes and often,  $M=3.6$ ,  $SD=0.76$ , confident in dealing with emotional or spiritual hardship as seen in Table 4-12.

Table 4-12. Level of Emotional Healing of Leaders and Non-leaders

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Leader	73	3.6	.73	.09
Non-leader	394	3.6	.76	.04

*Note:* 1=Not at all true, 4=Somewhat true, 7=Very true,  $n=467$ ; Missing=10

## Wisdom

Wisdom is defined as "a combination of awareness of surroundings and anticipation of consequences" (Barbuto & Wheeler, 2006, p. 318-319). Both leaders and non-leaders felt they often,  $M=4.2$ ,  $SD=0.68$  and  $M=4.1$ ,  $SD=0.91$ , used their awareness of surroundings and anticipated consequences in dealing with their organizations as seen in Table 4-13.

Table 4-13. Level of Wisdom of Leaders and Non-leaders

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Leader	74	4.2	.68	.08
Non-leader	395	4.1	.91	.04

*Note:* 1=Not at all true, 4=Somewhat true, 7=Very true,  $n=467$ ; Missing=10

## Persuasive Mapping

The fourth element of Barbuto and Wheeler’s five-dimensional construct, persuasive mapping, is defined as “the extent that leaders use sound reasoning and mental framework they encourage others to visualize the organization’s future and are persuasive, offering compelling reasons to get others to do things” (Barbuto & Wheeler, 2006, p. 319). Both leaders and non-leaders felt between sometimes and often,  $M=3.7$ ,  $SD=0.70$  and  $M=3.5$ ,  $SD=0.75$ , respectively, that they used solid reasoning and mental frameworks in dealing with others in their organizations as seen in Table 4-14.

Table 4-14. Level of Persuasive Mapping of Leaders and Non-leaders

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Leader	74	4.3	.65	.08
Non-leader	394	4.0	.67	.03

Note: 1=Not at all true, 4=Somewhat true, 7=Very true,  $n=467$ ; Missing=10

## Organizational stewardship

Organizational stewardship is defined as, “the extent that leaders prepare an organization to make a positive contribution to society through community development, programs, and outreach” (Barbuto & Wheeler, 2006, p. 319). Leaders felt between often,  $M=4.3$ ,  $SD=0.65$ , and always acting as organizational stewards of their organizations. Non-leaders felt they between sometimes and often,  $M=4.0$ ,  $SD=0.67$ , acted as organizational stewards of their organizations as seen in Table 4-15.

Table 4-15. Level of Organizational Stewardship of Leaders and Non-leaders

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Leader	74	4.3	.65	.08
Non-leader	394	4.0	.67	.03

Note: 1=Not at all true, 4=Somewhat true, 7=Very true, *n*=467; Missing=10

### **Objective Three: Compare differences in motivational factors in leaders and non-leader members of collegiate agricultural organizations**

This study measured the motivational factors in leaders and non-leaders of members of collegiate agricultural organizations. Eight constructs measured leaders and non-leaders and examined for significant differences using independent sample t-tests. The first three constructs are associated with SDT were autonomy, competence, and relatedness.

In order to establish significance, the p-value must be  $\leq 0.05$  level of significance at a 95% confidence interval.

There was no statistical significant difference in autonomy construct at the specified or equal to the 0.05 level,  $t(237) = 1.67$ ,  $p > .05$ . Table 4-16 illustrates the results.

Table 4-16 Independent Samples t-test for Autonomy

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Leader	40	5.3	.79	237	1.67	.08
Non-leader	199	5.1	.75			

Note. \* Correlation is significant at the  $p < .05$  Level, 2-Tailed.

There was no statistical significant difference in competence construct at the specified  $p \leq 0.05$  level,  $t(328) = .882$ ,  $p > .05$ . Table 4-17 illustrates the results.

Table 4-17. Independent Samples t-test for Competence

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Leader	59	5.8	.60	328	.882	.378
Non-leader	271	5.7	.96			

Note. \* Correlation is significant at the  $p < .05$  Level, 2-Tailed.

There was a significant difference in relatedness construct at the specified .05 level,  $t(86.4) = 2.85$ ,  $p < .05$ . Table 4-18 illustrates the results. The results show that the average scores for leaders and non-leaders differ for relatedness.

Table 4-18. Independent Samples t-test for Relatedness

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Leader	51	6.2	.60	86.4	2.85	.005
Non-leader	289	5.9	.82			

Note. \* Correlation is significant at the  $p < .05$  Level, 2-Tailed.

The next five constructs are associated with servant leadership theory. These constructs measured between leaders and non-leaders are: altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship.

There was a significant difference in altruistic calling construct at the specified  $p \leq 0.05$  level,  $t(465) = 2.15$ ,  $p < .05$ . Table 4-19 illustrates the results. The results show that the average scores for leaders and non-leaders differ for altruistic calling.

