Student Involvement in Government: Antecedents and Outcomes

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DOCTORAL THESIS

Title	**STUDENT INVOLVEMENT IN GOVERNMENT: ANTECEDENTS AND OUTCOMES**
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“March on. Do not tarry. To go forward is to move toward perfection. March on, and fear not the thorns, or the sharp stones on life's path.”

Gibran Khalil Gibran

Acknowledgments

March on, go forward. The PhD journey has taught me the meaning of going forward. With the constant support of some people, I did not fear thorns and sharp stones on the path. A lot of people have been supportive throughout and made it a memorable journey. I would like to thank my parents. Their presence and support are so precious to me. Their pride in my achievements has constantly motivated me to achieve higher standards. I also thank my siblings, whose video calls brightened my days and put a smile on my face; and my cousins and friends, whose visits warmed my heart.

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Abstract

Student involvement is crucial for the effectiveness and efficiency of education. Government is a major form of involvement through which students represent their peers, participate in the university's decision-making processes, and manage on-campus activities of organizations and clubs. Involvement has a visible impact on oneself, peers, faculty, administrators, and environment (educational experience). Yet, this concept has not received the proper attention. In fact, research on its antecedents and outcomes remains scarce. This thesis tackles this issue, using theories from various fields such as those of emotional intelligence, experiential learning, and quality of life. Hence, the main question is: Do learning styles, competencies, and operating philosophies account for post-education success of students involved in government experiences?

The significance of this research lies in the incorporation of theories from different fields (management, psychology, and education) to better understand the concepts that contribute to involvement and, conversely, those that involvement contributes to. The integration of these various theories from various fields to better understand the antecedents and outcomes of involvement reflects the novelty of this thesis' contribution.

The first study analyzes learning styles, competencies, and operating philosophies as antecedents of involvement. The second study analyzes the relationship between emotional, social, and cognitive competencies and involvement. Finally, the third study analyzes the impact of involvement on outcome variables related to objective and subjective success (job offers received, life satisfaction, job satisfaction, etc.).

The quality of this research is critically assessed and possible limitations and threats to validity are presented. Furthermore, implications for research and practice are provided. Specifically, this thesis provides implications and suggestions that can be useful to educational institutions, program managers, organizations, researchers, students, and practitioners. Finally, future research lines are recommended.

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Introduction

With the persistent need for effective leaders, leadership development remains a major concern for organizations (Cacioppe, 1998; Day, Fleenor, Atwater, Sturm, & McKee, 2014; Hogan & Kaiser, 2005; Vardiman, Houghton, & Jinkerson, 2006). As a result, many organizations and educational institutions have given great attention to developing leadership and to doing so at early stages. Many students have participated in leadership-development programs to develop and grow themselves. Those students are usually trained to become future leaders of organizations and institutions. Yet, "students learn leadership by doing it" (Eich, 2008, p. 182). One way for students to practice leadership is through their involvement in these programs, for example, by holding a student-representative position (Astin, 1984; Laosebikan-Buggs, 2006).

Student involvement is defined as "the time and effort expended by the student in activities that relate directly to the institution and its program" (Astin, 1977, p. 21). The concept of involvement has been studied for many years and it has been associated with academic success and career-related competencies (Astin, 1977, 1984, 1993; Pascarella & Terenzini, 2005). It has also been considered crucial for their grade point average, retention, and graduation. By taking the lens of organizational socialization, involvement helps students gain the necessary knowledge and skills to enter and succeed in their professional setting (S. K. Gardner & Barnes, 2007).

One way to be involved is through student government. This thesis focuses on this form of involvement: student involvement in government. Students involved in government are expected to perform three main roles: (1) to serve as the students' official voice, (2) to partake in the university's decision-making processes, and (3) to coordinate the on-campus activities of clubs and organizations (Laosebikan-Buggs, 2006). These roles have a significant impact on different parties such as peers, faculty, and staff (Laosebikan-Buggs, 2006). Through their involvement in government, students are expected to experience greater levels of learning and personal development (Astin, 1984).

1.1 Relevance and gap

Involvement provides students with leadership experiences that could help them succeed. It enables their learning and personal development (Astin, 1984). In fact, some researchers suggest that those with more leadership experiences at early stages have a higher chance of being effective leaders in the future (Amit, Popper, Gal, Mamane-

Levy, & Lisak, 2009). They claim that these experiences improve several success factors such as one's self-efficacy, self-perception as a leader, and leadership-related knowledge (Amit et al., 2009). Furthermore, other researchers suggest that involvement exposes students to real-life situations and that, consequently, those students are more likely to achieve their learning goals and to be successful (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; Wooten, Hunt, LeDuc, & Poskus, 2012). Hence, encouraging students to be involved in their programs affects their personal development, the educational institution's efficiency and effectiveness, and organizations' performance and growth.

Student involvement has been considered crucial for educational institutions, for students, and for organizations. Yet, there has been limited research on the antecedents of student involvement. The concepts of learning styles, competencies (emotional, social, and cognitive), and operating philosophies have been commonly used in education (Batista-Foguet, Ferrer-Rosell, Serlavós, Coenders, & Boyatzis, 2015; Boyatzis & Saatcioglu, 2008; Boyatzis, Stubbs, & Taylor, 2002). These concepts are related to each other and to several important variables for education, such as student success (Amdurer, Boyatzis, Saatcioglu, Smith, & Taylor, 2014; Barmeyer, 2004; Boyatzis, Murphy, & Wheeler, 2000; Boyatzis & Saatcioglu, 2008; A. Y. Kolb & Kolb, 2005; Kuh et al., 2006; McClelland, 1973). However, the relationship between these concepts and student involvement in government has yet to be explored. Accordingly, this thesis aims to fill this void in the research. Furthermore, it aims to analyze the competencies at the cluster level—self-awareness, self-management, social awareness, relationship management, and cognitive (Boyatzis, 2009)—and to analyze their impact on student involvement in government. Hence, the first and second aims of this thesis are:

1. *To analyze the effect of learning styles, competencies, and operating philosophies on student involvement in government.*
2. *To analyze the effect of the clusters of emotional, social, and cognitive competencies on student involvement in government.*

Furthermore, research provides a variety of results regarding the moderator effect of gender on the relationship between the different concepts (i.e. learning styles, competencies, and operating philosophies) and outcome variables (effectiveness,

performance, etc.). For instance, when it comes to gender's moderator effect on the relationship between emotional intelligence and outcome variables, some researchers report a moderation effect that favors males (Hopkins & Bilimoria, 2008). Others report a moderation effect that favors females (K. V. Petrides & Furnham, 2006; Salguero, Extremera, & Fernández-Berrocal, 2012). Some found no interaction effect (Mandell & Pherwani, 2003). Given the varying results in the literature, another aim here is to analyze gender's moderator effect on the relationship between the different concepts and student involvement. Hence, the third and fourth aims of this thesis are:

3. *To analyze gender's moderator effect on the relationship between (a) learning styles, (b) emotional and social competencies, and (c) operating philosophies on one side, and student involvement on the other side.*

4. *To analyze gender's moderator effect on the relationship between competency clusters and student involvement in government.*

In addition, several researchers have identified an association between involvement on the one hand and students' psychological well-being, confidence, and drive to achieve on the other (House, 2000; Kilgo, Mollet, Pascarella, & Whitt, 2016; Webber, Krylow, Zhang, Senecal, & Vallieres, 2013). Still other researchers have found that student involvement is associated with important competencies and with academic success (Astin, 1984; Laosebikan-Buggs, 2006; Pascarella & Terenzini, 2005; P. V. Thomas & Higbee, 2000; Webber et al., 2013). The majority of the empirical studies have focused on the impact of involvement on academic success (e.g. grade point average, retention, graduation). So far, there has been limited research on the effects of student involvement on one's post-education success, in different life domains. This thesis aims to fill this void in the research. The focus is on graduates' success in the objective (external) and the subjective (internal) domains. Hence, the fifth aim of this thesis is:

5. *To analyze the effect of student involvement in government on post-education levels of objective success and subjective success.*

Thus, on the basis of the previously mentioned aims, it is concluded that the main goal of this thesis is to investigate the antecedents and outcomes of student involvement in government. Thereby, the overarching research question that this thesis tackles is:

Do learning styles, competencies, and operating philosophies account for post-education success of students involved in government experiences?

Figure 1.1 presents the model that is suggested and analyzed in the following chapters. This model relates to the overarching research question and the main aim of the thesis.

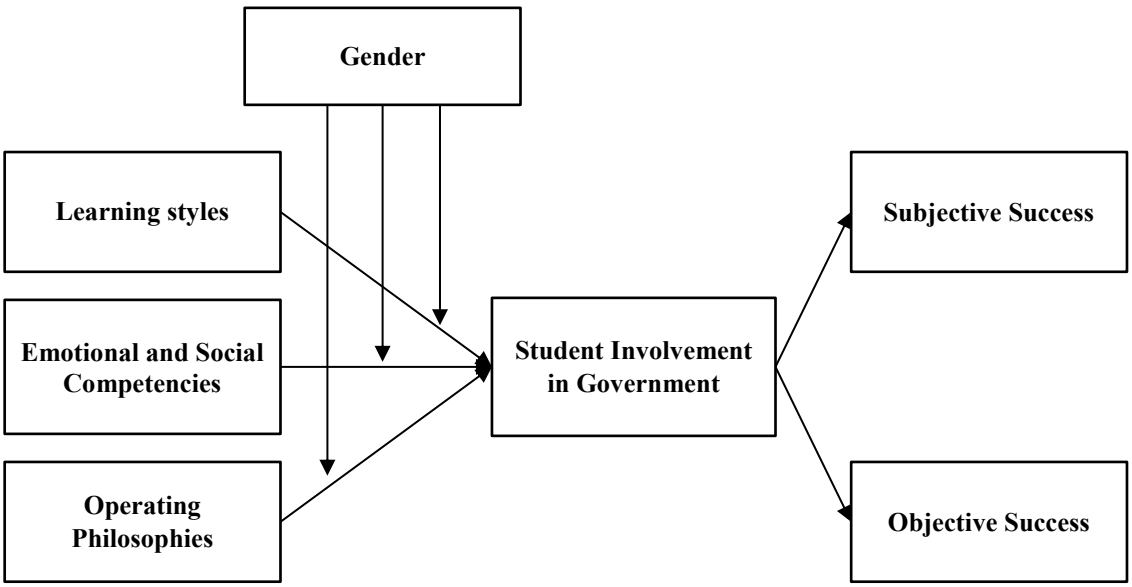

Figure 1.1 - Thesis framework

1.2 Structure of the thesis

This thesis comprises six chapters. Chapter 2 provides the theoretical background for this thesis and focuses on theories related to experiential learning, emotional intelligence, operating philosophy, involvement, and success.

As shown in Figure 1.2, Chapter 3 (study 1)[1] analyzes the impact[2] of learning styles, emotional and social competencies, and operating philosophies on student involvement in government. This chapter also inspects gender's moderator effect on the previously mentioned relationships. It develops and tests a model that helps better explain the relationship between these concepts. Hence, this chapter tackles the first and third aims of this thesis. This chapter is currently under review by the *Journal of Higher Education.*

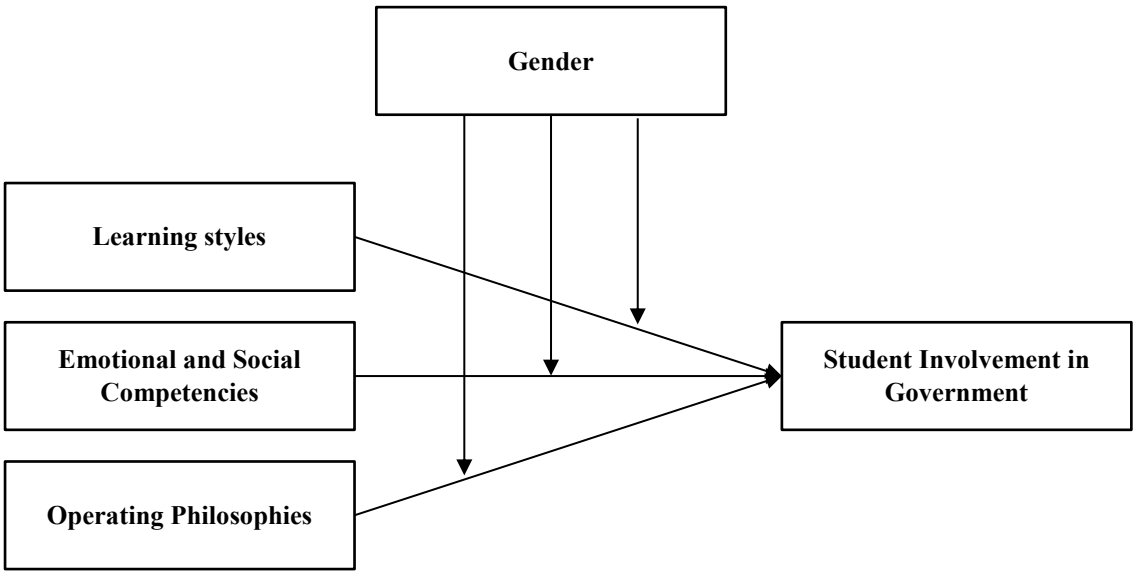

Figure 1.2 - Model (chapter 3)

Chapter 3 presents the findings related to the impact of competencies on student involvement in government. This chapter opens the door for additional investigation on that relationship, at the cluster level, as per the second and fourth aims of the thesis.

[1] This chapter was presented at meetings of the European Academy of Management (Mouawad, Batista-Foguet, & Serlavós, 2016) and the Academy of Management (Mouawad, Batista-Foguet, & Serlavós, 2017b).

[2] The studies were not designed as experiments or quasi-experiments. Hence, when focusing on the "impact" of one variable on another, this refers to the amount of variance that one variable explains in the other. This fact is included as a limitation and as a possibility for future research.

Thus, Chapter 4 (study 2)[3] analyzes the relationship between competencies and student involvement at the cluster level. These competency clusters include self-awareness, self-management, social awareness, relationship management, and cognitive competencies. As seen in Figure 1.3, this chapter investigates (1) the impact of the clusters of emotional, social, and cognitive competencies on student involvement; and (2) gender's moderator effect on that relationship. It develops and tests a model that helps better understand the concept of student involvement in government. Hence, this chapter tackles the second and fourth aims of this thesis. This chapter is currently under review by the *Journal of Career Development*.

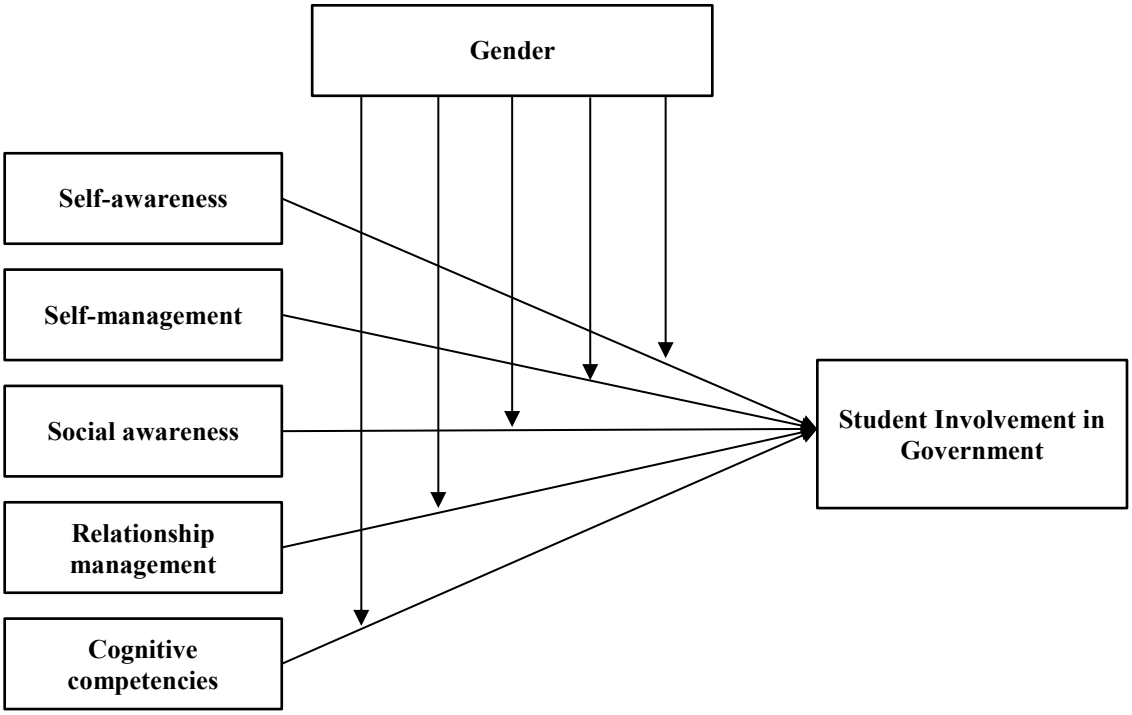

Figure 1.3 - Model (chapter 4)

Chapter 5 (study 3) tackles the fifth aim and analyzes the impact of student involvement on graduate success. This chapter develops and tests a model that analyzes the relationship between student involvement and graduate success. As seen in Figure 1.4, graduate success is studied in both its domains, the objective and the subjective. In this

[3] This chapter was presented at the International Congress on Emotional Intelligence (Mouawad, Batista-Foguet, & Serlavós, 2017a).

thesis, the subjective domain focuses on job satisfaction, career satisfaction, and life satisfaction. As for the objective domain, the focus is on change in compensation and number of job offers that the graduates received. These concepts are further elaborated upon in Chapter 5. This chapter is currently under review by the *Journal of College Student Development*.