Table 4-19. Independent Samples t-test for Altruistic Calling

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Leader	74	3.7	.62	465	2.15	.032
Non-leader	393	3.6	.54			

Note. \* Correlation is significant at the  $p < .05$  Level, 2-Tailed.

There was no significant difference in emotional healing construct at the specified .05 level,  $t(465) = 2.15$ ,  $p < .05$ . Table 4-20 illustrates the results.

Table 4-20. Independent Samples t-test for Emotional Healing

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Leader	73	3.6	.73	465	2.15	.882
Non-leader	394	3.6	.76			

*Note.* \* Correlation Is Significant At The  $p < .05$  Level, 2-Tailed.

There was no significant difference in wisdom construct at the specified  $p \leq 0.05$  level,  $t(467) = .174$ ,  $p < .05$ . Table 4-21 illustrates the results.

Table 4-21. Independent Samples t-test for Wisdom

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Leader	74	4.2	.68	467	.174	.862
Non-leader	395	4.1	.91			

*Note.* \* Correlation Is Significant At The  $p < .05$  Level, 2-Tailed.

There was no significant difference in persuasive mapping construct at the specified  $p \leq 0.05$  level,  $t(466) = 1.88$ ,  $p < .05$ . Table 4-22 illustrates the results.

Table 4-22. Independent Samples t-test for Persuasive Mapping

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Leader	72	3.7	.70	466	1.88	.06
Non-leader	396	3.5	.75			

*Note.* \* Correlation Is Significant At The  $p < .05$  Level, 2-Tailed.

There was a significant difference in organizational stewardship construct at the specified  $p \leq 0.05$  level,  $t(466) = 3.33$ ,  $p < .05$ . Table 4-23 illustrates the results. The results show that the average scores for leaders and non-leaders differ for organizational stewardship.

Table 4-23. Independent Samples t-test for Organizational Stewardship

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Leader	74	4.3	.65	466	3.33	.001
Non-leader	394	4.0	.67			

Note. \* Correlation Is Significant At The  $p < .05$  Level, 2-Tailed.

#### **Objective Four:**

Examine the relationship between desire to lead and demographic characteristics:

The purpose of this research was to discover the motivating factors of students in the CALS at the UF to seek or accept leadership roles in student organizations. The demographic questions representing leadership involvements, academic classification, age, gender, grade point average, ethnicity, transfer students, and major, along with eight constructs on competence, relatedness, autonomy, altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship were utilized for this correlation. A Pearson product moment correlation was utilized examines this relationship. A Pearson product moment correlation was utilized to describe the demographic data. A Pearson product moment correlation is a standardized regression coefficient that measures the relationship between two variables (Agresti & Finlay, 2009). In order to establish significance, the p-value must be less than  $p \leq 0.05$  at a 95% confidence interval.

Davis' conventions (1971) were used to describe the strength of the relationship between variables. Davis (1971) stated a value of  $r = +0.70$  or higher show a very strong positive association. Values of  $r$  between  $r = +0.50$  to  $+0.69$  indicated a positive substantial association. Values of  $r$  between  $r = +0.30$  to  $+0.49$  show a moderate

positive association. Values of  $r$  between  $r = +0.10$  to  $+0.29$  show a low positive association. Anything under  $r = +0.10$  implies an insignificant positive association. If  $r = .0$ , there is no association between variables. Conversely, two variables may also be negatively correlated. Davis also stated a value of  $r = -0.70$  or higher show a very strong negative association. Values of  $r$  between  $r = -0.50$  to  $-0.69$  indicated a negative substantial association. Values of  $r$  between  $r = -0.30$  to  $-0.49$  show a moderate negative association. Values of  $r$  between  $r = -0.10$  to  $-0.29$  show a low negative association. Anything under  $r = -0.10$  implies an insignificant negative association (Davis, 1971).

Davis's conventions were used to interpret the Pearson product moment correlations in determining if the data was significant. Classification and persuasive mapping ( $r=0.149$ ) and competence and GPA ( $r=0.15$ ) showed a low positive correlation as seen in Table 2-24. There were no other positive correlations between demographic variables and the constructs measured.

Relatedness and gender ( $r=0.216$ ), altruistic calling and gender ( $r=-.157$ ), emotional healing and gender ( $r=-.204$ ), and organizational stewardship and gender ( $r=-.149$ ) showed a low negative correlation as seen in Table 4-24. No other negative correlations between constructs and demographic variables existed in the data.

As seen in Table 2-25, student leaders had three significant correlations. First, a moderate negative association was found between gender and altruistic calling ( $r=-.337$ ). A low positive correlation was found between ethnicity and competence ( $r = .288$ ) and ethnicity and wisdom ( $r =.243$ ).

As seen in Table 2-26, non-leaders had seven significant correlations between variables. A low negative correlation was found between gender and relatedness ( $r = -.230$ ), gender and altruistic calling ( $r = -.125$ ), gender and emotional healing ( $r = -.202$ ), gender and organizational stewardship ( $r = -.158$ ), and ethnicity and organizational stewardship ( $r = -.125$ ). A low positive correlation was found between year and relatedness ( $r = .119$ ) and classification and persuasive mapping ( $r = .160$ ).

Table 4-24. Relationship Between Desire, Ability To Lead, and Demographic Characteristics

	Classification	Year of birth	Gender	GPA	Ethnicity	Major
Autonomy	-.058	.002	-.088	.048	.100	.090
Competence	.047	-.006	-.022	.150*	.061	-.079
Relatedness	-.022	.053	-.216*	.023	-.071	.051
Altruistic Calling	-.020	.035	-.157*	.014	-.065	-.035
Emotional Healing	-.035	.098*	-.204*	-.009	.000	-.053
Wisdom	.077	-.022	.037	-.020	.025	-.035
Persuasive Mapping	.149*	-.077	.082	.008	-.065	-.021
Organizational Stewardship	.065	-.036	-.149*	-.050	-.090	.006

Note: \*Correlation is significant at the  $p \leq .05$  levels, 2-tailed.

Table 4-25. Relationship Between Leader's and Desire and Ability To Lead, and Demographic Characteristics

	Classification	Year of birth	Gender	GPA	Ethnicity	Major
Autonomy	-.036	-.035	-.117	.192	.044	.104
Competence	-.006	-.200	.008	.020	.288*	.018
Relatedness	-.017	-.051	-.205	-.117	-.126	.044
Altruistic Calling	-.011	.149	-.337*	-.110	-.111	-.084
Emotional Healing	-.119	.095	-.202	-.120	-.114	-.149
Wisdom	-.105	.041	-.116	-.033	.243*	-.190
Persuasive Mapping	-.082	-.012	-.048	-.009	-.073	-.018
Organizational Stewardship	.100	.036	-.202	-.027	.028	-.213

Note: \*Correlation is significant at the  $p \leq .05$  levels, 2-tailed

Table 4-26. Relationship Between Non-leader's and Desire and Ability To Lead, and Demographic Characteristics

	Classification	Year of birth	Gender	GPA	Ethnicity	Major
Autonomy	-.098	.068	-.107	.007	.121	.108
Competence	.032	.052	-.035	.166*	.025	-.095
Relatedness	-.057	.119*	-.230*	.043	-.076	.051
Altruistic Calling	-.043	.024	-.125*	.038	-.062	-.040
Emotional Healing	-.011	.096	-.202*	.011	.020	-.050
Wisdom	.094	-.032	.059	-.018	.013	-.015
Persuasive Mapping	.160*	-.072	.096	.008	-.075	-.031
Organizational Stewardship	.019	-.014	-.158*	-.059	-.125*	.046

Note: \*Correlation is significant at the  $p \leq .05$  levels, 2-tailed

## **Summary**

This chapter presents the findings of this research. The chapter began with a summary of chapters, followed by a description of demographics that outlined the results of the seven demographic questions from the questionnaire. Next, a description of each objective, including a description of each construct and presentation of the number of participants, mean, standard deviation, and standard error. Following those descriptions, the summary of findings is presented for each construct. Eight theoretical constructs were measured during data collection. Those constructs were relatedness, autonomy, competence, altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship.

## CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS

### **Introduction**

Chapter 1 described the importance of colleges of agriculture producing graduates with competence in subject matter and leadership. The first chapter also showed the importance of research in student involvement and development. Chapter 1 also established the objectives for this research.

Chapter 2 presented a discussion on the theoretical and conceptual frameworks. Self-determination theory and servant leadership theory were the foundational theories used in the development of the conceptual model for this study. A comprehensive literature review was also conducted.

Chapter 3 described the methods utilized in this study, including the research design, population, instrumentation, data collection, and data analysis procedures.

Chapter 4 discussed the findings of the study. The chapter began with a description of the population and results of the reliability analysis. Following the analysis, the chapter presented the findings of the study for each objective in detail.

This chapter presents a discussion of findings and conclusions from this research study. Each research objective is stated along with a discussion and recommendations for further research in this field.

### **Purpose and Objectives**

The purpose of this study was to discover the motivating factors that students possess in the College of Agricultural and Life Sciences (CALs) at the University of Florida (UF) to seek out or accept leadership roles in student organizations.