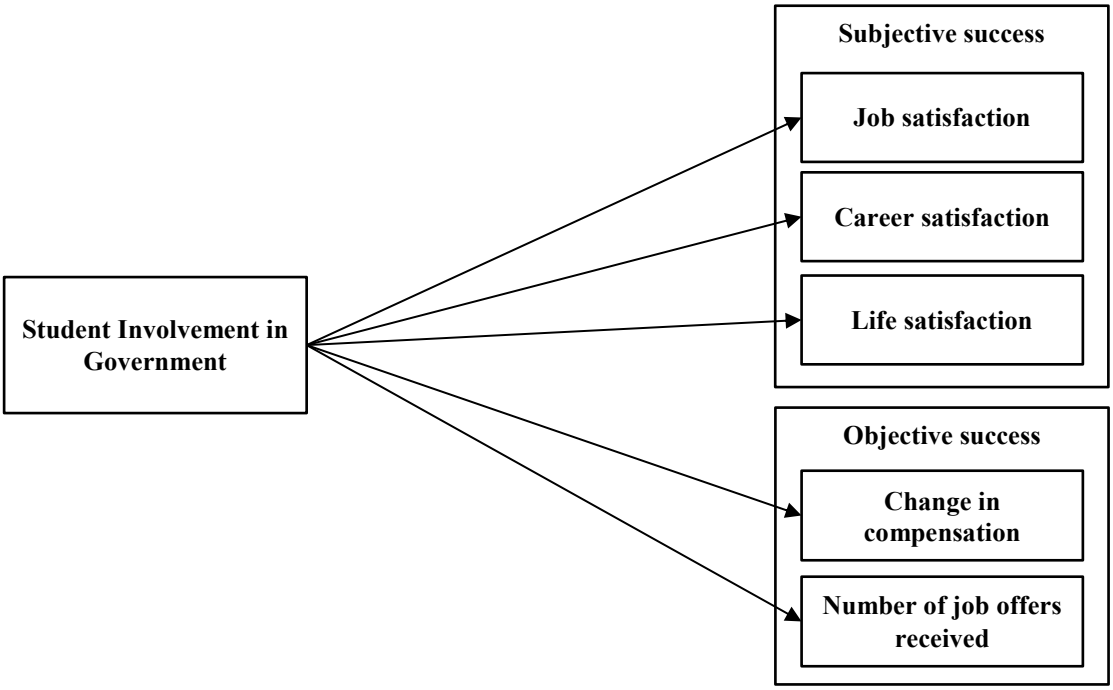

Figure 1.4 - Model (chapter 5)

Chapter 6 presents the synthesized findings of the three studies, discusses the implications of those findings, and presents the main contributions to research and practice. This chapter also presents the general limitations and threats to validity (internal, external, statistical conclusion, and construct) and the ways that they were mitigated. Finally, this chapter concludes the thesis with opportunities for future research and with personal thoughts about the PhD process.

1.3 Research methods adopted

This thesis tackles the main research question using a quantitative empirical approach (correlational). Survey methodology was used to collect data and robust statistical analyses were conducted (e.g. logistic regression analysis, structural equation modeling). The survey tools used comprise self-report measures, peer-evaluation measures, and objective measures. The main aims of the data collection process were (1) to obtain data about students' learning styles, competencies, and operating philosophies; (2) to identify students who were involved in government throughout the MBA program; and (3) to obtain data about students' success several years after their graduation from the MBA program. This research line is aligned with the research direction of the Leadership Development Research Centre. Data were collected through the help of the research center and by contacting graduates several years after their graduation.

Regarding the first aim of the data collection process, data were obtained through the Leadership Assessment and Development (LEAD) program that was designed by Ricard Serlavós. The LEAD platform (accessible via https://lead.esade.edu/lead/default.aspx) enabled the collection of data from different sources. Data on competencies were collected through peer evaluations. Data on learning styles and operating philosophies were collected through self-report surveys. As for the second aim, the alumni association publishes, on its official website, the list of students that were involved in government throughout the academic year. Through that website, individuals that were elected to represent and govern their peers were identified. As for the third aim, a detailed survey was developed using validated and widely used scales, such as the Satisfaction With Life Scale (Bagherzadeh et al., 2017; Diener, Emmons, Larsen, & Griffin, 1985; Pavot & Diener, 1993, 2008; Pavot, Diener, & Suh, 1998; Vázquez, Duque, & Hervás, 2013), the Career Satisfaction Scale (Chan & Mai, 2015; J. H. Greenhaus, Parasuraman, & Wormley, 1990; Jeffrey H. Greenhaus, Collins, & Shaw, 2003), and the Job Satisfaction Index (Buyukgoze-Kavas, Duffy, Güneri, & Autin, 2014; Ilies et al., 2017; Nichols, 2016). The survey structure was presented several times to members of the Leadership Development Research Centre and to the heads of the alumni association and career services. These meetings and presentations helped enhance the survey structure and quality.

As discussed in the subsequent chapters, data were explored and analyzed to check whether the model assumptions would hold. The appropriate techniques and methods were used to tackle the respective hypotheses, as derived from the main research question. These methods included different types of analyses (e.g. correlation analysis, logistic regression analysis, structural equation modeling). Furthermore, this thesis adds to the predictive validity of the scales used and shows that they help predict several variables and relationships that have not been explored yet. It also uses recent developments in methodology and techniques (e.g. log-transforming variables to deal with ipsative data; Batista-Foguet et al., 2015). Table 1.1 presents a synopsis of the research methods of studies 1, 2, and 3 (i.e. chapters 3, 4, and 5), respectively.

	Study 1	**Study 2**	**Study 3**
Empirical approach	Quantitative	Quantitative	Quantitative
Sampling	Stratified random sampling	Stratified random sampling	Entire population
Sample size	n = 330	n = 300	n = 325
Design	Non-experimental design – survey research (correlational study)	Non-experimental design – survey research (correlational study)	Non-experimental design – survey research (correlational study)
Analysis/technique	Logistic regression	Logistic regression	Structural equation modeling
Measures	• Self-report • Peer evaluation • Objective measures	• Peer evaluation • Objective measures	• Objective measures • Self-report

Table 1.1 - Research methods of the three studies

2

Theoretical background

This chapter presents the theories invoked in this thesis. These theories relate to the fields of leadership, education, learning, and psychology. Specifically, this section focuses on five main areas: (1) experiential learning, (2) emotional intelligence, (3) operating philosophy, (4) student involvement, and (5) success.

2.1 Experiential learning theory

Experiential learning theory is based on philosophical pragmatism (Dewey), social psychology (Lewin), and cognitive developmental genetic epistemology (Piaget) (Dewey, 1938; D. A. Kolb, 1984, 2015; D. A. Kolb, Boyatzis, Richard, & Mainemelis, 2001). This theory highlights the fundamental role that experience plays in the learning process. This differentiates this theory from other theories which consider learning either cognitive or behavioral (D. A. Kolb et al., 2001). Cognitive theories assume that the learning process is cognitive and does not involve affect. Behavioral theories assume that the learning process does not involve subjective experiences.

Experiential learning theory considers learning as a "holistic process and not a product. It is a process of human adaptation, in general, and not one limited to the classroom. Experiential learning combines experience, perception, cognition, and behavior" (Barmeyer, 2004, p. 580). Experiential learning theory defines learning as the process in which knowledge is created by grasping and transforming experience. The learning model depicts two dialectically linked modes of grasping experience—Concrete Experience (CE) and Abstract Conceptualization (AC)—and two dialectically linked modes of transforming experience—Reflective Observation (RO) and Active Experimentation (AE) (Mainemelis, Boyatzis, & Kolb, 2002). An individual's learning style refers to an individual's preferred way of grasping and transforming experience. For instance, as per Figure 2.1, individuals that exhibit preferences for the CE learning mode (on the grasping dialect) and the RO learning mode (on the transforming dialect) are considered to have a diverging learning style.

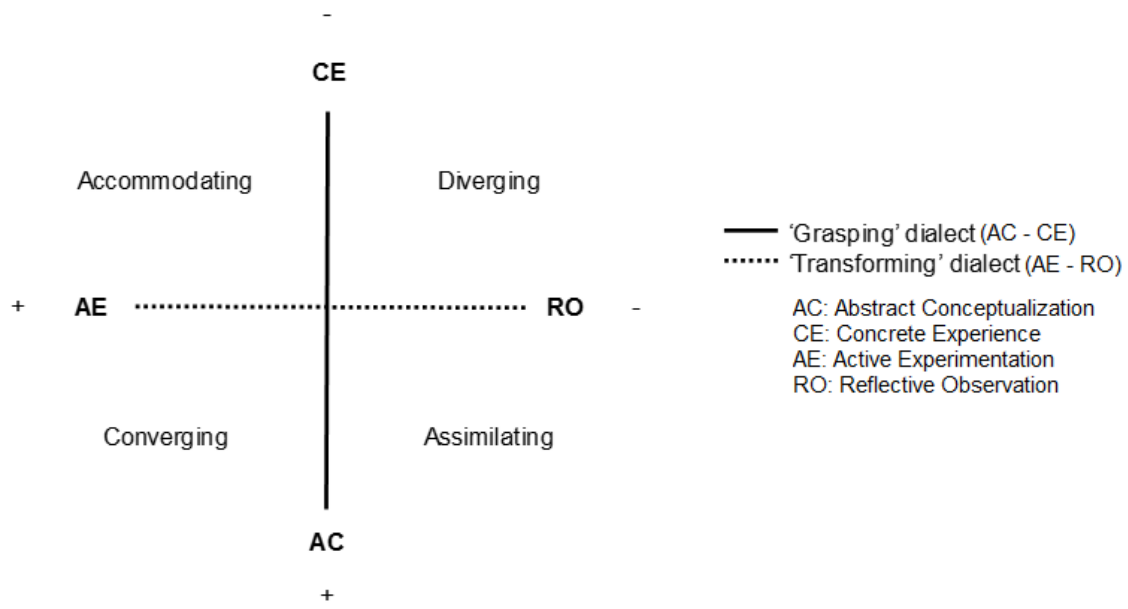

Figure 2.1 - Learning styles

Experiential learning theory has been invoked in practice (McCarthy, 2016) and in research in different fields (D'Amore, James, & Mitchell, 2012; Engels & de Gara, 2010). It has also been commonly used in education (e.g. Batista-Foguet et al., 2015). This theory is relevant to management education (Barmeyer, 2004) and to this thesis, which focuses on student involvement in education programs. This theory is often implemented in training and development through the use of learning styles. According to Barmeyer (2004), learning styles are helpful for dealing with daily problems and resolving problems. However, people have different tendencies (abstract versus concrete). For instance, using Barmeyer's example, a geometrician may emphasize abstract concepts, whereas a writer may prefer CE. A manager might be keen on actively applying ideas, whereas a biologist may be more concerned with the reflective observation of events (Barmeyer, 2004). Individuals with different learning styles are expected to differ in their approaches to involvement activities. Hence, when examining student involvement, this thesis focuses on individual differences in learning and analyzes their learning styles.

2.2 Emotional intelligence

2.2.1 Background

Early in the 20th century, traditional views of intelligence focused on cognitive facets such as problem solving (Salovey & Mayer, 1990). Definitions of intelligence included (1) the ability to judge true from false; (2) the capacity to think rationally, act purposefully, and deal with the environment; and (3) the capacity to perform abstract thinking. However, since the inception of the concept of intelligence, different types of intelligence emerged (H. E. Gardner, 1983, 2008; Salovey & Mayer, 1990). One of the first types that emerged was social intelligence.

Social intelligence was defined as "the ability to understand men and women, boys and girls—to act wisely in human relations" (Thorndike, 1920, p. 228). Some researchers criticized this concept for being undefined and unmeasured (e.g. Cronbach, 1960). However, other researchers later found this concept to be a factor distinct from general intelligence (Ford, 1982; R. J. Sternberg & Smith, 1985). In fact, according to Salovey and Mayer (1990), factorial analyses showed that social intelligence is distinct from general academic abilities. Years later, the concept of emotional intelligence emerged. This concept was originally viewed by Salovey and Mayer as part of social intelligence (Salovey & Mayer, 1990). Since the 1990s, this concept has gained significant recognition from researchers and practitioners (Goleman, 1995, 2006).

Emotional intelligence is defined as the "ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Salovey & Mayer, 1990, p. 189). Emotional intelligence is predictive of outstanding performance of leaders and managers (Cherniss & Boyatzis, 2013; Goleman, 2001; Spencer & Spencer, 1993), resonant and primal leadership (Boyatzis & McKee, 2005; Goleman, Boyatzis, & McKee, 2013), transformational leadership (L. Gardner & Stough, 2002; Mandell & Pherwani, 2003), salary increases, job success, life success, and performance in different roles (Amdurer et al., 2014; Di Fabio & Palazzeschi, 2015; Joseph, Jin, Newman, & O'Boyle, 2015; Ouyang, Sang, Li, & Peng, 2015). Student involvement entails dealing with conflicts, power struggles, emotions, apathy, and disorganization (Laosebikan-Buggs, 2006). Hence, this thesis suggests that emotional intelligence is crucial for involved students.

Over time, different approaches to emotional intelligence emerged, with the main difference between them being the setting, operationalization, and measurement. Several researchers have presented three different approaches to emotional intelligence: ability approach, internal approach, and behavioral approach (Bar-On, 2006; Boyatzis, 2009).

2.2.2 Ability approach

Salovey and Mayer claim that emotional intelligence is a mental ability and they relate it to standard and cognitive intelligence (Mayer, Salovey, Caruso, & Sitarenios, 2001; Salovey & Mayer, 1990). This approach has been criticized for higher correlation with traditional cognitive measures than the other approaches (O'Boyle, Humphrey, Pollack, Hawver, & Story, 2010; C. A. Webb et al., 2013). Furthermore, several researchers show that this approach has an incremental validity lower than that of the two other approaches (O'Boyle et al., 2010).

2.2.3 Internal approach

The two main models of the internal approach are those proposed by Bar-On and by Petrides and Furnham. Bar-On claims that "emotional–social intelligence is a cross-section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands" (Bar-On, 2006, p. 14). This self-report approach to emotional intelligence has been criticized for the following reasons: measuring products of emotional intelligence rather than its constituents, lacking measures of emotional expression, and overlapping with personality measures (McEnrue & Groves, 2006). Bar-On's measurement tool was originally a self-report tool and was later transformed into a 360º assessment tool (Bar-On, 1997, 2006; Boyatzis, 2009).

Petrides and Furnham (2000, 2001) present the "Trait EI" model which refers to a "constellation of behavioral dispositions and self-perceptions concerning one's ability to recognize, process, and utilize emotion-laden information" (K. V. Petrides, Frederickson, & Furnham, 2004, p. 278). This model encompasses various dispositions from the personality domain and has been criticized for its high overlap with personality measures (Joseph & Newman, 2010).

2.2.4 Behavioral approach

Boyatzis (2009) claims that competencies represent the behavioral approach to emotional intelligence. He defines a competency as "an underlying characteristic of a person that leads to or causes effective or superior performance" (Boyatzis, 1982, p. 21). A competency is specified from the personality theory on which the behavioral approach is based (Boyatzis, 2008). Boyatzis (2008) presented a holistic conceptualization of personality; one that enables the prediction of relationships among one's neural circuits, unconscious motives, values and operating philosophy, and competencies (Goleman, 1998, 2006).

Competencies could be segregated into threshold competencies and outstanding performance differentiators (Boyatzis, 2009). Threshold competencies relate to competencies that are necessary for average performance. Outstanding performance differentiators are those competencies that set average performers apart from outstanding performers. There is a set of competencies that have been shown to cause or predict outstanding manager or leader performance: emotional, social, and cognitive (Boyatzis, 2009, 2011; Goleman, 1998). These "competencies predict effectiveness in professional, management, and leadership roles in many sectors of society" (Boyatzis, 2008, p. 5). This approach has been criticized for high inter-correlations with measures of personality (McEnrue & Groves, 2006). McEnrue and Groves (2006) suggest that further research would increase the validity of the measures used in the competencies model.

2.2.5 Choice of approach

This thesis uses the behavioral approach to emotional intelligence (i.e. emotional, social, and cognitive competencies) for the following reasons. First, the constructs have been developed and measured in an organizational environment. These competencies, unlike regular intelligence tests, have been induced based on real-life performance, using critical incident interviews (Flanagan, 1954; McClelland, 1998). This fact renders this approach more relevant to this thesis (research in management sciences). Second, this approach assesses competencies using a 360º assessment. This assessment method provides this approach with higher criterion validity than approaches that assess emotional intelligence using intelligence tests and self-report (Judge, Colbert, & Ilies, 2004). In fact, McClelland (1973) suggested that intelligence testing should be replaced

by competency-based testing on the basis that competencies are better able to predict important outcomes than would more traditional tests. Third, these competencies could be developed (Boyatzis, Passarelli, & Wei, 2013; Boyatzis et al., 2002; e.g. Boyatzis & Saatcioglu, 2008) and are crucial for development and effectiveness (Boyatzis, Rochford, & Cavanagh, 2017; Langley, 2000; Newell, 2002). Finally, researchers have shown in a meta-analytical study that this approach has higher incremental validity than other approaches (O'Boyle et al., 2010).

2.3 Operating philosophy

Operating philosophy relates to "how one values or determines values" (Boyatzis et al., 2000, p. 50). A value is defined as a "discrete belief about something or someone. It can be an absolute dichotomous belief as well as a conditional belief" (as cited in Boyatzis et al., 2000). Boyatzis et al. (2000) suggest that to determine a closer relationship between a person's values, beliefs, and behavior, exploring a person's operating philosophy is important, or even crucial. It is important in understanding, explaining, or predicting a person's behavior.

Three major operating philosophies are identified, describing the extent to which an individual is pragmatic, intellectual, or humanistic (Boyatzis et al., 2000). These philosophies affect an individual's behavior, thoughts, and feelings in different and distinctive ways (Boyatzis et al., 2000). The pragmatic operating philosophy was developed based on philosophies of pragmatism, consequentialism, instrumentalism, and utilitarianism. Those with a predominantly pragmatic operating philosophy tend to value things based on utility (input-output). They tend to choose actions that maximize benefit. The intellectual operating philosophy was developed based on rationalism. Those with a predominantly intellectual operating philosophy tend to value things based on reason. In the decision-making process, they prefer to rely on logic and guidelines. The humanistic operating philosophy was developed based on philosophical theories of communitarianism, hermeneutics, humanism, and collectivism. Those with a predominantly humanistic operating philosophy tend to value things based on relationships and feelings. They are assumed to be committed to human values.

Operating philosophies are stable and are expected to be related to an individual's interests, preferences, and choices (Boyatzis et al., 2000). A person's operating philosophy is important for understanding, explaining, and predicting one's behavior. It

is also helpful in understanding other constructs such as learning styles and competencies (Batista-Foguet et al., 2015; Boyatzis, 2008; Boyatzis et al., 2000). Hence, this thesis incorporates theories of operating philosophy to better understand student involvement and other related constructs.