The objectives for this study are as follows:

1. Describe the motivational leadership factors of student leaders and non-leaders in undergraduate students in CALS at UF who are involved in collegiate agricultural organizations
2. Describe the ability to lead of both leaders and non-leaders by members of collegiate agricultural organizations
3. Compare differences in motivational factors in leaders and non-leader members of collegiate agricultural organizations
4. Examine the relationship between desire to lead and demographic characteristics

### **Methodology**

The population for this study was all undergraduates in collegiate organizations in the CALS at UF. A convenience sample was taken of 32 student organizations registered with the Agricultural and Life Sciences College Council (ALSCC). There were 1,019 members registered with ALSCC during the fall 2010 semester. Of the 1,019 members, 540 of were surveyed. That accounted for a 53.0% response rate. Of those 27 organizations, 21 were surveyed and data was collected. This accounted for a 77.7% organizational response rate.

### **Summary of Findings**

#### **Objective 1: Describe the motivational leadership factors of student leaders and non-leaders in undergraduate students in CALS at UF who are involved in collegiate agricultural organizations**

This objective aimed to identify the motivational factors of student leaders through the theoretical framework of the self-determination theory. The three constructs measured were relatedness, competence, and autonomy. Respondents indicated their level of motivation on a seven-point likert scale as indicated in chapter three. This scale

ranges from “not at all true” as the lowest score (1), to “somewhat true” as the middle score (4), to “very true” as the highest score (7).

Both leaders and non-leaders reported being between somewhat and very related,  $M=6.2$ ,  $SD=0.60$ , and  $M=5.9$ ,  $SD=0.82$ , respectively, to their student organization. Additionally, both leaders and non-leaders indicated being between somewhat competent and very competent,  $M=5.8$ ,  $SD=0.60$  and  $M=5.7$ ,  $SD=0.96$ , in the actions taken in their student organizations. According to Deci and Ryan (2002), these students indicated they felt like they were effective in the actions they took in regards to their respective organizations. Leaders and non-leaders, indicated being just above somewhat autonomous,  $M=5.3$ ,  $SD=0.78$  and  $M=5.1$ ,  $SD=0.75$ , with respect to having control over their own choices within their organizations.

**Objective 2: Describe the ability to lead of both leaders and non-leaders by members of collegiate agricultural organizations**

This objective aimed to describe the ability of leaders and non-leaders to lead through the five constructs of servant leadership: altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship (Barbuto & Wheeler, 2006). Respondents indicated their ability to lead on a five-point likert scale as indicated in chapter three. This scale ranges from “never” as the lowest score (1), “rarely” (2), “sometimes”(3) as the middle score, “often” (4), to “always” as the highest score (5). Respondents were asked to measure their ability to lead by rating their level of altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship abilities.

Leaders and non-leaders responded they felt between somewhat and often,  $M=5.3$ ,  $SD=0.78$  and  $M=5.1$ ,  $SD=0.75$ , having an altruistic calling. These students felt

between somewhat and often a deep-rooted desire to make a positive difference in regards to others in their student organization. Both leaders and non-leaders reported being confident often,  $M=3.6$ ,  $SD=0.73$  and  $M=3.6$ ,  $SD=0.76$ , in dealing with emotional or spiritual hardships. Furthermore, both leaders and non-leaders felt they often,  $M=4.2$ ,  $SD=0.68$  and  $M=4.1$ ,  $SD=0.91$ , used their wisdom, or awareness of surroundings and anticipated consequences in dealing with their organizations. Both leaders and non-leaders felt often,  $M=3.7$ ,  $SD=0.70$  and  $M=3.5$ ,  $SD=0.75$ , that they used techniques that persuaded others in their organizations to visualize their organizations future. Leaders felt between sometimes and often,  $M=4.3$ ,  $SD=0.65$ , they prepare their organizations to make a positive social change. Non-leaders felt they often,  $M=4.0$ ,  $SD=0.67$ , prepared their organizations in making a positive social change.

### **Objective 3: Compare differences in motivational factors of leaders and non-leader members of collegiate agricultural organizations**

This objective sought to compare the differences between motivational factors in leaders and non-leader members of collegiate agricultural student organizations within CALS at UF. As described in Chapter 3, t-tests were used to establish statistically significant relationships between leaders and non-leaders in eight constructs. An alpha level of  $p < .05$  was established for statistical significance. A  $p$ -value below this level was considered statistically significant.

The first three constructs measured the constructs associated with self-determination theory. Those three constructs were autonomy, relatedness, and competence. A significant difference was found between leaders and non-leaders in the relatedness construct. Leaders had a higher relatedness score,  $M=5.3$ ,  $SD=0.79$

than the non-leaders,  $M=5.1$ ,  $SD=0.75$ . There was a significant difference in relatedness construct at the specified .05 level,  $t(86.4) = 2.85$ ,  $p < .005$ .

The last five constructs measured the level of servant leadership of leaders and non-leaders. The five constructs were altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship. A significant difference was found between leaders and non-leaders in the altruistic calling construct. Leaders had a higher altruistic calling score,  $M=3.7$ ,  $SD=0.62$ , than the score of the non-leaders,  $M=3.6$ ,  $SD=0.54$ . Additionally, a significant difference was found between leaders and non-leaders in the organizational stewardship construct. Leaders,  $M=4.3$ ,  $SD=0.65$ , reported having a greater ability to set a vision to assist the surrounding community than did non-leaders,  $M=3.6$ ,  $SD=0.54$ .