2.4 Student involvement

The concept of student involvement has been developed on the basis of involvement theory. It was first presented by Astin (1975), and the definition was then formalized as "the time and effort expended by the student in activities that relate directly to the institution and its program" (Astin, 1977, p. 21). It relates to the investment of psychological and physical energy in both academic and social experiences (Astin, 1984; Wolf-Wendel, Ward, Kinzie, Braxton, & Gonyea, 2009). Astin (1984) further suggests that this concept is closely related to individual learning, could be stimulated by educational institutions, could boost education effectiveness, and could augment student retention.

Astin's background in industrial psychology motivated him to analyze the concept of "vigilance" (i.e. sustained attention to a task) and its relation to student retention (Wolf-Wendel et al., 2009). Astin noted that the concept of vigilance is not sufficient to explain retention since its application is narrow and does not consider environmental factors. However, he claims that the concept of involvement is somewhat broader covering a wider range of experiences and behaviors. He concluded that the combination of behavior, psychic energy, and environment better explains and predicts outcome variables such as retention. He added that the concept of involvement provided a theoretical link between practice and results.

Hence, the concept of involvement focuses on the time and effort that a student invests in academic and social experiences, but also acknowledges the environment's role. This concept is usually seen in research that utilizes Astin's (1984) Input-Environment-Output model (Wolf-Wendel et al., 2009). In this model, individual factors are controlled so that the impact of involvement on diverse outcomes can be isolated. This thesis controls for several variables that are important to the context of education and involvement (e.g. age, gender, grade point average).

The literature suggests that there are various types of involvement that include activities such as "working on campus, living on campus, engaging with peers, being a member

of clubs, and socializing with faculty members" (Hernandez, Hogan, Hathaway, & Lovell, 1999; Pascarella & Terenzini, 2005; Wolf-Wendel et al., 2009, p. 411). A combination of these activities was later defined as student involvement in government (Laosebikan-Buggs, 2006). This type of involvement includes representing one's peers, acting as a link between students and program management, and managing on-campus activities of organizations and clubs (Laosebikan-Buggs, 2006). This concept has been discussed in Chapter 1 and is further elaborated in the subsequent chapters.

2.5 Success

Success means different things to different people and one needs to take this into account (Dyke & Murphy, 2006). According to Dyke and Murphy (2006), the way individuals define success has a substantial effect on numerous decisions in their personal and professional lives. Originally, success was defined as any positive outcome. However, with time it became associated with wealth and prestige (Dyke & Murphy, 2006). According to Dyke and Murphy, several researchers consider this definition to be related to masculine socialization. Some research has studied success in two forms: subjective success and objective success.

Subjective success relates to a person's own subjective perception of work and life, and his or her role within it (Gattiker & Larwood, 1986; Hay & Hodgkinson, 2006; Schein & Van Maanen, 1977). According to Weick and Berlinger (1989), it is psychologically defined in terms of challenge, self-fulfillment, and satisfaction. The main measures used are intrinsic indices, such as career satisfaction (T. H. Cox & Harquail, 1991) and perceptions of one's accomplishments and future prospects (Aryee, Chay, & Tan, 1994).

Objective success is specified external to the person and it relates to monetary (e.g. salary, compensation, wealth) and non-monetary criteria (e.g. positions, official structures, titles) (Schein & Van Maanen, 1977). It is defined through the "society's evaluation of achievement with reference to extrinsic measures, such as salary and managerial level" (Melamed, 1996). According to Dyke and Murphy (2006), the majority of empirical research on success has focused on objective success and used measures such as salary and compensation. However, they claim that there is a growing acknowledgment of the importance of examining individuals' subjective success. This

thesis analyzes the impact of student involvement on both objective and subjective success.

3

Antecedents of student involvement: Learning styles, competencies, and operating philosophy

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3.1 Abstract

Student involvement throughout programs has been associated with academic success and career-related competencies. However, there has been limited research on the antecedents of student involvement. In this chapter, we employed learning styles, emotional and social competencies (ESCs), and operating philosophies as predictors of student involvement in leadership-development programs. We collected multi-source data on 330 participants of a leadership-development program. We used logistic regression analysis to estimate the effects of the three concepts on the likelihood of emergence of involved students. We show that to emerge as an involved student, it is crucial to apply one's feelings, senses, and emotions when experiencing and understanding one's environment; it is also important to develop one's ESCs. Furthermore, we present counterintuitive findings related to the moderator effect of gender on the relationship between ESCs and student involvement. This investigation explores implications for research and practice related to student development, leadership development, and educational training and development. This study (a) invokes theories of education, psychology, and management; (b) identifies predictors of student involvement; (c) develops and tests models; (d) analyzes the moderator effect of gender; and (e) invokes a common methodology, used in other disciplines, to reduce response bias and deal with ipsative data.

Keywords: Students, involvement, emotional intelligence, management competencies, experiential learning, learning style, leadership development, programs, education

3.2 Introduction

With the pressing need for leaders in different industries and contexts, numerous educational institutions, especially management and business schools, have invested significant resources in leadership development. Leadership-development programs have been designed to invoke pragmatic awareness (Bottery, 2004) and to be aligned with educational institutions' core of learning and teaching (Bush, 1998, 2003; Hoyle & Wallace, 2005). These programs have been common for individuals in early and mid-stages of their careers. Many institutions aim to train students participating in these programs to become future leaders of the society. Yet, practice remains the primary method for students to learn leadership (Eich, 2008). One of the principal ways for them to practice leadership is through involvement, for example, in student government (Astin, 1984; Laosebikan-Buggs, 2006). Student involvement has been claimed necessary for academic success. So far, there has been limited research that identifies the factors that predict student involvement. Hence, in this chapter we investigate the predictors of student involvement, in the context of leadership-development programs.

3.2.1 Leadership development

A great deal of new knowledge on leadership development has been generated. However, the history of rigorous scholarly theory and research on the topic is short and there is still much to be learned (Day et al., 2014). According to Day et al. (2014), leadership development is a complex theme that deserves scholarly attention that is independent of what has already been studied in the field. The subject of leadership development is inherently multilevel and longitudinal. The process of leadership development is dynamic and involves numerous individuals and interactions that persist over time. The development of effective leadership involves more than simply deciding on which leadership theory or model to invoke. Institutions and organizations are more interested in learning and applying the most effective and efficient manner in which to develop leaders and leadership (Day et al., 2014; Lingham, Richley, & Rezania, 2006; Richard, Holton, & Katsioloudes, 2014).

3.2.2 Leadership-development programs

"Students learn leadership by doing it, and programs that provide opportunities for student leadership practice create ripples of positive outcomes for students and society" (Eich, 2008, p. 182). Leadership-development programs aim to develop leadership and to expose individuals to leadership experiences. Individuals with more leadership experiences at early stages have a higher chance of being effective leaders in the future (Amit et al., 2009). These experiences enhance one's self-efficacy, self-perception as a leader, and leadership-related knowledge (Amit et al., 2009). Leadership-development programs provide a context in which participants can practice leadership and be involved as student representatives at an early stage.

3.2.3 Student involvement

Involvement is "the time and effort expended by the student in activities that relate directly to the institution and its program" (Astin, 1977, p. 21) and it includes academic, social, and political dimensions. Involvement is associated with multiple variables of academic success and the development of career-related competencies (Astin, 1977, 1984, 1993; Pascarella & Terenzini, 2005). Involvement, through the lens of organizational socialization, helps individuals gain the necessary knowledge and skills to enter and succeed in their professional setting (S. K. Gardner & Barnes, 2007). Graduate students' involvement enables them to interact with peers, faculty, and professionals in the field.

Involved students are expected to lead, represent, and inspire their peers. By holding such positions, they practice leadership, and their chances of emerging as effective future leaders are consequently enhanced (Amit et al., 2009; Eich, 2008). The early-stage identification and development of these individuals affects their personal development, the educational institution's efficiency and effectiveness, and organizations' performance and growth.

One way to be involved is through student government. In this study, we focus on this form: student involvement in government. Student government has three main roles: (1) to serve as the students' official voice—representation; (2) to partake in the university's decision-making processes—voice; and (3) to coordinate the on-campus activities of clubs and organizations—advocacy (Laosebikan-Buggs, 2006).

Student government plays an undisputedly important role for students, faculty, and staff (Laosebikan-Buggs, 2006). The greater the student's involvement in government (i.e. as student representatives), the greater will be their learning and personal development (Astin, 1984). Through their involvement in government, students are exposed to real-life situations and are more likely to achieve their learning goals and to be successful (Kuh et al., 2006; Wooten et al., 2012). Involvement in such activities indicates leadership and behavioral skills. Furthermore, these activities are effective for instilling leadership and interpersonal skills and for enhancing recruiters' evaluations of students (Rynes, Trank, Lawson, & Ilies, 2003).

3.2.4 Antecedents of student involvement

Student involvement is predictive of student success and several other outcome variables, yet there has been only limited research on the antecedents of student involvement. Learning styles, ESCs, and operating philosophies are related concepts and have been commonly used in education (Batista-Foguet et al., 2015). They are related to several important variables for education, such as student success (e.g. Amdurer et al., 2014; Barmeyer, 2004; Boyatzis et al., 2000; Boyatzis & Saatcioglu, 2008; A. Y. Kolb & Kolb, 2005; Kuh et al., 2006). However, to our knowledge, the relationship between these concepts and student involvement in government has yet to be explored. Accordingly, this thesis aims to fill this void in the research. Thus, the first research question is:

1. *Are learning styles, competencies, and operating philosophies predictive of student involvement in government?*

In addition, gender is a variable that might affect the relationship between several of the above-mentioned relationships. As explained in the following sections, this study investigates gender's moderator effect on the relationship between (1) learning style, competencies, and operating philosophies; and (2) student involvement. Hence, the second research question is:

2. *Does gender moderate the relationship between (a) learning styles, (b) emotional and social competencies, and (c) operating philosophies on one side, and student involvement on the other side?*

3.3 Theoretical background

We invoked the following concepts as antecedents of student involvement: (a) learning styles to assess one's approach to knowledge creation; (b) ESCs to assess one's competency; and (c) operating philosophy to assess one's motivational drivers. In this section, we present the theories and concepts that were invoked, and the respective hypotheses. Furthermore, in the following sections we explain how the concepts were operationalized in this chapter. We also present a model in Figure 3.2, to provide an overview of the hypothesized relationships.

3.3.1 Learning style

One main goal of graduate management education is preparing students to be outstanding leaders and managers. This means helping them develop the knowledge needed (Boyatzis et al., 2002). However, in education, self-authorship is highly valued. This concept highlights the importance of self-learning and being involved in the construction of one's own knowledge (A. Y. Kolb & Kolb, 2005). Furthermore, the role of teaching is no longer transmitting knowledge, but initiating, guiding, and influencing students' thinking processes (Vermunt, 1996).

The experiential learning theory considers knowledge to be social and to be created and recreated in one's personal knowledge. It postulates that "knowledge results from the combination of grasping and transforming experience" (A. Y. Kolb & Kolb, 2005; D. A. Kolb, 1984, p. 41). However, students approach that process in different ways. Individual preferences in *grasping* and *transforming* experience to knowledge are defined as learning styles (D. A. Kolb, 1984). Learning styles have been associated with several factors (e.g. interpersonal skills, leadership, and helping others) that could impact student involvement. On that basis, we investigate, in this study, the different learning styles that could influence student involvement.

One grasps experience through concrete experience (CE, experiencing) or abstract conceptualization (AC, thinking). One transforms experience through reflective observation (RO, reflecting) or active experimentation (AE, acting). Figure 3.1 shows Kolb's learning model, which depicts two dialectically linked modes of grasping experience—CE and AC—and two dialectically linked modes of transforming experience into knowledge—RO and AE. Knowledge results from a recurring cycle of experiencing (CE), reflecting (RO), thinking (AC), and acting (AE). Here, one develops observations and reflections that are based on one's concrete experiences. These observations and reflections are then assimilated and refined into abstract concepts from which to draw new implications for action. These implications can be experimented on and used as guidelines when creating new experiences (D. A. Kolb et al., 2001). The focus here is on an individual's learning style, which is the individual's preferred way of grasping and transforming experience: diverging (CE and RO), assimilating (AC and RO), converging (AC and AE), or accommodating (CE and AE), as shown in Figure 3.1.

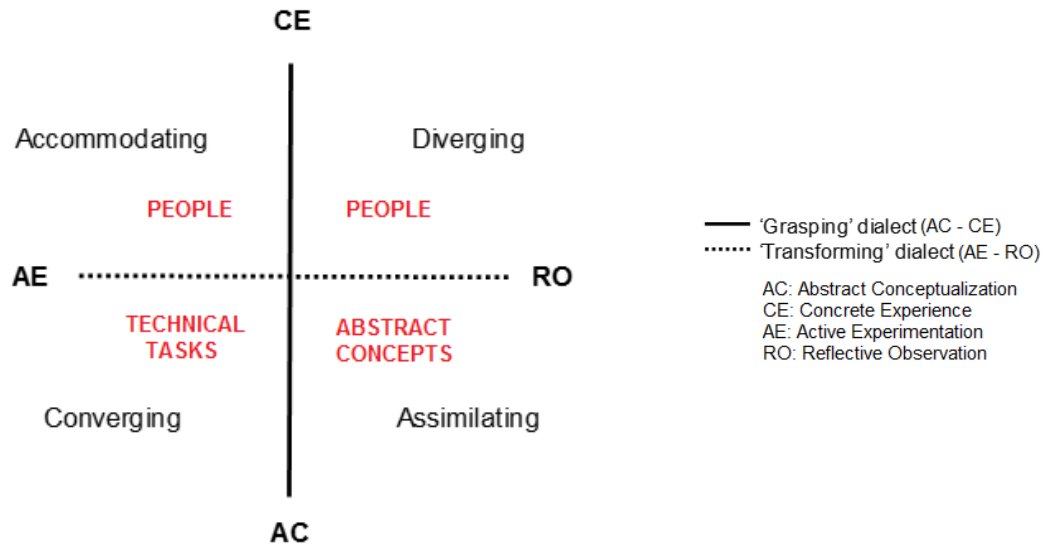

Figure 3.1 - Learning styles as derived from learning modes

Individuals with a diverging learning style tend to be imaginative, emotional, and interested in people. Those with an assimilating learning style are less focused on people and more interested in ideas and abstract concepts. Individuals with a converging learning style prefer to deal with technical tasks and problems, rather than with social and interpersonal issues. Those with an accommodating learning style rely

more heavily on people for information and prefer to work with others to set goals and complete assignments (D. A. Kolb et al., 2001). In summary, individuals with diverging and accommodating learning styles show preference for dealing with people and emotions, and are expected to better manage emotions and social situations. Furthermore, these two learning styles are significantly related to the interpersonal skills of leadership, relationship, and helping (A. Y. Kolb, 2005). This means that individuals with tendencies toward these learning styles exhibit higher levels of interpersonal skills than individuals with tendencies toward other learning styles.

Student government plays a significant role in shaping the quality of life on campus. However, "internal power struggles, student apathy, and disorganization more powerfully shape the role and the agenda of student government" (Laosebikan-Buggs, 2006, p. 2). In order to effectively represent students, involved students need to employ interpersonal skills (A. Y. Kolb, 2005) so that they can be sensitive to their environment (Conger & Kanungo, 1987), communicate with students, understand and represent students' best interest, and shape their own actions in light of what is best for the students (Laosebikan-Buggs, 2006). Hence, interpersonal skills are considered crucial for involved individuals who are expected to lead and represent others, manage relationships, and help and inspire their peers.

As noted previously, individuals who exhibit tendencies toward the diverging and accommodating learning styles are inclined to be interested in people and in maintaining harmony and good relationships. Therefore, we expect that, through their interpersonal skills and interest in people, those individuals will more likely be involved in government than their peers, in order to manage conflict, to motivate their peers, and to represent their peers' needs and concerns. On that basis, we argue that individuals who exhibit tendencies toward the diverging and accommodating learning styles are more likely to be involved in student government than their peers. This leads to the following hypothesis:

> *Hypothesis 1. Tendencies toward the (a) diverging and (b) accommodating learning styles are predictive of the likelihood of being involved in student government.*

There has been significant research on gender differences in learning styles (Barmeyer, 2004), but few studies on gender's moderator effect on the relationship between

learning styles and outcome variables. Some studies tested gender's moderator effect on the relationship between learning styles and engagement (Garland & Martin, 2005). However, no research to date has analyzed gender's effect on the relationship between learning styles and student involvement. As previously discussed, interpersonal skills are necessary for the relationship between the diverging and accommodating learning styles and involvement. However, because females are more specialized in interpersonal skills than males (Mainemelis, Boyatzis, & Kolb, 1999), we expect the relationship between those learning styles and student involvement to be stronger for females than for males. This leads to the following hypothesis:

> *Hypothesis 2. Gender moderates the relationship between the (a) diverging and (b) accommodating learning styles and the likelihood of being involved in student government (stronger association for females than for males).*

3.3.2 Emotional and social competencies

"To be an effective manager or leader, a person needs the ability to use knowledge and to make things happen. These can be called competencies" (Boyatzis et al., 2002, p. 150). Competencies are "the underlying characteristics of a person that lead to or cause effective and outstanding performance" (Boyatzis, 1982, p. 21). On the basis of empirical research and meta-analyses, Boyatzis et al. (2002) claim that there are a set of competencies that predict outstanding leader or manager performance. These competencies (Goleman, 1998) have been clustered into emotional, social, and cognitive intelligence competencies (Boyatzis, 2009).

From the three competency clusters, we invoked the ESCs as predictors of student involvement, for several reasons. First, the ESCs differentiate outstanding performers from average performers (Boyatzis, 2009; Goleman, 1998). Second, these competencies are crucial for development and effectiveness (Boyatzis et al., 2017), go beyond technical competence (Langley, 2000), and are crucial for educational environments (Boyatzis et al., 2013). Third, these competencies have been studied for cross-cultural validity and are predictive of numerous outcomes in various fields (e.g. Amdurer et al., 2014; Batista-Foguet, Boyatzis, Guillén Ramo, & Serlavós, 2008; Boyatzis, Good, & Massa, 2012; Boyatzis et al., 2017; Emmerling & Boyatzis, 2012; Hopkins & Bilimoria, 2008; Sharma, 2012; A. R. Webb, Young, & Baumer, 2010). Finally, involved students deal with different parties (peers, faculty, etc.) and these relationships frequently exhibit

conflicts, emotions, and power struggles (Laosebikan-Buggs, 2006). In order to succeed, student representatives are expected to understand and manage their emotions (emotional competencies) and others' emotions (social competencies). Thus, in this chapter we suggest that ESCs are crucial for student representatives.

According to Boyatzis' model, there are 12 competencies in total, out of which five are emotional (e.g. emotional self-awareness) and seven are social (e.g. social awareness) (Boyatzis, 2009). Emotional competency means having an "ability to recognize, understand, and use emotional information about oneself that leads to or causes effective or superior performance" (Boyatzis, 2009, p. 757). Social competency means having an "ability to recognize, understand, and use emotional information about others that leads to or causes effective or superior performance" (Boyatzis, 2009, p. 757).

In order to be effectively involved in student government, students need to understand the structure of the institution and their duties and role within it, they need to frequently communicate with students and other stakeholders, and they need to shape their actions in light of what is best for the students (Laosebikan-Buggs, 2006). Furthermore, as previously mentioned, student government involves dealing with internal power struggles, student apathy, and disorganization (Laosebikan-Buggs, 2006). In this chapter we propose that emotional and social competencies are crucial for student representatives for several reasons: (1) to better assess and handle their internal states, preferences, resources, and instincts, especially in situations of chaos and disorganization; (2) to better manage their emotions and actions in order to deal with power struggles and disorganization; (3) to better perceive others' feelings, needs, and concerns in order to better deal with situations of power struggle and student apathy, to better understand the structure of the organization, and to better communicate; and (4) to inspire others and better manage relationships with them, especially in situations of conflict, disorganization, chaos, power struggles, and student apathy. This leads to the following hypothesis:

> *Hypothesis 3. ESCs are predictive of the likelihood of being involved in student government.*

The ESCs have been established as important factors for several outcomes (Boyatzis, 1982; Goleman, 1998; Wolff, Pescosolido, & Druskat, 2002). Among the many variables, gender is commonly tested as a moderator of the relationship between ESCs

and outcome variables. However, no research has been found that analyzes the impact of gender on the relationship between ESCs and student involvement. In this study we investigate this relationship.

Hopkins and Bilimoria (2008) claim that male and female leaders exhibit no significant differences in terms of demonstrating ESCs. However, in their investigation, they found that gender did moderate the relationship between the display of these competencies and individual success. Male leaders were assessed as being more successful, even when the competencies were equivalently demonstrated across genders. Among the possible explanations of such findings are bias, discrimination, and politics (Hopkins & Bilimoria, 2008).

Social identity theory postulates that individuals develop their identities in terms of group memberships and that they uphold a positive identity through association with esteemed groups and comparison to other groups (Aberson, Healy, & Romero, 2000; Tajfel, 1982; Tajfel & Turner, 1979). "The tendency to evaluate one's own groups more positively in relation to other groups is termed ingroup bias" (Aberson et al., 2000, p. 157). The predominant approach to the study of ingroup bias presumes that ingroup love and outgroup hate are correlated. However, experiments and cross-cultural research support the alternative perspective that ingroup bias and intergroup discrimination are motivated by favored treatment of ingroup members rather than negative attitudes toward outgroup members (Brewer, 1999).

In this chapter, we take the alternative view and assume that ingroup bias and intergroup discrimination are motivated by the need to belong and the preference for the familiar. The participants in the leadership-development program came from different countries with no previous interaction among them. One of the preliminary ways to develop associations is based on gender. On the basis of social identity theory and the fact that the majority of leadership-development programs are male-dominated rather than being gender-balanced, we expect that males will exhibit a stronger relationship between their competencies and the likelihood of being involved in student government. This leads to the following hypothesis:

> *Hypothesis 4: Gender moderates the relationship between ESCs and the likelihood of being involved in student government (stronger association for males than for females).*

3.3.3 Operating philosophy

Competencies are crucial for effective performance, yet outstanding performance calls for the additional necessary element that extends beyond competencies, which is the intent or desire to use one's talent. This intent or desire is determined by one's "values, philosophy, sense of calling or mission, and unconscious motives and traits" (Boyatzis et al., 2002, p. 150). An individual's motivational drivers are assessed using their operating philosophy.

Operating philosophy relates to "how one values or determines values" (Boyatzis et al., 2000, p. 50). Boyatzis et al. (2000) suggest that exploring a person's operating philosophy is crucial to determining the relationship between a person's values, beliefs, and behavior. Operating philosophy helps predict a person's behavior and is critical to understanding and predicting the specific behaviors of involved students who are expected to lead, represent, and inspire others. Three major operating philosophies describe the extent to which an individual is pragmatic, intellectual, or humanistic (Boyatzis et al., 2000). These philosophies indicate an individual's tendency to value things based on utility (input–output), reason, or relationships and feelings, respectively. Individuals with a predominantly humanistic operating philosophy tend to be nurturing, sensitive to others, and able to establish meaningful relationships (Boyatzis et al., 2000). Those with a predominantly pragmatic operating philosophy tend to plan, be proactive and take initiative, and strive for efficiency (Boyatzis et al., 2000). Those with a predominantly intellectual operating philosophy tend to value guidelines, build causal/theoretical maps, and detect patterns within seemingly unrelated data or information (Boyatzis et al., 2000).

All three operating philosophies are crucial, yet, at varying degrees, based on the context and the outcome variable of interest. Different outcome variables require different operating philosophies. Each of these philosophies is significantly associated with different behaviors, such as initiative taking and empathy (Boyatzis et al., 2000). For instance, when assessing an individual's level of initiative taking, we expect those with a predominantly pragmatic operating philosophy to exhibit a stronger association with initiative taking than those with other philosophies. These individuals tend to value efficiency, to plan, and to be proactive. These concepts are strongly associated with initiative taking. However, when assessing an individual's level of empathy, we expect those with a predominantly humanistic operating philosophy to exhibit a stronger

association with empathy than those with other philosophies. These individuals tend to value relationships and feelings. These concepts are strongly associated with empathy. In this chapter, we investigate involvement as the outcome variable and we analyze the level of association of each of the three operating philosophies with the concept of involvement. This association is inspected in light of the nature of involved students' tasks and expected behavior.

Involved students often deal with internal power struggles, student apathy, and disorganization (Laosebikan-Buggs, 2006). They are expected to represent students, manage conflict, maintain healthy relationships, motivate and inspire, solve problems, and deal with chaos. They are also expected to be sensitive to the environment, trustworthy, likeable, articulate, and communicative (Conger & Kanungo, 1987). Individuals with a predominantly humanistic operating philosophy tend to value relationships, and are expected to have a stronger desire than others to manage relationships, resolve conflict, inspire and motivate others, and lead and represent them. Those with a predominantly pragmatic operating philosophy value efficiency and proactivity. They are expected to be less sensitive to the environment and to have an urge for competition and improvement, likely at the expense of relationships and others' emotions. Those with a predominantly intellectual operating philosophy are interested in logic and causal maps, and are expected to be the least concerned with relationships and conflict management. Hence, in this study's context, we suggest that students with a predominantly intellectual operating philosophy are less likely to be involved than others, and those with a predominantly humanistic operating philosophy are more likely to be involved than those with a predominantly pragmatic operating philosophy. This leads to the following hypothesis:

> *Hypothesis 5. Operating philosophies are positively predictive of the likelihood of being involved in student government, where (a) together, the humanistic and pragmatic shares have a stronger association than the intellectual share; and (b) the humanistic share has a stronger association than the pragmatic share.*

Operating philosophy is crucial for explaining the link between values and behavior. Different philosophies have different effects on different outcome variables. As per the previous hypothesis, the humanistic operating philosophy is expected to have the strongest association with student involvement. This philosophy has a stronger association with interpersonal skills, in which females are more specialized than males

(Mainemelis et al., 2002). The intellectual operating philosophy exhibits stronger association with conceptualization (Boyatzis et al., 2000). Males exhibit stronger preferences for conceptualization than females (Mainemelis et al., 2002). This leads to the following hypothesis:

> *Hypothesis 6. Gender moderates the relationship between operating philosophies and the likelihood of being involved in student government, where (a) males exhibit a stronger association than females between intellectual share and student involvement; and (b) females exhibit a stronger association than males between the humanistic share and student involvement.*

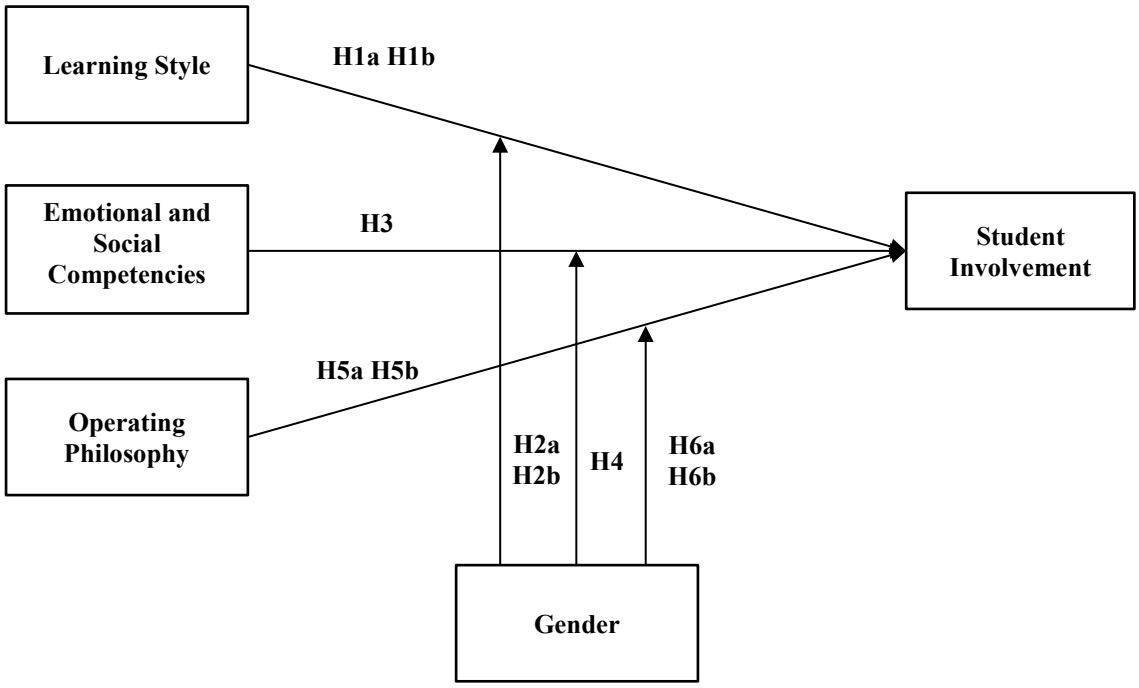

Figure 3.2 - Model and hypotheses

3.4 Methods

3.4.1 Sample

The population consists of 1603 participants in a leadership-development program that has been effectively implemented in several universities (e.g. Boyatzis et al., 2013). This program is part of an MBA program at one of the world's top business schools. The entry period of these individuals was from 2006 to 2012. The population (1180 males, 423 females, M_{age} = 29.53 years, age range: 20-46 years) included individuals from more than 75 countries, the majority from Spain and the US. Upon exploration of the data, four outliers (Grubbs test, $p < 0.01$) were identified and excluded, so that the population size was reduced to 1599 participants (1177 males, 422 females, M_{age} = 29.53 years, age range: 20-44 years).

The MBA programs at that business school vary in terms of schedule and time requirements (full-time vs. part-time). Part-time students are expected to invest fewer hours per week in the program than full-time ones. Hence, part-time students have a higher chance of being involved in external activities. This means that these students might not be involved in the MBA program due to external commitments. This might challenge our conclusions. Therefore, to mitigate this risk, we excluded part-time and executive MBA students, restricting our sample to full-time MBA students. According to program management, the full-time program requires students' full dedication. These students spend most of their time in class (from 10 AM to 6:30 PM). After class, they work in teams on assignments, case studies, and projects. Teamwork is one of the program's values. For full-time MBA students, the possibility of being engaged leaders outside the program is considered low. This strategy enhances the validity of our conclusions by eliminating alternative explanations for low involvement in the program. This strategy reduced the population size to 747 full-time MBA students (520 males, 227 females, M_{age} = 28.34 years, age range: 20-38 years).

In order to be able to run the adequate statistical analyses, we needed to ensure sufficient variability in the dependent variable. Hence, we decided to increase the proportion of involved students in the total sample. To avoid excessive loss of information, we doubled the previously mentioned proportion to a ratio of 1:10. Hence, with 30 involved students in the population, we randomly selected 300 students that were not involved (30:300). This strategy provided sufficient variability in the

dependent variable and a sufficient number of individuals in each group. Consequently, this enabled us to compare the two groups of individuals and to conduct the appropriate data analyses (i.e. logistic regression analysis).

The final sample consists of 330 participants (240 males, 90 females, M_{age} = 28.39 years, age range: 20-37 years). The sample is representative of the population in terms of gender, background, and other variables. The sample's mean age is slightly lower than that of the population. This is the result of excluding executive students from the sample, as their mean age is greater than that of the rest of the sample. We present, in Table 3.1, the sample's descriptive statistics.

3.4.2 Measures

3.4.2.1 Student representative

Student government is a form of involvement (Laosebikan-Buggs, 2006). In this chapter, we focused on this form of involvement and we operationalized it with "student representative." Student representatives were expected to handle all three roles of student government: serving as the students' official voice, taking part in decision-making processes, and coordinating the on-campus activities of clubs and organizations. We consider this operationalization theoretically plausible. Student involvement in government was measured by whether the individual held a student representative position throughout the program or not. Individuals who held a student representative position were assigned a value of (1), while those who did not were assigned a value of (0). Student representatives were elected and not appointed, and received no financial returns. Both the individual and the class valued holding a position as a student representative. Those holding such a position represented and lead their peers, acted as the link with program management, and could have brought about policy changes. Furthermore, they practiced their leadership skills (Eich, 2008) by representing, leading, and inspiring their peers.

3.4.2.2 Kolb Learning Style Inventory (KLSI)

We used the KLSI to identify an individual's predominant learning style. Many cross-cultural studies have used this method and its validity has been established in several fields (Iliff, 1994; Manolis, Burns, Assudani, & Chinta, 2013). The scales show good internal consistency, reliability, and test-retest correlations (Veres, Sims, & Locklear,

1991). The KLSI uses a forced choice-ranking method to scale an individual's preferred modes of learning. It provides scores for all four learning modes, CE, RO, AC, and AE. These scores are ipsative—measures that force the sum of scores to be the same for all individuals. Ipsative data help reduce response bias, but do not allow for comparisons across individuals (Cheung, 2006). Therefore, we log-transformed the variables, as recommended by Batista-Foguet et al. (2015):

$$Grasping = \ln\frac{AC}{CE} = \ln AC - \ln CE \quad (1)$$

$$Transforming = \ln\frac{AE}{RO} = \ln AE - \ln RO \quad (2)$$

$$Grasping - Transforming = \ln\frac{\sqrt{AC.CE}}{\sqrt{AE.RO}} = \frac{\ln AC + \ln CE}{2} - \frac{\ln AE + \ln RO}{2} \quad (3)$$

These equations indicate an individual's tendency toward a specific learning mode or dialect. In equation (1), a positive value indicates a tendency toward abstract conceptualization. In equation (2), a positive value indicates a tendency toward active experimentation. In equation (3), a positive value indicates a tendency toward the "grasping" dialect. An individual's learning style is identified, based on the signs of equations (1) and (2), as per Figure 3.1. For instance, negative scores on equations (1) and (2) indicate a tendency toward the diverging learning style. Related to hypothesis 1, both, the diverging and accommodating learning styles exhibit a tendency toward the CE learning mode, which is indicated by a negative score on equation (1).

3.4.2.3 Emotional and Social Competency Inventory (ESCI)

We used the university edition of the ESCI to measure an individual's score on the ESCs (Boyatzis, 2007; Boyatzis & Gaskin, 2010). The inventory comprises five items per each of the 12 competencies (Boyatzis, 2009). On average, 3.14 raters per individual were involved in the data-collection process. An individual's mean ESC score was used (Taylor & Hood, 2011). The correlations among the 12 competencies were all sufficiently high (mean = 0.58) and significant. Cronbach's alpha for the 12 competencies amounted to 0.94. The psychometric standards achieved in several studies provide reassurance that the ESCI focuses on behaviors that are observable, recognizable, and distinct. The tests of reliability and validity demonstrate the competencies' desirable psychometric properties (Amdurer et al., 2014; Boyatzis, Gaskin, & Wei, 2015; O'Boyle et al., 2010).

3.4.2.4 Philosophical Orientation Questionnaire (POQ)

We used the POQ to identify an individual's predominant operating philosophy. It consists of a "list of beliefs, attitudes, descriptive statements, and behavioral choices of people in work and social situations" (Boyatzis et al., 2000, p. 16). This questionnaire has been used in research and in practice (Batista-Foguet et al., 2015; Sheneman, 2013; Steinheider, Wuestewald, Boyatzis, & Kroutter, 2012). The items were theoretically clustered into those that appeared more likely to relate to people expressing pragmatic (P), intellectual (I), or humanistic (H) operating philosophies. Respondents rank-ordered the available options. The ranks of the items reflect the individual's value orientation. The questionnaire was ipsative, therefore, we log-transformed the variables, as recommended by Batista-Foguet et al. (2015):

$$Operating\ Philosophy\ (1) = \ln \frac{I}{\sqrt{P.H}} = \ln I - \frac{\ln P + \ln H}{2} \quad (4)$$

$$Operating\ Philosophy\ (2) = \ln \frac{P}{H} = \ln P - \ln H \quad (5)$$

Equation (4) compares the intellectual operating philosophy with the mean of the pragmatic and humanistic operating philosophies. A negative value indicates that the share of the intellectual philosophy is less than the mean of the shares of the other two philosophies, hence supporting hypothesis 5a. Equation (5) compares the pragmatic and humanistic operating philosophies. A negative value indicates that the humanistic share is larger than the pragmatic share, hence supporting hypothesis 5b.