#### **Objective 4: Examine the relationship between desire to lead and demographic characteristics**

The eight constructs measured to achieve this objective were relatedness, competence, autonomy, altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship. A Pearson product moment correlation was conducted to identify relationships that existed between the eight measured constructs and the demographic variables identified in this research. A Pearson product moment correlation is a standardized regression coefficient that measures the relationship between two variables. In order to establish significance, the p-value must be less than  $p \leq .05$  at a 95% confidence interval (Agresti & Finlay, 2009).

Davis's conventions (1971) were used to interpret the Pearson product moment correlations in determining if the data was significant. Classification and persuasive mapping ( $r = 0.149$ ) and competence and GPA ( $r = 0.15$ ) showed a low positive

correlation. There were no other positive correlations between demographic variables and the constructs measured.

Relatedness and gender ( $r=0.216$ ), altruistic calling and gender ( $r=-0.157$ ), emotional healing and gender ( $r=-0.204$ ), and organizational stewardship and gender ( $r=-0.149$ ) showed a low negative correlation. No other negative correlations between constructs and demographic variables existed in the data.

## **Conclusions**

The following conclusions were drawn based upon findings of the study:

### **Objective 1 Describe the motivational leadership factors of student leaders and non-leaders in undergraduate students in CALS at UF who are involved in collegiate agricultural organizations:**

- Undergraduates in CALS student organizations feel a sense of relatedness and connectedness to others in their organizations
- Undergraduates in CALS student organizations feel competent in the decisions they make about their respective organizations
- Undergraduates in CALS student organizations have autonomy in the decisions they make in regards to their organizations

### **Objective 2 Describe the ability to lead of both leaders and non-leaders by members of collegiate agricultural organizations:**

- Leaders and non-leaders both show high strengths in wisdom, persuasive mapping, and emotional healing in student organizations
- Leaders show greater strength in altruistic calling and organizational stewardship

### **Objective 3 Compare differences in motivational factors in leaders and non-leader members of collegiate agricultural organizations:**

- Leaders and non-leaders both feel as if they have autonomy over their own destiny and choices within their organizations
- A student is more likely to become a leader if they have a greater amount of relatedness to others in their student organization

- Leaders of CALS student organizations are better organizational stewards than non-leaders

**Objective 4 Examine the relationship between desire to lead and demographic characteristics:**

- CALS student organizations have a higher percentage of juniors and seniors than freshmen and sophomores
- CALS student organizations on average are made up of a greater amount of females
- There is a correlation between classification (freshmen, sophomore, junior, and senior) and persuasive mapping
- There is a correlation between gender and relatedness, altruistic calling, emotional healing, and organizational stewardship
- There is a correlation between GPA and competence

**Discussion and Implications**

The success of the agricultural industry is dependent on college of agriculture graduates possessing not only technical skills, but also leadership skills (Andelt, Barrett, & Bosshamer, 1997). During the four years a graduate spends obtaining their degree, it has been shown student involvement leads to student development (Astin, 1977, 1993; Ewing, Bruce, & Ricketts, 2009). In most universities and colleges it is evident the importance of student development based on the amount of funding, time, and energy universities and colleges place into extracurricular involvement. The importance of involvement is apparent, however, less research has been conducted concerning the importance of leadership-involvement and the development a student receives from the student leadership experience in colleges of agriculture. This research is aimed to identify what motivates students to seek out and accept a leadership position.

Self-determination theory (SDT) and servant leadership (SL) theory were utilized in this research. The SDT was used to determine what motivated students to seek out

and accept leadership positions in colleges of agriculture. The SL theory was used to establish the ability of leaders versus non-leaders to lead student organizations. Eight constructs were measured in this study. Relatedness, competence, and autonomy measured the students' level of motivation. Altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship measured the levels of leadership of the leaders versus non-leaders. As established in Chapter 2, leaders were defined as a member holding one of the following officer positions: president, vice president, treasurer, or secretary.

Of the three constructs measured under SDT, relatedness was the only construct that was statistically significant with distinguishing leaders versus non-leaders. However, it is important to note the scores for competence and autonomy were above the middle score on the questionnaire, which as stated in Chapter 3 was "somewhat". This indicates that leaders and non-leaders are both competent in their actions and they felt autonomy in their decisions in student organizations. This leads to the conclusion that a student that possesses the motivation to seek out and accept a leadership role is someone who has greater amount of relatedness, or connections within the student organization. Deci and Ryan (2002) defined relatedness as having a connection with others and having a sense of belongingness. Intuitively, in democratic organizations, students who are better connected and related would have the best probability of getting elected and receiving leadership opportunities. A sense of relatedness is the separating motivator to seek out and accept leadership positions within collegiate student organizations within colleges of agriculture.

Servant leadership was an indicator of leadership ability in this study. Altruistic calling and organizational stewardship were the two constructs of servant leadership that had statistically significant differences. However, the three other constructs had high means, even though they did not have significant differences. Wisdom, persuasive mapping, and emotional healing were all constructs that had above the middle score on the questionnaire. This indicates students have high leadership potential in these areas, but the difference between the non-leaders and leaders ability to lead is found in the altruistic calling and organizational stewardship constructs. Altruistic calling is the internal sense to want to make a positive action in others' lives. Considering the time and effort student leaders put into their student organizations, it makes sense that they would have a greater level of altruistic calling. Likewise, leaders that show organizational stewardship as leader of a student organization normally have a greater ability to plan and prepare members for service to the department, college, or university.

The greater the connection between members of an organization, the greater chance more members will be motivated to seek out and accept leadership positions in their organizations. Undergraduates who become motivated to take leadership positions, as shown in conceptual model (see Figure 2-1), will receive personal development through involvement and enhanced motivation.

Figure 2-1. Acceptance of a leadership role conceptual model.

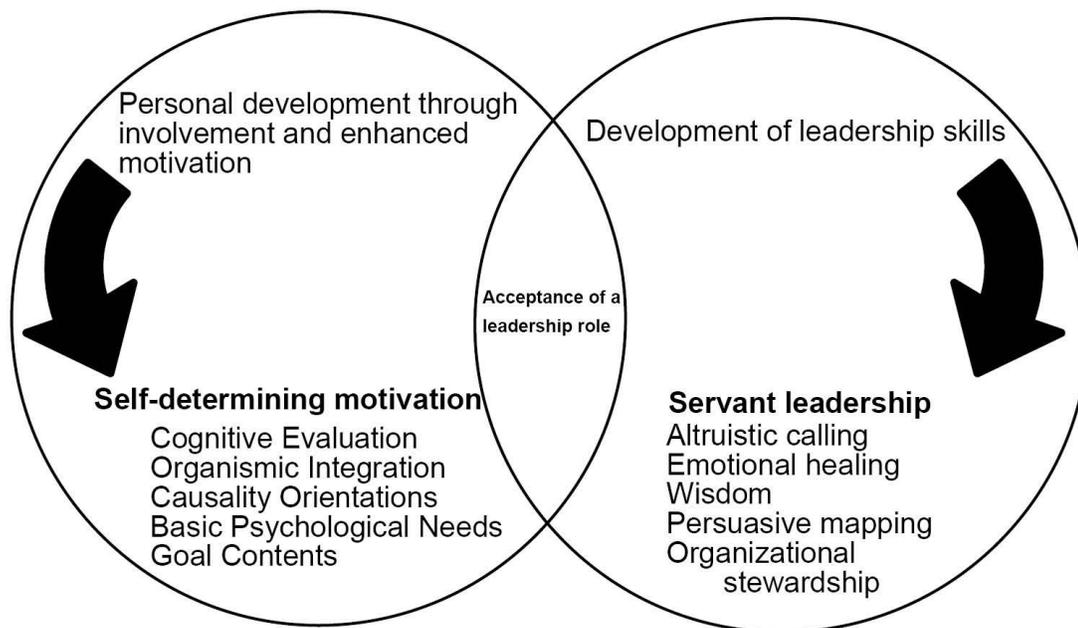


Figure 2-1. Acceptance of a leadership role conceptual model.

As seen in the model, higher levels of motivation are likely to influence the student to accept additional leadership roles and, in turn, receive more development in the leadership competency. Undergraduates who are motivated to seek out and accept a leadership role will also benefit from developing their level of leadership ability. The development of students' leadership ability will make them more valuable to employers after graduation. The greater the net value of employees, the greater these graduates will impact on the agricultural industry.

Furthermore, findings indicated several demographic relationships. First, a significant relationship was found between persuasive mapping and classification. Assuming there were no lurking variables, it makes sense that juniors and seniors, who

make up most of the leadership positions, would have a higher ability to persuade members to do things a certain way. A lurking variable is a unmeasured variable that influences the correlation of two independent variables indirectly (Agresti & Finlay, 2009). Especially those juniors and seniors have been around the organizations and hold institutional knowledge.

Findings also indicated a relationship between gender and relatedness, altruistic calling, emotional healing, and organizational stewardship. These findings would suggest that gender influences a undergraduate's level of relatedness, altruistic calling, emotional healing, and organizational stewardship.

There was also a correlation between GPA and competence. A student's GPA would be an indicator of how competent they were in the decisions they made in an undergraduate student organizational setting.

### **National Research Agenda**

RPA1: "Recruit and prepare students for the future workforce in the agricultural and life sciences" (p.16).