3.4.2.5 Control variables

We used age (M_{age} = 28.39 years, SD_{age} = 2.81), number of raters per individual (M_{raters} = 3.14, SD_{raters} = 2.05), year of entry which ranges between (1) = 2006 and (7) = 2012 (M_{entry} = 4.39, SD_{entry} = 1.85), and grade point average (GPA; M_{GPA} = 8.02, SD_{GPA} = 0.41) as control variables. GPA ranges between 0 and 10. We used gender as a moderator variable. Therefore, to avoid issues of multicollinearity, we did not use it as a control variable.

3.4.3 Stages of data analysis

We used IBM SPSS Statistics software (Corp., 2013) for the data analysis, which took place in three stages: Exploratory data analysis, correlation analysis, and logistic regression analysis. In the first stage, we conducted exploratory data analysis on the population data. We checked the data for outliers, distribution, and normality, using numerical measures (i.e. Grubbs test with $p < 0.01$, skewness, and kurtosis) and graphical representations (i.e. box plots, histograms, P-P plots, and Q-Q plots). In the second stage, we analyzed the correlations of the variables, for the sample. To enhance the standard errors, the statistical tests, and the interpretation of the estimates, we checked the data for multicollinearity. Collinearity could lead to coefficient point estimates that are implausible in magnitude; it could also lead to incorrect signs. In the third stage, to test the hypotheses we ran a logistic regression analysis—maximum likelihood (D. R. Cox & Snell, 1989; Hosmer Jr, Lemeshow, & Sturdivant, 2013)—on the sample. The models are presented as logical progressions. In model 1, we included the control variables. In model 2, we added the main effects (variables related to ESCs, learning styles, and operating philosophies), to test hypotheses 1a, 1b, 3, 5a, and 5b. In model 3, we added the interaction terms to test moderator effects i.e. hypotheses 2a, 2b, 4, 6a, and 6b. We also developed graphs to support the findings.

3.5 Results

3.5.1 Exploratory data analysis

We identified and excluded four significant outliers. The population size was reduced to 1599. We identified no signs of non-normality. Dots were randomly distributed across de-trended plots, indicating no potential for systematic error. We identified no extreme values of kurtosis (mean of absolute values = 1.00) and skewness (mean of absolute values = 0.42). Furthermore, high power would lead to the false rejection of the hypotheses of normality (Sawyer & Ball, 1981). Therefore, we did not use *p*-value tests.

3.5.2 Correlation analysis

We analyzed the correlation among the variables, based on their nature. We used the Pearson product-moment correlation for the continuous variables. We used the point-biserial correlation for the bivariate relationships that involve a binary variable (i.e. for student representative and gender). Table 3.1 presents the variables' means, standard

deviations, and correlation coefficients. The significant coefficients are flagged with asterisks.

As for multicollinearity, except for gender and its interaction with the main effects, the correlation matrix (Table 3.1) exhibits low-to-moderate correlations. A high collinearity is expected between the interaction terms (e.g. Gender×ESC) and the main effects (e.g. ESC). The results indicate that there is no need for further investigation; the highest Variance Inflation Factor amounted to 1.32 and the lowest tolerance amounted to 0.76 (Marquardt, 1970).

3.5.3 Logistic regression analysis

The results of the logistic regression analysis are presented in Table 3.2. The outcome variable is student representative. The tendency toward the CE learning mode (diverging and accommodating learning styles) is significantly related ($\beta = -2.65$[4], $p < 0.05$, Cohen's $d = 0.88$) with the outcome variable; hypotheses 1a and 1b are supported. The ESCs are positively related ($\beta = 1.13$, $p < 0.01$, Cohen's $d = 0.61$) to student representative; hypothesis 3 is supported. Hypotheses 5a ($\beta = 0.23$, *ns*) and 5b ($\beta = 0.22$, *ns*) are not supported. The results indicate that the odds of being a student representative are (a) 14.20 times greater for each point in the direction of the CE learning mode (diverging and accommodating learning styles), and (b) 3.08 times greater for individuals scoring one point higher on their mean ESC score.

[4] This significant *negative* coefficient supports hypotheses 1a and 1b since the tendency toward the CE learning mode is indicated by a *negative* result on equation (1), as shown in Figure 3.1.

	N	Mean	*SD*	1	2	3	4	5	6	7	8	9	10
Student representative[a]	330	0.09	0.29										
Number of raters	330	3.14	2.05	0.12 *									
Year of entry	330	4.39	1.85	-0.32 **	-0.06								
Age	330	28.39	2.81	-0.10	-0.05	0.33 **							
GPA	330	8.02	0.41	-0.13 *	0.05	0.42 **	0.21 **						
Grasping (AC-CE)	328	0.42	0.35	-0.24 **	-0.05	0.12 *	0.08	0.15 **					
Transforming (AE-RO)	328	0.24	0.39	-0.01	-0.14 *	-0.02	0.04	-0.01	-0.16 **				
Grasping-Transforming	328	-0.04	0.24	-0.07	-0.03	-0.01	0.03	0.08	-0.15 **	0.15 **			
ESC	330	7.59	0.81	0.12 *	-0.02	0.05	-0.07	0.00	-0.01	0.04	0.02		
Operating philosophy (1)	323	0.06	0.47	0.01	0.04	-0.08	-0.04	0.05	0.23 **	-0.12 *	0.16 **	0.02	
Operating philosophy (2)	323	-0.43	0.64	-0.06	-0.01	0.03	0.05	-0.08	0.13 *	0.01	-0.09	-0.13 *	-0.12 *

Note: SD: Standard Deviation; Student representative: 0 = No, 1 = Yes; Year of entry: ranges between (1) = 2006 and (7) = 2012; GPA: grade point average, ranges between 0 and 10; Grasping (AC-CE): equation (1); Transforming (AE-RO): equation (2); Grasping-Transforming: equation (3); ESC: mean emotional and social competency score, ranges between 0 and 10; Operating philosophy (1): equation (4); Operating philosophy (2): equation (5).

[a] Point-Biserial correlation (binary variable).

* $p < .05$, ** $p < .01$

Table 3.1 - Means, standard deviations, and correlation coefficients

	Student representative		
Independent variables	Model 1	Model 2	Model 3
Constant	-3.41	-14.84*	-18.73**
GPA	0.21	0.66	0.87
Number of raters	0.18*	0.14	0.07
Age	0.05	0.11	0.21
Year of entry	-0.73**	-0.76**	-0.89**
Grasping (AC-CE)		-3.17**	-2.65*
Transforming (AE-RO)		-0.50	-2.24
Grasping-Transforming		-2.62*	-0.84
ESC		0.95**	1.13**
Operating Philosophy (1)		0.65	0.23
Operating Philosophy (2)		0.18	0.22
Grasping (AC-CE) × Gender			-1.33
Transforming (AE-RO) × Gender			1.91
Grasping-Transforming × Gender			-3.06
ESC × Gender			-0.25*
Operating Philosophy (1) × Gender			1.00
Operating Philosophy (2) × Gender			0.22
χ^2	39.36	60.78	73.41
df	4	10	16
-2 Log-Likelihood (-2LL)	161.70	124.74	112.11
Cox and Snell R^2	0.11	0.17	0.20
Nagelkerke R^2	0.25	0.39	0.47
Overall correct classification (%)	91.20	94.40	94.40
n	330	322	322

Note: Student representative: 0 = no, 1 = yes; GPA: grade point average, ranges between 0 and 10; Grasping (AC-CE): equation (1); Transforming (AE-RO): equation (2); Grasping-Transforming: equation (3); ESC: mean emotional and social competency score, ranges between 0 and 10; Operating Philosophy (1): equation (4); Operating Philosophy (2): equation (5); Gender: 0 = female, 1 = male; × Gender: interaction term of gender with the main effects.

* $p < .05$, ** $p < .01$

Table 3.2 - Logistic regression analysis

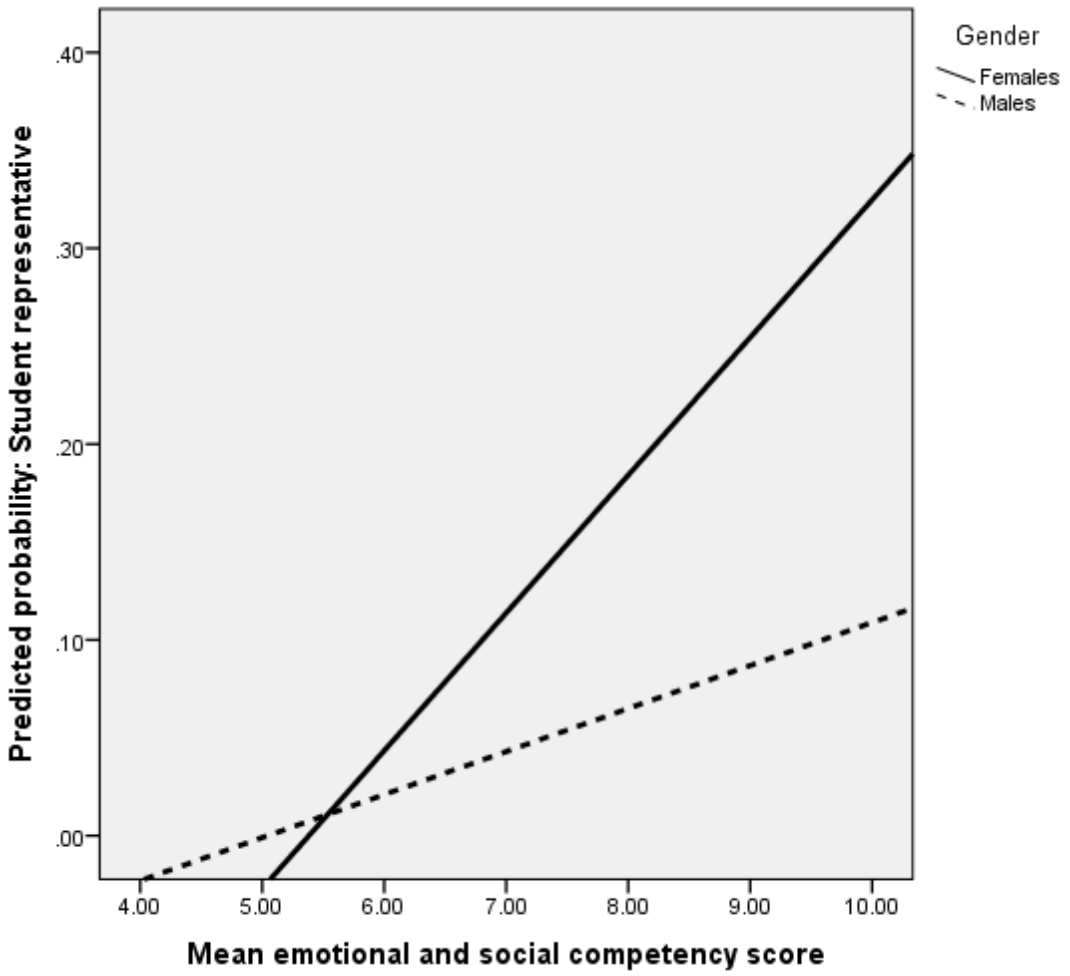

Figure 3.3 - Gender's moderator effect

We assessed the moderator effect of gender in model 3. We added the interaction terms between gender and the main effects. We did not include gender in these models, due to multicollinearity with the interaction terms, as previously discussed. The only significant interaction term is that of the ESCs and gender ($\beta = -0.25$, $p < 0.05$, Cohen's $d = 0.39$). However, the negative parameter estimate indicates that the relationship is stronger for females than for males, which is contrary to hypothesis 4. In Figure 3.3, we plot the estimated student-representative probabilities against the mean ESC scores, which are labeled by gender. The plot supports the moderator effect of gender. The slope for females is steeper, indicating a stronger relationship between the ESC score and the student-representative probability. Thus, hypothesis 4 is supported but in the opposite direction. We further analyze this finding in the discussion section. As per Table 3.2, the values for the overall model evaluation, goodness of fit, and R^2 are considered satisfactory. The model with the results is presented in Figure 3.4.

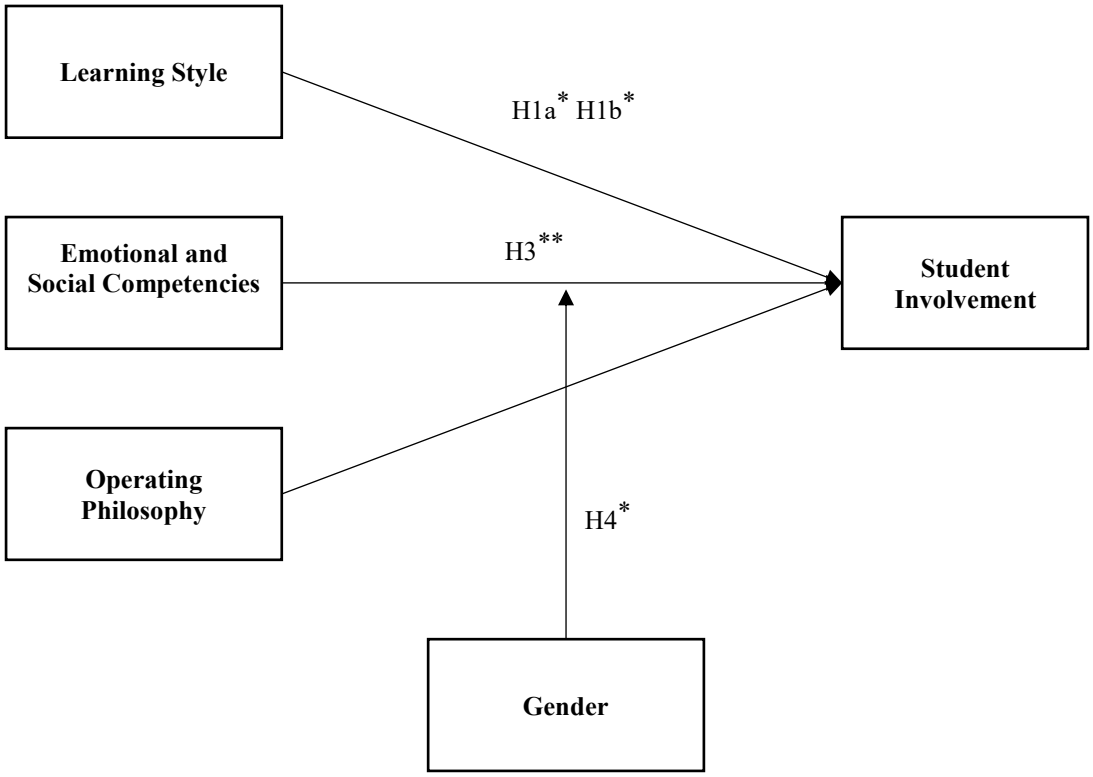

Figure 3.4 - Model and results (p < .05, ** p < .01)*

3.6 Discussion

The CE learning mode is positively related to the likelihood of being an involved student. This learning mode is one where we grasp knowledge by interacting with our environment through engagement. In this way, individuals experience and understand their environment with their senses, feelings, and emotions (D. A. Kolb et al., 2001). Individuals who experience through emotions could be perceived as being more engaged than those who experience through reflecting and thinking. The more engaged one is, when experiencing and understanding one's environment, the higher the chance of being involved, as a student representative. The learning styles related to this learning mode are the "diverging" and "accommodating" styles.

Furthermore, ESCs are positively related to the likelihood of being an involved student. That is, individuals participating in leadership-development programs who display higher levels of ESCs tend to emerge as student representatives. When assessed by peers, individuals who score higher on ESCs than others have a higher chance of emerging as involved students. They demonstrate competencies that are necessary for

representing, leading, and inspiring their peers. These competencies signal leadership potential; consequently, peers are more likely to elect that individual as a representative. In this study, we suggest that these competencies are necessary for student involvement in government. This suggestion is based on the idea that these students will have to deal with significant emotions resulting from power struggles, conflicts, student apathy, and disorganization. In order to be successful at representing, leading, and inspiring their peers, student representatives need to understand and manage their emotions (emotional competencies) and those of their peers (social competencies). When these competencies are carefully assessed and developed, individuals can better manage themselves and their relationships with their peers, with long-term effects (Boyatzis & Saatcioglu, 2008; Kunnanatt, 2008).

The results indicate that gender moderates the relationship between ESCs and the likelihood of being an involved student (model 3). This relationship is stronger for females than for males, whereas in hypothesis 4 we suggest the opposite. We attribute this finding to several factors. First, leadership-development programs that have competitive entry standards tend to signal competence and ability, hence reducing gender bias against females. As a result, the relationship between ESCs and the likelihood of being an involved student could be more visible and stronger for females than for males. Second, the 360º tool used to assess ESCs focuses on behaviors that matter (Boyatzis, 2009), hence reducing the social-desirability and gender biases against females. Third, this study focuses on development rather than competition. This means that, in a leadership-development context, individuals could become less defensive, focus more on collaboration, and be less likely to inhabit a mindset of in- and out-groups, in which females would be disadvantaged, simply based on the lower number of female participants. Fourth, the sample consists of individuals from a variety of countries, cultures, and industries. This diversity helps reduce the likelihood of anti-female biases related to country, culture, and industry.

3.6.1 Implications

3.6.1.1 Implications for research

In this chapter, we invoke theories of education, psychology, and management and identify predictors of the likelihood of being an involved student. We present a model that invokes the following constructs and we assess their role in predicting the likelihood of being involved: (a) learning styles, (b) ESCs, and (c) operating philosophies. Hence, this study enhances the predictive validity of these constructs. We also assess the role of gender as a moderator of the relationship between involvement and its antecedents. The counterintuitive results suggest the need for further research on this relationship, at the competency level.

3.6.1.2 Implications for practice

In this chapter we also provide important contributions for educational institutions and program managers, organizations, and individuals. Involved students portray early signs of leadership potential. This study helps distinguish involved students from their peers and identifies the predictors of their involvement. We suggest that program managers and educational institutions could tailor their programs to focus on assessment and development of students in two areas. First, we suggest training students based on experiential learning, specifically focusing on concrete experience in which students learn through senses, emotions, and feelings. Second, we suggest developing students' awareness and management of emotions.

Program managers and practitioners can achieve significant improvements, but only if adequate analysis is conducted so as to ensure that the right development program is provided to the right individuals (Collins & Holton, 2004). By focusing on development areas that matter for students' future, educational institutions and program managers could achieve significant improvement and could enhance their programs' efficiency and effectiveness. They could also ensure an alignment between the institution's aim, strategy, and operations (Bush, 2003). These two development areas (learning styles and ESCs) are critical for students that are involved at early stages of their careers, as this gives them an opportunity to practice and learn leadership (Eich, 2008) and to deal with issues that they are expected to handle in the future, such as power struggles, conflicts, and emotions. By introducing these concepts to their leadership-development

programs and through effective training, educational institutions and program managers could help bridge the gap between education and practice.