- This research aided the agricultural education research agenda by furthering the ability of college of agricultural faculty and staff to develop and prepare graduates to the workforce through leadership development

RPA2: "Improve the success of students enrolled in agricultural and life sciences academic and technical programs" (p.16).

- This research aided in the further understanding of how to support and aid student development in colleges of agriculture and life sciences

Overall, this research is consistent with the national agenda by helping the sustainability and succession of academic agricultural leadership programs (Osborne, n.d.).

## **Recommendations**

Based on the results and conclusions of this study, the researcher has made recommendations for practitioners and researchers.

### **Recommendations for Practice**

There are several recommendations for CALS faculty, staff, and advisors at UF and other similar colleges of agriculture with the same structure and format as student organizations at UF based on the results of this study. Faculty and staff who serve as advisors for student organizations are encouraged to spend time at the beginning of each semester encouraging activities that will connect the members of an organization. As seen from SDT, a student with a higher level of relatedness is more likely to seek out and accept a leadership position. For example, an advisor could enhance the amount of membership development activities like community service, outdoor trips, establish mentor programs, and partake in social activities in an organization. Fostering these types of membership development that connect the members of the organization, resulting in higher levels of relatedness. According to Deci and Ryan (2002) this relatedness will lead to a greater amount motivation in regards to the student organization. The greater the motivation, the higher chance more non-leader students will express interest in leadership positions.

It is also recommended leaders and non-leaders take the survey developed in this study at the beginning of each semester to measure the levels of motivation and ability to lead of each of the members of the study. This would allow for advisors and undergraduates to measure the change in student development accurately from one semester to the next and to identify circumstances that certain areas of motivation should enhance. This feedback would allow individual students to better understand

their strengths and weaknesses in their motivation levels and ability to lead in student organizations.

CALS faculty, staff, and advisors could use these research findings to implement new protocol if an organization is struggling to produce constant and satisfactory leadership. This procedure might be to first assess the levels of leadership ability in the organization. Contingent on certain members having satisfactory scores in all five leadership constructs, especially altruistic calling and organizational stewardship, the advisor could then place the students in an opportunity to seek out and accept leadership roles by increasing the level of relatedness in the group setting.

### **Recommendations for Research**

This study focused particularly on CALS at UF, however research in other colleges of agriculture and life sciences at different universities is important to further assess the levels of motivation and ability to lead throughout the nation. With this research, individuals that work with student organizations could further understand the levels of motivation and ability to lead in student organizations.

Additionally, there is a need to research understanding if tenure in a student organization has a correlation with seeking out and accepting a leadership position. This would be beneficial in understanding the connection between age, tenure, and level of leadership involvement in undergraduates.

A certain amount of overlap occurred during this research with students who were in several organizations. It seems some undergraduates were not just connected to one student organization, but were in several or more organizations. It would be beneficial to understand more about why students with the motivation to seek out and accept one

leadership position often seek out and accept more leadership positions in different organizations.

A large proportion of students surveyed in this research were females. Further research into why there are so many more females in colleges of agriculture and life sciences than males would help further understand the demographics of the populations being surveyed. This skewed variable may have influenced the data. Furthermore, research to better understand the possible relationship between gender and relatedness, altruistic calling, and emotional healing.

One of the implications of the population surveyed was the homogenous nature of the sample might have led to similar population responses. Further research might examine the effect size that gender had on the results of this study. A heterogeneous mixture might be able to be examined by examining a cross-section of colleges of agricultural and life sciences across the nation.

A growing trend in higher education is online learning. However, results of this study indicate a student's education is not limited to inside a classroom. In fact, most of the growth in competencies such as leadership that the agricultural industry demands occurs outside the traditional classroom setting in settings such as student organizations. Online education is a great supplemental tool to an educational experience, but should not replace the experience and growth students receive from involvement on a physical campus.

Further research should be conducted on the culture and value systems in colleges in universities. Identifying value systems of colleges will assist researchers in colligate settings in extrapolating research findings from college to college.

In addition, further research should be conducted on what happens to the leaders and non-leaders from student organizations after graduation. It would be interesting to find if leaders were more successful in industry than non-leaders. Is there a significant correlation between student leaders who have leadership positions and leadership roles in industry?

### **Summary**

The beginning of this chapter presented a summary of purpose and objectives. The methodology of the study is laid out including the organizational and member response rates. Next, a summary of findings and recommendations for further research were presented based on the four objectives. Each objective is stated and inferences of statistical analysis were discussed and presented in detail. Additionally, a discussion of research conclusions and recommendations for further research were presented and related to the conceptual model discussed in earlier chapters. This chapter also outlines how this research coincided with the national research agenda.