We also suggest that programs could provide students with education for involvement. Furthermore, educational institutions could invite students to be more involved, give them more authority, listen to their opinions, engage them in board meetings, and allow them to participate in decision making. Through these involvement activities, students learn leadership by doing it and educational institutions ensure a practical and effective development of leadership. Leadership development should not solely focus on theory, but should also focus on practice. Furthermore, we recommend that program managers design leadership-development classes to be more recursive than discursive. These classes could shift away from text-driven education toward a process of experiencing, reflecting, thinking, and acting (Kolb & Kolb, 2005).

We also suggest that educational institutions provide teachers with training in the methodologies that can affect student involvement. As part of the program, institutions could develop learning spaces and environments that enable students to better understand their environments through emotions. One possible way of doing so is by using case studies and simulations. It would also be helpful to assign experts to oversee the process and to ensure that a safe environment is provided for students to learn leadership by doing it. These environments could provide more opportunities for student involvement and the practice of leadership. For instance, institutions might find it reasonable to create committees, teams, and clubs and let students manage them. These groups could focus on various issues that matter to students: campus life, environmental issues, educational issues, social issues, recruitment issues, and so forth.

At the organizational level, we suggest that companies emphasize the importance of ESCs and experiential learning. Many companies require their employees to pursue postgraduate degrees (e.g. MBA) or to join leadership-development programs. In this chapter, we suggest that companies should motivate their employees to join programs that invoke experiential learning and that have been effective at developing ESCs (e.g. Boyatzis et al., 2013). These companies could motivate their employees to be involved in these programs and provide them with the resources (e.g. time, financial aid) and the support (e.g. schedule flexibility, motivation) to do so. Involvement in these programs provides students an opportunity to practice leadership (Eich, 2008) and enhances their leadership potential (Amit et al., 2009; Astin, 1993).

At the individual level, previous research shows that ESCs are predictive of several outcomes (Amdurer et al., 2014; Hopkins & Bilimoria, 2008). In this study, we establish a positive association between ESCs and involvement. We recommend that individuals interested in leadership development join leadership-development programs that focus on the development of ESCs, and be involved in these programs. This provides them the opportunity to practice leadership and to enhance their potential for effective future leadership. In addition, based on the relationship between the CE learning mode and the likelihood of being involved, we recommend that individuals continually experience and understand their environments with their senses, feelings, and emotions. The more emotions individuals invoke into their understanding of their environment, the stronger their connection with their environment will be; and consequently, the higher their chances of being involved and practicing leadership.

3.6.2 Limitations and future research

The sample used in this study was obtained from one business school. This fact might challenge the external validity of the conclusions; that is, the chapter's findings might not be generalizable across all leadership-development programs and to the entire population of students, educational institutions, program managers, or practitioners in different sectors. However, we mitigated this shortcoming by ensuring sufficient variability within the sample in terms of background, culture, and industry. Therefore, we advise researchers to re-run this analysis in different contexts, controlling for other variables, such as education and experience. It is important to note that this study's findings relate to individuals' involvement in a leadership-development program. We did not incorporate measures of these individuals' performance after the program. Future research could study the post-program-performance of involved students.

Among the individuals who ran for student representation, some won and others lost. We did not ignore those who lost. These students were included in the sample. This enhances the validity of our conclusion, that student representatives are significantly different in terms of their learning styles and ESCs from their peers, and from those who lost the elections. Based on behavioral theories of leadership and on this study's findings, we assume that the significant statistical differences indicate that the students that held the representation positions exhibit the behavioral components of leadership in a stronger manner than their peers, and consequently, are elected by their peers to lead, represent, and inspire them. Future research could focus on the election process and

could classify individuals into the following different categories: those who won, those who lost, and those who did not run for the elections.

3.7 Conclusion

Leadership development needs to start at an early stage. In order to learn and develop leadership, students need to practice it (Eich, 2008). Student involvement provides the opportunity for students to practice their leadership skills by representing, leading, and inspiring their peers. Leadership-development programs provide a developmental context for students to be involved and to practice leadership. This chapter's focus is on students' involvement in these programs. Through involvement in government, students develop leadership skills and are trained to better lead future endeavors. Furthermore, their involvement provides them real-life experiences through which they practice and learn leadership and develop into involved and effective future leaders (Amit et al., 2009; Eich, 2008). Through the effective and practical teaching of leadership, these outcomes of student involvement are indicative of an alignment between education and practice. They also demonstrate an alignment between the educational institution's aims, strategy, and operations (Bush, 2003).

In this study, we investigate the learning styles, competencies, and operating philosophies as predictors of student involvement in a leadership-development program. Individuals with higher ESC scores and a tendency toward the CE learning mode are more likely to emerge as involved students. This indicates the importance of (a) understanding and managing one's own emotions and others' emotions; and (b) experiencing and understanding one's environment with one's senses, feelings, and emotions. Emotions are central to involvement. The proper assessment and management of emotions prepares students to deal with future power struggles, conflicts, apathy, and chaos.

4

Antecedents of student involvement: Emotional, social, and cognitive competencies

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4.1 Abstract

Emotional, social, and cognitive competencies have been shown to be important in education. However, no research has been found on the relationship between these competencies and an important concept for education: student involvement. This study analyzes the relationship between these competencies and student involvement. The sample consists of 300 international students from 7 cohorts (2006-2012) of a development program that focuses on these competencies. Participants were randomly selected from a population of 1603 students, whose competencies were evaluated through peer assessment. The sample is considered representative, comprising participants from more than 75 countries, from different professions, and with experience in diverse industries. To assess competencies, data were collected using a validated instrument. The data were explored for outliers, normality, and other assumptions. The data analysis was conducted using logistic regression. The results indicate that relationship management competencies predict student involvement and that gender moderates the relationship between these competencies and student involvement. The chapter also discusses some implications for research and practice, limitations, and opportunities for future research. This study contributes to the fields of education and student development.

Keywords: Student, involvement, education, competency, emotional, social, cognitive

4.2 Introduction

Educational institutions face increased scrutiny to show their ability to prepare students to succeed and to face the challenges of this century (Association of American Colleges and Universities, 2009). Institutions have been advised to implement practices that enhance student learning experiences, connect them to the community, and enhance their personal leadership growth (Wooten et al., 2012). These experiences must connect with the challenges that they will face as future leaders.

One main goal of graduate education is preparing students to become the outstanding leaders and managers that society needs (Boyatzis et al., 2002). However, "students learn leadership by doing it, and programs that provide opportunities for student leadership practice create ripples of positive outcomes for students and society" (Eich, 2008, p. 182). Leadership experiences at early stages are associated with effective future leadership. Those who have more leadership experiences at early stages are more likely to be effective leaders in the future (Amit et al., 2009). Through these experiences, individuals improve their leadership-related knowledge, self-perception as a leader, and self-efficacy (Amit et al., 2009).

A noteworthy way for students to learn and practice leadership at an early stage is through their involvement in government and leadership, as student representatives (Astin, 1984; Laosebikan-Buggs, 2006). Skills learned through student involvement are transferable to their long-term goals (Whipple & Murphy, 2004). Furthermore, their involvement in programs is associated with career-related competencies and with academic success. Yet, there has been limited research that identifies the competencies that predict student involvement and that distinguish involved students from other students. This chapter aims to (1) identify the competencies that predict student involvement and that distinguish involved students (student representatives) from their peers; and (2) study gender's moderator effect on the relationship between competencies and student involvement.

This chapter invokes the emotional, social, and cognitive competencies as predictors of student involvement for several reasons. First, these competencies have been considered important for education (Goleman et al., 2013). Second, research suggests that, in education, more emphasis should be placed on the student's perspective (Fairhurst & Connaughton, 2014; Harter, Ziolkowski, & Wyatt, 2006; Richards, 2012). These

competencies are behavioral and are assessed by peers. Hence, these competencies are observed from the student's perspective—how students perceive and evaluate their peers. The invoked concepts are assessed at the same level of analysis: competencies (assessed by students) and student involvement (elected by students). Hence, this enhances the internal validity of this chapter's conclusions. Third, these competencies differentiate outstanding performers from average performers (Boyatzis, 2009; Goleman, 1998) and could help differentiate involved students from non-involved ones. Finally, involved students are expected to frequently deal with several parties, including peers and faculty. These relationships often involve power struggles, conflicts, and emotions (Laosebikan-Buggs, 2006). Successful and effective involvement requires that those involved students understand and manage their emotions (emotional competencies) and others' emotions (social competencies). It also requires the ability to think and analyze information (cognitive competencies).

Thus, this chapter proposes that emotional, social, and cognitive competencies are central to student involvement. It also studies the impact of gender on the relationship between these competencies and student involvement in government. Hence, the two research questions are:

1. *Are the clusters of emotional, social, and cognitive competencies predictive of student involvement in government?*
2. *Does gender moderate the relationship between competency clusters and student involvement in government?*

4.3 Conceptual background

4.3.1 Involvement

"Students do not learn only in a classroom but also gain valuable skills through involvement and activities beyond the classroom" (Wooten et al., 2012, p. 55). Astin defined involvement as "the time and effort expended by the student in activities that relate directly to the institution and its program" (1977, p. 21). Involvement comprises three dimensions: academic, social, and political. Student involvement positively relates to academic success and to career-related competencies (Astin, 1977, 1984, 1993; Pascarella & Terenzini, 2005). From an organizational socialization perspective, involvement provides individuals with the essential knowledge, skills, and connections

for success in their professions (S. K. Gardner & Barnes, 2007). Involvement further provides students the opportunity to practice and develop leadership.

Involved students are "more likely to engage in educationally purposeful activities during college, persist, and achieve their educational objectives" (Kuh et al., 2006, p. 3). Their involvement exposes them to real-life situations and enables them to take part in decisions that would directly affect the campus or the society (Kuh et al., 2006). Kuh et al. (2006) claim that, consequently, these experiences enhance the likelihood of graduating and being successful. Involved students significantly impact their peers' educational development, serving to improve the student experience (Wooten et al., 2012). Nowadays, student involvement in government and leadership is considered an educational method for attaining key learning goals (Wooten et al., 2012). In that sense, Wooten et al. (2012, p. 53) consider the campus a "holistic learning environment."

Students could be involved in programs through student government and by taking on leadership positions. Student government comprises three roles: (1) representing students and being their official voice; (2) participating in the institution's decision-making processes and policy development; and (3) organizing on-campus events of organizations and clubs (Laosebikan-Buggs, 2006). Student government has a significant impact on students, faculty, and staff (Laosebikan-Buggs, 2006). At the individual level, greater levels of student involvement in government are associated with greater levels of learning and personal development (Astin, 1984).

4.3.2 Competencies

McClelland (1973) claimed that intelligence and grades are not appropriate predictors of career success and that competencies are better predictors, across sectors and professions. A competency is defined as "an underlying characteristic of a person in that it may be a motive, a trait, a skill, an aspect of one's self-image or social role, or a body of knowledge which he or she uses" (Boyatzis, 1982, p. 21). When assessing an individual's competency, this chapter focuses on the emotional, social, and cognitive competencies; it takes a behavioral approach to emotional, social, and cognitive intelligence.

These competencies have been shown to predict individuals' effectiveness (Boyatzis & Ratti, 2009; Boyatzis et al., 2017), job performance (Guillén Ramo, Saris, & Boyatzis, 2009), and many other outcomes. However, we are not aware of any research that

identifies the emotional, social, and cognitive competencies that distinguish involved students from their peers. This distinction is critical for education and for the effective development of leaders who improve society. By focusing, at an early stage, on competencies that matter, educational institutions could develop involved leaders more efficiently and effectively. This study inspects the emotional, social, and cognitive competencies as predictors of student involvement.

4.3.3 Emotional, social, and cognitive competencies

Emotional, social, and cognitive competencies represent the behavioral approach to emotional, social, and cognitive intelligence (Boyatzis, 2009). These competencies are important for education (Goleman et al., 2013) and they differentiate average performers from outstanding performers (Boyatzis, 2009; Goleman, 1998, 2006). These competencies are predictive of several outcomes across sectors and have been studied for cross-cultural validity (Amdurer et al., 2014; Emmerling & Boyatzis, 2012; Hopkins & Bilimoria, 2008). Furthermore, as previously discussed, these competencies are considered necessary for involved students. They are presented in Appendix 4.1.

Emotional competency is defined as an "ability to recognize, understand, and use emotional information about oneself that leads to or causes effective or superior performance" (Boyatzis, 2009, p. 757). The emotional competencies are clustered into self-awareness competencies and self-management competencies. The self-awareness cluster relates to awareness of one's internal states, preferences, resources, and instincts (emotional self-awareness). The self-management cluster relates to handling one's internal states, impulses, and resources (emotional self-control, achievement orientation, adaptability, and positive outlook).

Social competency is defined as an "ability to recognize, understand, and use emotional information about others that leads to or causes effective or superior performance" (Boyatzis, 2009, p. 757). The social competencies are clustered into social awareness competencies and relationship management competencies. The social awareness cluster relates to the way people handle relationship and to consciousness of others' feelings, needs, and concerns (empathy and organizational awareness). The relationship management cluster relates to the skill or ability to induce desired responses in others (conflict management, coach and mentor, influence, inspirational leadership, and teamwork).

Cognitive competency is defined as an "ability to think or analyze information and situations that leads to or causes effective or superior performance" (Boyatzis, 2009, p. 757). This cluster includes two competencies (systems thinking and pattern recognition). These competency clusters are presented in Figure 4.1. More details are available in Appendix 4.1.

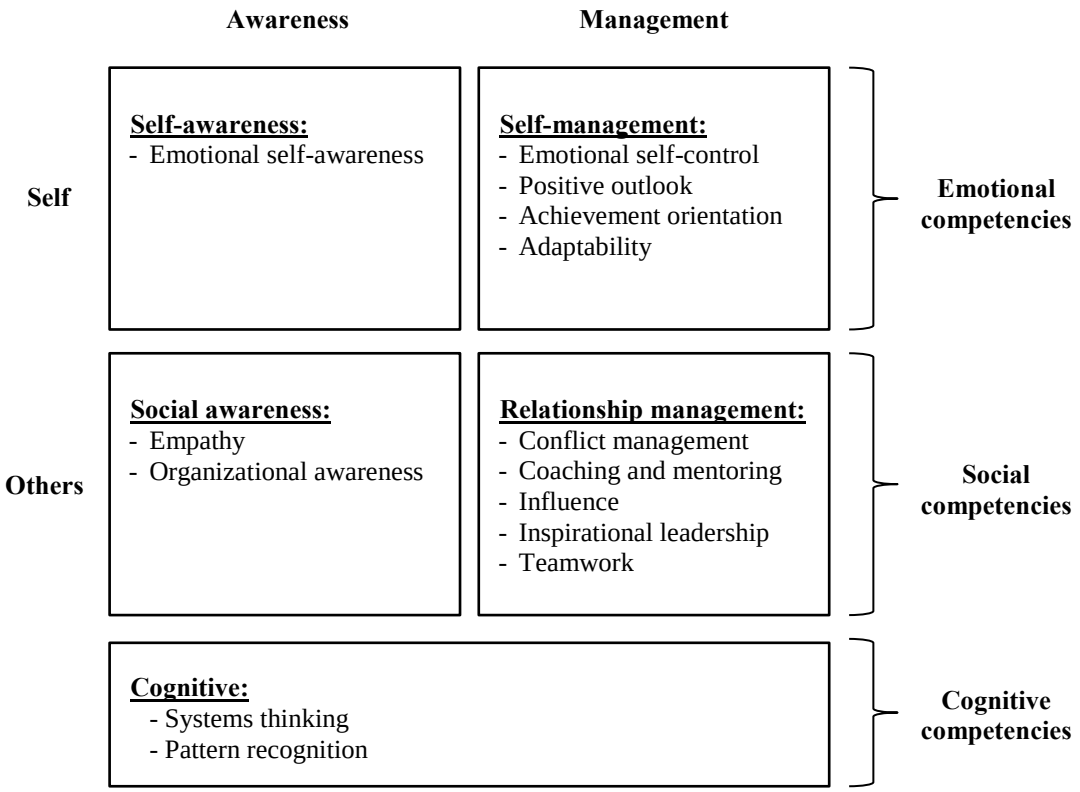

Figure 4.1 - Emotional, social, and cognitive competencies

4.4 Hypotheses

Student government has a significant impact on the quality of life on campus, the student experience, and the educational development of peers (Laosebikan-Buggs, 2006; Wooten et al., 2012). However, "internal power struggles, student apathy, and disorganization more powerfully shape the role and the agenda of student government" (Laosebikan-Buggs, 2006, p. 2). Effective government requires that involved students comprehend the structure of the institution and their role and responsibilities within that structure. It also requires that they effectively communicate with several parties (peers, faculty, etc.). Furthermore, they need to understand and act in the students' best interest (Laosebikan-Buggs, 2006).

On that basis, this chapter proposes that emotional competencies are crucial for student involvement. Emotional competencies include self-awareness and self-management competencies, as per Figure 4.1. Through these competencies, involved students could better assess (self-awareness) and manage (self-management) their internal states, preferences, resources, and instincts.

The self-awareness competency is called emotional self-awareness and it refers to the recognition of one's own emotions and their impact on oneself and on others (Boyatzis, 2009). Research that reviews several studies shows that this competency is significantly associated with interpersonal ability, management effectiveness, and problem solving (Boyatzis & Sala, 2004). This investigation suggests that involved students need to invoke their self-awareness competency to accurately assess their emotions in situations of chaos and disorganization and consequently, to better manage them. This competency is crucial for involved students. Failing to understand one's own emotions could negatively impact several outcome variables (e.g. management effectiveness) and could lead to the deterioration of relationships with different parties.