APPENDIX A  
LIST OF ALL COLLEGE OF AGRICULTURAL AND LIFE SCIENCES STUDENT  
ORGANIZATIONS

- Agricultural Communicators and Leaders of Tomorrow
- Agricultural Education and Communications Graduate Student Association
- Agricultural Economics Club
- Agricultural Operations Management Club
- Agronomy/ Soils Club
- Air and Waste Management Association
- Alpha Epsilon
- Alpha Gamma Rho
- Alpha Zeta
- American Society of Agricultural and biological Engineers
- American Water Works Association
- Animal Sciences Graduate Student Association
- Bioenergy and Sustainable Technology Society
- Blok and Bridle
- CALS Ambassadors
- The Campus Kitchens Project
- Collegiate 4-H
- Collegiate Farm Bureau
- Collegiate FFA/Agricultural Education and Communication Society
- Dairy Science
- Doctor of Plant Medicine student Organization
- Entomology

- Environmental Horticulture Club
- Environmental Horticulture Graduate Students Association
- Ethnoecology Society
- Equestrian Club
- Family, Youth, and Community Sciences
- Florida Water Environment Association, Student Chapter
- Food Science and Human Nutrition Club
- Forestry Club
- Gator Chapter of the Florida Association for Food Protection
- Gator Citrus
- Gator Collegiate Cattlewomen's Association
- Geomatics Student Association
- Horticulture Sciences Graduate Student Club
- InvestiGators Research Honor Society
- Marine Biology
- Microbiology and Cell Sciences Student Organization
- Microbiology Pre-graduate club
- Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS)
- Organic and Sustainable Agriculture Club
- Packaging Science Club
- Phi Tau Sigma – The Honor Society of Food Scientists
- Pre-Veterinary Medicine Club
- Public Interest Environment Conference

- School of Natural Resources and Environment Council
- Sigma Alpha
- Society for American Foresters
- Society for Viral Studies
- Students United in the Research of Fisheries
- Turfgrass Club
- Urban Entomological Society
- Wetlands Club
- Wildlife Graduate Student Association
- Wildlife Society
- Xi Sigma Pi – The Forestry honor Society

## APPENDIX B CONSTRUCT DEFINITIONS

**Relatedness.** Using empirical processes, Deci and Ryan (2000) found that being connected to those in a particular social network enhanced your motivation levels. Relatedness is a construct in this study examining how connected members feel to their peers.

**Competence.** Deci and Ryan (2000) found that optimal motivation levels and competence in abilities are correlated. This construct was appropriate to use in this research to measure how competent individuals in organizations feel in their leadership abilities.

**Autonomy.** This construct is part of SDT in that "...inherent growth tendencies and innate psychological needs that are the basis for their self-motivation" (Deci & Ryan, 2000, p. 68). Autonomy in this study will measure the levels of self-direction from student leaders.

### **Altruistic calling**

Altruistic calling was defined as, "a leader's deep-rooted desire to make a positive difference in others' lives" (Barbuto & Wheeler, 2006, p. 318). Respondents, both leaders and non-leaders, indicated feeling somewhat altruistic,  $M=3.7$ ,  $SD=0.62$  and  $M=3.6$ ,  $SD=0.54$ , respectively, called to their organizations as seen in Table 4-11.

### **Emotional Healing**

Emotional healing, the second factor of Barbuto and Wheeler's (2006) five-dimensions of servant leadership, is defined as, "a leader's commitment to and skill in fostering spiritual recovery from hardship or trauma" (Barbuto & Wheeler, 2006, p 318).

## **Wisdom**

Wisdom is defined as “a combination of awareness of surroundings and anticipation of consequences” (Barbuto & Wheeler, 2006, p. 318-319).

## **Persuasive Mapping**

The fourth element of Barbuto and Wheeler’s five-dimensional construct, persuasive mapping, is defined as “the extent that leaders use sound reasoning and mental framework they encourage others to visualize the organization’s future and are persuasive, offering compelling reasons to get others to do things” (Barbuto & Wheeler, 2006, p. 319).

## **Organizational stewardship**

Organizational stewardship is defined as, “the extent that leaders prepare an organization to make a positive contribution to society through community development, programs, and outreach” (Barbuto & Wheeler, 2006, p. 319).

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## BIOGRAPHICAL SKETCH

Micah David Scanga was born in Harare, Zimbabwe, Africa. During his adolescent years, he lived on four different continents, and eventually moving to Florida after surviving the Great Hanshin earthquake of 1995 and relocating to Dade City, Florida. Mr. Scanga was very active in middle school and high school in academics and extra-curricular activities. He was accepted in the University of Florida and began his undergraduate degree in the fall of 2005 on the University of Florida's main campus in Gainesville, FL. After four years, Mr. Scanga graduated cum laude with his Bachelor of Science in Agricultural Education and Communication, specializing in communication and leadership development and minoring in leadership.

Following graduation he decided to continue his education, pursuing his Master of Science in Agricultural Education and Communication, with an emphasis in leadership development and a minor in food and resource economics. Mr. Scanga plans to pursue a career related to the agricultural industry.