Furthermore, involved students are expected to be flexible when dealing with situations that arise, and to act in the best interest of their fellow students. They are also expected to enhance the student experience and to improve the institution's processes, policies, and procedures. Based on these tasks, this investigation suggests that self-management competencies are crucial for student involvement. These competencies enable those students to deal with power struggles and disorganization and to manage their own actions. The self-management competencies that are considered extremely relevant are (1) emotional self-control, to manage their emotions; (2) achievement orientation, to enhance the student experience, to improve the processes, to deal with disorganization and chaos, and to resolve issues; and (3) adaptability, to adjust their behavior to arising situations, in light of students' interests. Hence, this leads to the following hypotheses:

> *Hypothesis 1a: The self-awareness competency positively predicts the likelihood of being involved in student government.*
>
> *Hypothesis 1b: The self-management competencies positively predict the likelihood of being involved in student government.*

Gender differences in emotional competencies are commonly tested. However, there has been limited research on gender's moderator effect on the relationship between

emotional competencies and outcome variables, specifically student involvement. As previously discussed, emotional competencies are necessary for student involvement, especially to better assess one's emotions and manage them. Females have shown stronger tendencies toward self-awareness and are usually rated higher than males on that competency (Boyatzis & Sala, 2004). However, for the self-management competencies, males are expected to have a stronger association with outcome variables than females. For instance, achievement orientation, a self-management competency, is often associated with males. Some researchers found that males who scored higher on this competency had a stronger association with success. For women, this orientation has not been rewarded (Hopkins & Bilimoria, 2008). Hence, this chapter expects that females who exhibit higher levels of self-awareness will have higher chances of being involved than their peers. It also expects that males who exhibit higher levels of self-management will have higher chances of being involved than their peers. This leads to the following hypotheses, bearing in mind that males were coded as (0) and females as (1):

> *Hypothesis 2a: Gender positively moderates the relationship between the self-awareness competency and the likelihood of being involved in student government.*
>
> *Hypothesis 2b: Gender negatively moderates the relationship between the self-management competencies and the likelihood of being involved in student government.*

Furthermore, this chapter proposes that social competencies are crucial for student involvement. Social competencies include social awareness and relationship management competencies, as per Figure 4.1. Through these competencies, involved students could enhance their consciousness of others' feelings, needs, and concerns (social awareness) and could better handle their relationships with them (relationship management).

Involved students need to increase their awareness of larger issues that affect the campus and the student experience (Kuh et al., 2006). They need to be aware of the institution's structure and their role within it. Their position as an intermediary between different parties also requires empathy for them to better communicate and to better manage the relationships between those parties. Based on these roles and duties, social

awareness competencies are considered crucial for involved students. These competencies help involved students to better deal with situations of power struggle and student apathy, to better understand the structure of the organization, and to better communicate. The social awareness competencies that are considered extremely relevant are: (1) organizational awareness, to better understand the structure of the organization and to better deal with power struggles; and (2) empathy, to deal with student apathy and to better communicate with peers and faculty.

Furthermore, involved students usually deal with several parties and are expected to influence those parties in pursuit of the students' best interests. They are also expected to manage conflict and resolve problems between different parties (e.g. peers, clubs, faculty, department heads). Furthermore, involved students are expected to enhance the educational experience and to motivate students to achieve better results (Wooten et al., 2012). Based on these roles and duties, relationship management competencies are considered crucial for effective student involvement. The relationship management competencies that are considered extremely relevant for involved students are (1) conflict management, to better deal with disorganization, chaos, conflict, and power struggles; (2) influence, to communicate effectively and convince peers and other members of the institution; and (3) inspirational leadership, to deal with student apathy and to inspire and motivate the students. Hence, this leads to the following hypotheses:

> *Hypothesis 3a: The social awareness competencies positively predict the likelihood of being involved in student government.*
>
> *Hypothesis 3b: The relationship-management competencies positively predict the likelihood of being involved in student government.*

Also, there has been limited research on gender's moderator effect on the relationship between social competencies and outcome variables, specifically involvement. As previously mentioned, social competencies are necessary for student involvement, especially for conflict management, student motivation, and enhanced communication. The social competencies are usually associated with females (K. V. Petrides & Furnham, 2000) and are expected to be more instrumental for them than for males. For instance, some researchers have shown that on average, successful females score higher on empathy and organizational awareness than successful males (Hopkins & Bilimoria, 2008). Hence, it is expected that females who exhibit higher levels of social

competencies will have higher chances of being involved than their peers. This leads to the following hypotheses, bearing in mind that males were coded as (0) and females as (1):

> *Hypothesis 4a: Gender positively moderates the relationship between the social awareness competencies and the likelihood of being involved in student government.*
>
> *Hypothesis 4b: Gender positively moderates the relationship between the relationship-management competencies and the likelihood of being involved in student government.*

Furthermore, involved students are expected to participate in decisions that require strategic planning, critical thinking, and problem solving (Kuh, 1995). This study proposes that cognitive competencies are crucial for student involvement. Through these competencies, involved students could better analyze information and situations. This study suggests that student leaders need to invoke their cognitive competencies to effectively participate in these tasks and to better deal with situations of disorganization and chaos. Cognitive competencies that are considered extremely relevant are: (1) systems thinking, to perceive multiple causal relationships when analyzing complicated and disorganized situations; and (2) pattern recognition, to identify patterns in seemingly random events and to solve issues accordingly. Hence, this leads to the following hypothesis:

> *Hypothesis 5: Cognitive competencies predict the likelihood of being involved in student government.*

Furthermore, there has been limited research on gender's moderator effect on the relationship between cognitive competencies and outcome variables, specifically student involvement. Among the different tasks, student involvement encompasses solving problems and dealing with chaos. As previously mentioned, cognitive competencies are necessary for such situations. However, these competencies are usually associated with males (K. V. Petrides & Furnham, 2000) and are expected to be more instrumental for males than for females. Hence, it is expected that male students who exhibit higher levels of cognitive competencies will have a higher chance of being involved than their peers. This leads to the following hypothesis, bearing in mind that males were coded as (0) and females as (1):

Hypothesis 6: Gender negatively moderates the relationship between cognitive competencies and the likelihood of being involved in student government.

4.5 Method

4.5.1 Sample

The population consists of 1603 MBA students who participated in 7 cohorts (between years 2006 and 2012) of a development program at a leading business school in Spain (1180 males, 423 females, Mage = 29.53 years, age range: 20-46 years). This program focuses on the emotional, social, and cognitive competencies of students. The population is diverse; it includes individuals from more than 75 countries and from different professions and industries. Upon exclusion of three outliers, the population size was reduced to 1600 participants (1177 males, 423 females, Mage = 29.52 years, age range: 20-44 years).

This population includes individuals from different programs (full-time, part-time, and executive). However, due to their shorter schedule, part-time students have a higher chance of being involved in leadership activities that are external to the program. Their involvement in external activities could reduce the validity of this study's conclusions. Therefore, only full-time students were included in the sample. This strategy helps diminish the alternative explanations for non-involvement in the program. This strategy reduced the population size to 747 participants (520 males, 227 females, Mage = 28.34 years, age range: 20-38 years). The reduced population maintains the diverse background of students, with students from a variety of countries: Spain (17%), USA (14%), India (9%), Germany (6%), Mexico (4%), and Italy (4%).

For statistical reasons, the sample needs sufficient variability in all groups of individuals. Hence, a representative to non-representative ratio of 9:1 was upheld in the sample. With 30 representatives in the population (N = 747), 270 non-representatives were randomly selected, hence maintaining the 9:1 ratio (270:30). This strategy (1) ensured adequate variability in the dependent variable; (2) provided sufficient observations per group; and subsequently, (3) enabled the two groups of students to be statistically compared and the appropriate data analyses to be run (e.g. logistic regression analysis).

The final sample consisted of 300 full-time students who participated in different cohorts of the program (218 males, 82 females, Mage = 28.36 years, age range: 20-37 years). The sample is representative of the population in terms of gender, background, and all variables used in the analyses (e.g. cognitive competencies). The sample also maintains the diverse background of students. The average age of the sample is slightly lower than that of the population. This is a consequence of the exclusion of executive students from the sample. Their age, on average, is higher than that of the rest of the sample. Table 4.1 presents the descriptive statistics of the sample.

	n	Mean	*SD*	1	2	3	4	5	6	7	8	9
Student representative	300	0.10	0.30									
Number of raters	300	3.15	2.03	0.12 *								
GPA	300	8.00	0.41	-0.12 *	0.08							
Year of entry	300	4.34	1.84	-0.33 **	-0.06	0.41 **						
Age	300	28.36	2.83	-0.10	-0.03	0.23 **	0.37 **					
Self-awareness	300	6.97	1.08	0.14 *	-0.05	-0.08	-0.04	-0.07				
Self-management	300	7.76	0.75	0.09	0.01	0.02	0.04	-0.08	0.52 **			
Social awareness	300	7.68	0.89	0.15 **	0.00	-0.05	0.01	-0.11	0.62 **	0.75 **		
Relationship management	300	7.34	0.91	0.19 **	0.01	-0.04	0.05	-0.09	0.65 **	0.80 **	0.81 **	
Cognitive	300	7.18	0.88	0.01	0.04	0.10	0.09	0.04	0.51 **	0.64 **	0.56 **	0.64 **

Notes. *n*: number of observations; *SD*: standard deviation; Student representative: 0 = no, 1 = yes; Number of raters: per person; GPA: grade point average, ranges between 0 and 10; Year of entry: ranges between 1 = 2006 and 7 = 2012.

* $p < .05$, ** $p < .01$

Table 4.1 - Descriptive statistics

4.5.2 Measures

This study used (1) the Emotional and Social Competency Inventory to assess emotional, social, and cognitive competencies and (2) "student representative" to assess student involvement in government. In addition, this study used the number of raters per individual, grade point average (GPA), year of entry, and age as control variables. The descriptive statistics of the control variables are included in Table 4.1.

4.5.2.1 Emotional and Social Competency Inventory (ESCI)

This study used the university edition of the ESCI to measure an individual's emotional, social, and cognitive competency scores (Boyatzis, 2007; Boyatzis & Gaskin, 2010). Several studies on the psychometric standards of the ESCI provide assurance that it assesses behaviors that are distinct and observable. These competencies also achieve desirable psychometric properties in tests of reliability and validity (Amdurer et al., 2014). The inventory consists of five items per each of the 14 competencies (Boyatzis, 2009). Individuals were assessed by an average of 3.15 raters. Five scores were computed per individual, one for each cluster of competencies (self-awareness, self-management, social awareness, relationship management, and cognitive competencies). The correlations among the 14 competencies (mean = 0.55) and among the five clusters of competencies (mean = 0.65) were all sufficiently high and significant. Cronbach's alpha for the 14 competencies amounted to 0.94, and for the five clusters it amounted to 0.90.

4.5.2.2 Student representative

This study focuses on students' involvement in the government and representation of their class. Hence, students' involvement was assessed in terms of whether they held a student representative position throughout the program or not. Student representatives in this program were elected and not appointed. They received no financial compensation for holding this position. Those holding that position were the link with program management and could have brought about policy changes. The variable used to assess student involvement is "student representative." This operationalization is theoretically plausible and consistent with the literature. Individuals were assigned a value of (1) if they held a student representative position throughout the program, or (0) if they did not.

4.5.3 Data analysis

Data analysis consisted of three stages: exploratory data analysis, correlation analysis, and logistic regression analysis (D. R. Cox & Snell, 1989; Hosmer Jr et al., 2013). In the first stage, the population data were explored using numerical measures (i.e. Grubbs test with $p < 0.01$, skewness, and kurtosis) and graphical representations (i.e. box plots, histograms, P-P plots, and Q-Q plots). In the second stage, the sample data were analyzed for correlations among variables and for multicollinearity. In the third stage, the hypotheses were tested, using three models. In model 1 the control variables were input. In model 2, the main effects were input, to test hypotheses 1a, 1b, 3a, 3b, and 5. In model 3, the interaction terms were input, to test hypotheses 2a, 2b, 4a, 4b, and 6. Data were analyzed using IBM SPSS software.

4.6 Results

In the first stage of the analysis, the population data were explored and no signals of non-normality, skewness (mean of absolute values = 0.45), or kurtosis (mean of absolute values = 0.48) were detected. Three outliers were identified and were excluded from the population. In the second stage, the correlations were analyzed and they were low to moderate, as per Table 4.1. However, the clusters of competencies exhibited moderate to high correlations and a Cronbach's alpha of 0.90. These findings further support the scale's validity. Except for the interaction terms, no signals of multicollinearity were detected. In the third stage, the hypotheses were tested.

Regarding the main effects (model 2), only hypothesis 3b ($\beta = 1.84$, $p < 0.01$, Cohen's $d = 0.89$) was supported. This indicates that the relationship management cluster is the only one that is significantly related to student involvement. As for the moderator effects (model 3), hypothesis 2a ($\beta = 1.89$, $p < 0.05$, Cohen's $d = 0.48$) and hypothesis 6 ($\beta = -2.30$, $p < 0.05$, Cohen's $d = 0.43$) were the only ones to be supported. Gender's moderator effect in hypothesis 2a indicates that females exhibit a stronger association between the self-awareness competency and student involvement than males. Gender's moderator effect in hypothesis 6 indicates that males exhibit a stronger association between cognitive competencies and student involvement than females. These results are presented in Table 4.2.

	Student Representative		
Independent variables	Model 1	Model 2	Model 3
Constant	-4.06	-12.81 *	-16.32 *
Number of raters	0.18 *	0.25 **	0.27 **
GPA	0.25	0.47	0.37
Entry	-0.76 **	-0.79 **	-1.00 **
Age	0.07	0.11	0.19
Self-awareness		0.08	-0.62
Self-management		-0.83	-0.97
Social awareness		0.19	0.62
Relationship management		1.84 **	1.56 *
Cognitive		-0.55	0.43
Self-awareness x Gender			1.89 *
Self-management x Gender			1.05
Social awareness x Gender			-1.22
Relationship management x Gender			0.71
Cognitive x Gender			-2.30 *
χ^2	39.02	61.14	77.97
df	4.00	9.00	14.00
Correct classification (%)	90.30	93.00	93.00
Cox and Snell R^2	0.12	0.18	0.23
Nagelkerke R^2	0.26	0.39	0.48
n	300.00	300.00	300.00

Notes. *df*: degrees of freedom; *n*: number of observations; Student representative: 0 = no, 1 = yes; Number of raters: per person; GPA: grade point average, ranges between 0 and 10; Year of entry: ranges between 1 = 2006 and 7 = 2012; x Gender: interaction terms (e.g. Self-awareness x Gender) between main effects (e.g. self-awareness) and gender.

* $p < .05$, ** $p < .01$

Table 4.2 - Logistic regression analysis

The model with the results is presented in Figure 4.2.

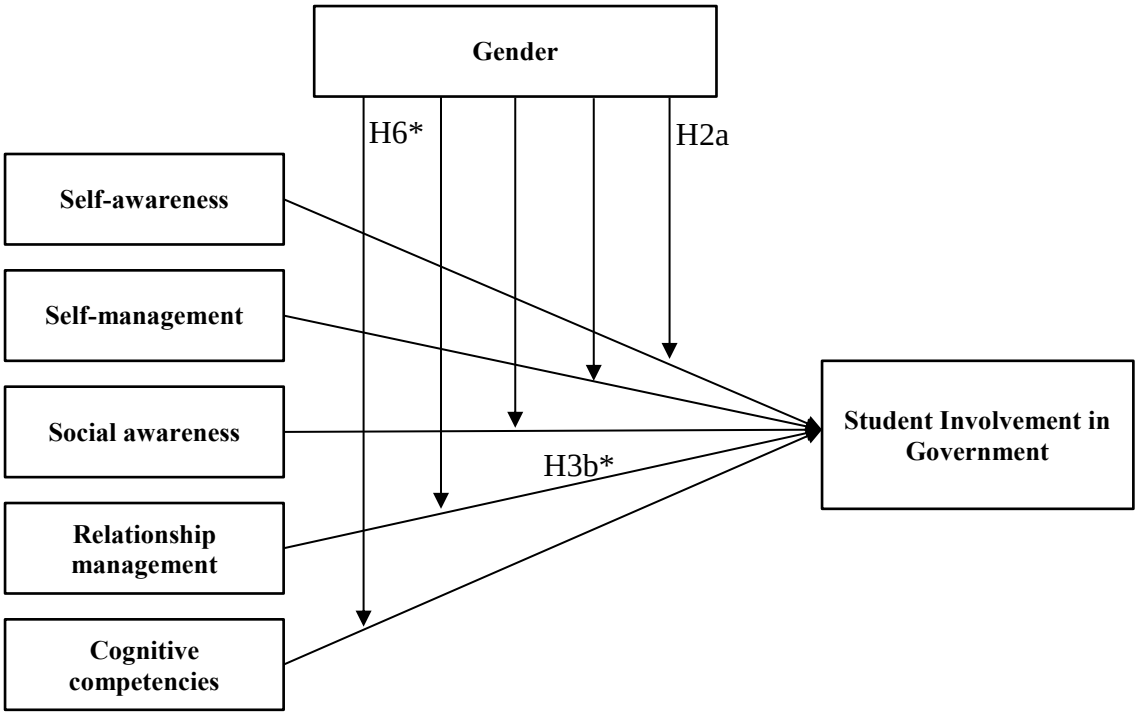

Figure 4.2 - Model and results (p <.05, ** p < .01)*

4.7 Discussion

This study analyzed the relationship between competencies and student involvement. It focused on the clusters of competencies, not on the single competencies. These clusters have shown good psychometric properties and they predict several outcomes (e.g. effectiveness). The relationship management cluster was the only one to be significantly related to student involvement. This means that with all control variables (model 1), clusters (model 2), and moderator variables (model 3) included in the analyses, relationship management is positively predictive of student involvement. The findings also indicate that the relationship between the self-awareness competency and student involvement is only significant for females. This means that females who exhibit higher levels of self-awareness have a higher chance of being involved than their counterparts. As for the cognitive competencies, the relationship with student involvement is only significant for males. This means that males who exhibit higher levels of cognitive competencies have a higher chance of being involved than their counterparts.

The relationship management competencies appear to be crucial for involvement for several reasons. First, these competencies have the most visible impact on one's peers.

For instance, the conflict management competency (relationship management) itself and its impact are more visible to others than the emotional self-awareness competency (self-awareness). Managing a conflict between a group of peers is more observable to others than is being aware of one's own feelings. This means that when individuals exhibit a higher level of the relationship management competencies, there is a higher chance that their peers sense the impact of this competency, perceive those students as leaders, and consequently elect them for student government and leadership as student representatives. Second, this cluster of competencies exhibits the strongest association with interpersonal abilities and other traits that are necessary for leading, representing, and motivating peers. Third, this cluster includes competencies that involve helping others (e.g. coaching and mentoring, teamwork). By developing these competencies, educational institutions would promote the culture of helping others. One expected outcome of this culture would be that students will be motivated to contribute to others and to their environment, to be involved in the campus community, and to enhance the student experience.

4.7.1 Implications

4.7.1.1 Implications for research

Regarding the contributions and implications for research, these findings support the reliability of the ESCI. The study also enhances the predictive validity of the emotional, social, and cognitive competencies and shows that they are necessary for student involvement in education. Future research could focus on the relationship between these competencies and other outcome variables, in the same context. As for gender's moderator effect, existing research is split into three categories: one that finds that gender does not moderate the relationship between emotional, social, and cognitive intelligence and outcome variables, one that suggests a moderation that favors females, and one that suggests moderation that favors males (e.g. Hopkins & Bilimoria, 2008; Mandell & Pherwani, 2003; K. V. Petrides & Furnham, 2006; Salguero et al., 2012). This study adds to existing research by examining the competencies at the cluster level and identifying different moderator effects, at that level. This investigation shows that gender's moderator effect favors females in one cluster (self-awareness) and males in another cluster (cognitive).

The findings indicate that when examining gender's moderator effect on the relationship between competencies and student involvement, one needs to look at the competencies at the cluster level. Females exhibit a stronger association between self-awareness and involvement whereas males exhibit a stronger association between cognitive competencies and involvement. These differences could be explained by several factors. First, this finding could be attributed to gender bias related to gender roles. Second, this finding could be related to gender preferences for different types of involvement. Different types of involvement might require different levels of these competencies. For example, cognitive competencies might be more relevant for individuals involved in the finance club, while relationship management competencies might be more relevant for those involved in the social events club. Future research could further explore the relationship between the competencies and the different types of involvement.

4.7.1.2 Implications for practice

As for the contributions and implications for practice, educational institutions could motivate students to be involved by focusing on and developing their relationship management competencies. The majority of these competencies focus on helping and developing others (e.g. coaching and mentoring, teamwork). By focusing on these competencies, institutions could promote a culture of helping others and a holistic learning environment. This culture invites students to be involved in campus life and to enhance the educational experience for all students.

Furthermore, this investigation suggests that educational institutions and program managers could enhance the effectiveness of their programs by focusing on the students' relationship management competencies and by giving them opportunities to be involved and to practice leadership. Through relationship management competencies students become more involved, and consequently learn leadership by practice (Eich, 2008). Those students have higher chances of being effective future leaders. Educational institutions could involve experts to oversee the process and to ensure that relationship management competencies are properly assessed, developed, and implemented.

In addition, educational institutions could provide training to students; this could be beneficial for the effectiveness of student involvement (Wooten et al., 2012). Students

could be trained in relationship management competencies: what they are, how they could be developed, and how they affect the involvement process and the student experience in general. This study suggests that, by focusing on relationship management competencies, educational institutions could ensure adequate training for students and could enhance the effectiveness of the involvement efforts of those students. These competencies could prepare students to better deal with situations that they are expected to handle in student government and in their future careers, such as conflicts, internal power struggles, chaos, and disorganization.

As for teachers, educational institutions could provide training on the methodology for developing their students' relationship management competencies, and consequently on the impact of these competencies on student involvement. Experts could be involved throughout the process to ensure that teachers are aware of the importance of these competencies and of their impact on student involvement and on student experience. Teachers and program managers could incorporate metrics to assess and monitor competency and involvement levels. This would help assess and monitor the effectiveness of the training efforts.

It is also suggested that programs could cater to individual preferences and differences. Males and females exhibit different levels of association between their competencies and their involvement. As previously discussed, these differences could be related to individual preferences or to the nature of the task they will be involved in. By understanding and cherishing these differences, educational institutions would support the personal development and growth of the students. One way to do so is to cater to student needs and to develop students' competencies based on those needs. Individuals who have stronger tendencies toward cognitive competencies could be assigned to positions that have a stronger need for those competencies (e.g. head of finance club). This could be a helpful way to motivate students to be involved in tasks that they value.

Furthermore, institutions are advised to enhance the fit between the students and the involvement tasks. The meticulous assessment of the students (their competencies and preferences) and the student involvement tasks (their nature and required competencies) is crucial for that fit. By catering to students' preferences, that fit could be improved and it could motivate students to be involved. For instance, individuals who are passionate about finance might be more inclined to be involved in government if the position they are to hold would be head of the finance club. Furthermore, by accounting

for students' competencies, the fit could further be improved, and it could enhance the effectiveness of students' involvement efforts. For instance, individuals with higher levels of relationship management competencies might be better off heading the social events club.

At the individual level, it is suggested that individuals should seize opportunities to develop their competencies and to be involved in programs. There are several leadership-development programs that aim to develop emotional, social, and cognitive competencies. Several programs have been shown to be effective at developing these competencies and to have long-lasting effects (e.g. Boyatzis et al., 2013; Boyatzis & Saatcioglu, 2008). Individuals interested in leadership development could join programs that focus on the development of competencies. These programs provide a safe environment for students to develop these competencies and to practice and learn leadership through involvement. Those who practice leadership at an early stage have higher chances of being effective future leaders (Amit et al., 2009).

4.7.2 Limitations and future research

The fact that the sample was extracted from one program might challenge the external validity of the conclusions (Trochim, 2001). However, several factors mitigated this limitation. First, the sample consists of international students with diverse backgrounds and cultures. The participants originate from different countries, are currently living in different countries, and have worked in different professions and industries. This helps ensure that the findings are not bound to a specific country, culture, profession, or industry. Second, these participants were selected from different cohorts, between 2006 and 2012. This helps ensure that the findings apply to different cohorts. Third, the concepts of emotional, social, and cognitive competencies are reliable, coherent, and valid for assessing individuals in diverse cultures and countries (Emmerling & Boyatzis, 2012). Hence, the findings here are expected to apply to different cultures and countries. Researchers could analyze this study's findings in different contexts, and could control for additional variables, such as experience and undergraduate education.

4.8 Conclusion

Competencies and student involvement are crucial concepts for education. The findings of this study indicate that relationship management competencies predict student involvement. By developing these competencies and by inviting students to be

involved, educational institutions could (1) connect students to the community; (2) develop a culture of helping others; (3) enhance the student experience in general; and (4) develop and teach leadership that is able to deal with current challenges, not only through theory, but also through practice. Educational institutions should not just focus on theory, they should also focus on practice (A. Y. Kolb & Kolb, 2005). These institutions should provide the safe environment for individuals to practice leadership, to become student leaders, and to grow into effective individuals that are involved in their communities.

To conclude, one main goal of graduate education is to prepare students to become the outstanding leaders and managers that society needs (Boyatzis et al., 2002). In line with that goal, this chapter shows that relationship management competencies are necessary for student involvement. These competencies could promote a culture of helping others, could enhance the relationships in the learning environment, and in turn could boost the educational experience for everyone.

4.9 Appendices

Appendix 4.1

Boyatzis' (2009) definitions of competencies and clusters of competencies

1. Emotional intelligence competencies:
    a. Self-awareness cluster concerns knowing one's internal states, preferences, resources, and intuitions. The self-awareness cluster contains one competency:
        i. Emotional self-awareness: recognizing one's emotions and their effects.
    b. Self-management cluster refers to managing one's internal states, impulses, and resources. The self-management cluster contains four competencies:
        i. Emotional self-control: keeping disruptive emotions and impulses in check.
        ii. Adaptability: flexibility in handling change.
        iii. Achievement orientation: striving to improve or meeting a standard of excellence.
        iv. Positive outlook: seeing the positive aspects of things and the future.
2. Social intelligence competencies:
    a. Social awareness cluster refers to how people handle relationships and awareness of others' feelings, needs, and concerns. The social awareness cluster contains two competencies:
        i. Empathy: sensing others' feelings and perspectives, and taking an active interest in their concerns.
        ii. Organizational awareness: reading a group's emotional currents and power relationships.

b. Relationship management cluster concerns the skill or adeptness at inducing desirable responses in others. The cluster contains five competencies:

    i. Coach and mentor: sensing others' development needs and bolstering their abilities.

    ii. Inspirational leadership: inspiring and guiding individuals and groups.

    iii. Influence: wielding effective tactics for persuasion.

    iv. Conflict management: negotiating and resolving disagreements.

    v. Teamwork: working with others toward shared goals. Creating group synergy in pursuing collective goals.

3. Cognitive intelligence competencies (in the ESCI – University version only):

    a. Systems thinking: perceiving multiple causal relationships in understanding phenomena or events.

    b. Pattern recognition: perceiving themes or patterns in seemingly random items, events, or phenomena.

5

The effect of student involvement on graduate success

This article is currently under review
by the *Journal of College Student Development*.

5.1 Abstract

Student involvement has been considered an important concept for student success in education. However, there have been limited research on the impact of student involvement in programs on their post-education success. This chapter studies the impact of student involvement on post-education success (objective and subjective). The sample consists of 325 international graduates that, at the time of data collection, were working in different professions, industries, and countries. Data were collected using validated instruments. The data were explored for outliers, normality, and other assumptions. The data were then analyzed using structural equation modeling. The results indicate that student involvement predicts job and life satisfaction (χ^2/df = 1.73; CFI = 0.954; RMSEA = 0.048; SRMR = 0.043). The chapter also discusses some implications for research and practice, limitations, and opportunities for future research. There has been limited research on the impact of involvement on post-education success. This chapter analyzes the impact of student involvement on post-education success. It studies both, objective and subjective success. It uses advanced methodology to test the hypotheses.

Keywords: Involvement, Success, Career satisfaction, Life satisfaction, Job satisfaction, Quality of life

5.2 Introduction

Student involvement is a central topic to education. It has been associated with important competencies and with academic success (Astin, 1984; Laosebikan-Buggs, 2006; Pascarella & Terenzini, 2005; P. V. Thomas & Higbee, 2000; Webber et al., 2013). Some researchers have also identified an association with students' psychological well-being, confidence, and drive to achieve (House, 2000; Kilgo et al., 2016; Webber et al., 2013). Yet, there has been limited research that analyzes the effect of students' involvement on their post-education success, in different life domains. The main goal of this study is to analyze the relationship between students' involvement in higher education and their post-education success, in different domains of life. The focus is on graduates' success in the objective and the subjective domains. The main research question is:

> *Does student involvement predict post-education levels of objective success and/or subjective success?*

5.2.1 Involvement

Student involvement was defined by Astin as "the time and effort expended by the student in activities that relate directly to the institution and its program" (1977, p. 21). Student government is one of the principal ways for students to be involved. It encompasses three characteristics: (1) the representation aspect—representing students and acting as their voice; (2) the participative aspect—taking part in the institution's policy development and decision-making processes; and (3) the organization aspect—managing events of clubs and organizations (Laosebikan-Buggs, 2006). Student involvement in government affects students and their educational experience. It also affects other parties including faculty and staff (Laosebikan-Buggs, 2006).

Student involvement has been identified as a predictor of student engagement in educationally meaningful activities and of their achievement of their educational and learning goals (Kuh et al., 2006; Wooten et al., 2012). Kuh et al. (2006) claim that through their involvement in government and leadership, students are exposed to real-life situations and are more likely to be successful. In that sense, the campus becomes a holistic learning environment that prepares them for the future (Wooten et al., 2012).

Apart from that, the involvement experience helps the involved students grow as effective individuals, enabling their learning and personal development (Astin, 1984). Through their involvement in student government they develop leadership skills and are exposed to leadership experiences. Such experiences at early stages are related to effective future leadership. Those who have more leadership experiences at early stages are more likely to be effective leaders in the future (Amit et al., 2009). These early experiences also boost their self-efficacy, self-perception as a leader, and necessary leadership knowledge (Amit et al., 2009).

5.2.2 Objective and subjective success

Success could be studied at the subjective and objective levels (Hay & Hodgkinson, 2006). Objective success is established external to the individual (Schein & Van Maanen, 1977), through the society's evaluation of one's accomplishments in relation to extrinsic measures (Melamed, 1996). It relates to monetary (salary, compensation, etc.) and non-monetary criteria (positions, official structures, and titles) (Schein & Van Maanen, 1977).

Subjective success relates to one's perception of work and life, and of one's role within it (Schein & Van Maanen, 1977). It is defined based on one's assessment of success and it emerges from subjective feelings toward one's career and life (Gattiker & Larwood, 1986; Hay & Hodgkinson, 2006). This study focuses on three dimensions of subjective success (job, career, and life) and specifically on one's satisfaction with these dimensions (i.e. job satisfaction, career satisfaction, and life satisfaction).

Job satisfaction could be extrapolated from individuals' attitude toward their work. It describes their feelings toward their work (Brayfield & Rothe, 1951). Career satisfaction relates to the individuals' personal evaluations of their own careers and the extent to which they are satisfied with their progress and future prospects (Melamed, 1996). Life satisfaction relates to individuals' judgement of the quality of their lives, based on their personal set of criteria (Johnson & Shin, 1978).

Research has often associated the concept of success with objective measures such as salary (Hay & Hodgkinson, 2006). This chapter studies both objective and subjective success as outcomes of student involvement. It places more emphasis on subjective success, for several reasons. First, many of the studies on success focus on objective success (Dyke & Murphy, 2006). Hence, there is a need for the examination of

subjective success as an outcome of student involvement. Second, subjective success, as assessed by job, life, and career satisfaction (Hay & Hodgkinson, 2006; Schein & Van Maanen, 1977), is considered an important outcome for individuals seeking development. Third, this type of success has been associated with concepts of well-being and health (Faragher, Cass, & Cooper, 2005; Strine, Chapman, Balluz, Moriarty, & Mokdad, 2008).

5.3 Hypotheses

One main goal of graduate management education is preparing students to be outstanding leaders and managers (Boyatzis et al., 2002). However, "students learn leadership by doing it, and programs that provide opportunities for student leadership practice create ripples of positive outcomes for students and society" (Eich, 2008, p. 182). Students' involvement in their programs provides an opportunity for them to practice leadership and to grow into effective future leaders.

Student involvement helps individuals acquire essential knowledge and skills for success in their professions (S. K. Gardner & Barnes, 2007). It also provides students the opportunity to practice and develop leadership. "The outcomes of involvement can be divided into three subthemes: (a) networking, (b) connecting the classroom to the community, and (c) professional development" (S. K. Gardner & Barnes, 2007, p. 12). Graduate student involvement is considered necessary for future success. It provides students with necessary skills and connections, and an enhanced understanding of what to expect in their future career (Gardner & Barnes, 2007). On that basis, student involvement is expected to impact graduates' objective and subjective success.

5.3.1 Subjective success

As previously mentioned, involved students are expected (1) to network, (2) to connect the classroom to the community, and (3) to develop professionally (Gardner & Barnes, 2007). On the basis of these outcomes, it is suggested that student involvement leads to higher levels of subjective success in terms of job satisfaction, career satisfaction, and life satisfaction. The following paragraphs discuss how—based on networking, connecting, and developing—involvement impacts each dimension of subjective success.

This chapter suggests that student involvement affects job satisfaction, for several reasons. First, by networking, involved students are expected to develop social skills that are necessary for managing relationships at work. These skills are crucial for one's success in an organizational environment and their development has a long-lasting effect (Amdurer et al., 2014). One of the outcomes of the development of these skills could be an increased level of job satisfaction. Second, by connecting the classroom to the community, these individuals are expected to develop higher levels of organizational awareness. This enables them to better navigate through the internal power struggles at work and to obtain the necessary resources for effective job performance. This is expected to enhance their levels of job satisfaction. Finally, regarding their professional development, involvement enables students to develop as professionals and to acquire the necessary skills and knowledge for job success. Consequently, job success is expected to boost one's job satisfaction. Hence, by being involved in student government, individuals are expected to (1) develop their social skills, (2) develop their organizational awareness, and (3) acquire the necessary knowledge and skills for job success. On that basis, it is suggested that student involvement leads to higher levels of job satisfaction.

> *Hypothesis 1: Student involvement in government positively predicts post-education job satisfaction.*

Furthermore, this chapter suggests that student involvement affects career satisfaction, for several reasons. First, by networking, involved students are expected to develop connections inside and outside the educational institution which are necessary for their future careers. For instance, by dealing with external organizations to organize events, these students could develop strong relationships with organizations that could further support those individuals in their careers. These relationships are expected to enhance one's career opportunities, and consequently, to enhance one's level of career satisfaction. Second, by connecting the classroom to the community, these students are expected to have real-life experiences (Wooten et al., 2012). These experiences are expected to help students bridge theory and practice. These learning experiences could have a long-term impact on students' careers (Whipple & Murphy, 2004) and could satisfy their needs for career development. In fact, the literature suggests that career satisfaction is established on the personal assessment of one's own progress and development (Hay & Hodgkinson, 2006; Schein & Van Maanen, 1977). Hence, based

on learning experiences that contribute to career growth and development, one would expect an enhanced level of career satisfaction. Finally, in terms of professional development, involved students could develop the necessary knowledge and skills for success in their careers (Amit et al., 2009; S. K. Gardner & Barnes, 2007). Consequently, the development of this knowledge and these skills is expected to increase students' career success and to enhance their levels of career satisfaction. Hence, through involvement in government, students are expected to (1) enhance their career prospects, (2) satisfy their career development needs through learning experiences, and (3) develop knowledge and skills that are useful for their careers. On that basis, student involvement is expected to lead to higher levels of career satisfaction.

> *Hypothesis 2: Student involvement in government positively predicts post-education career satisfaction.*

This chapter also suggests that student involvement affects life satisfaction, for several reasons. First, by networking, involved students are expected to participate in cooperative activities, to develop friendly relationships with others, and to satisfy their affiliation needs (McClelland, 1975). By satisfying these affiliation needs, the networking aspect of student involvement enhances students' levels of emotional well-being, and is expected to contribute to their life satisfaction (Schüler, Job, Fröhlich, & Brandstätter, 2008). Second, by connecting the classroom to the community, involved students are expected to better understand the needs of the community, to identify opportunities for satisfying those needs, and potentially to contribute to the community. Through this process, as they help improve the community, students could satisfy their need for achievement (McClelland, 1975). This is expected to enhance their satisfaction with their achievements, and consequently, to boost their life satisfaction levels. Finally, in terms of professional development, through their involvement, students could satisfy some of their personal and life goals for growth and development. The achievement of those goals is expected to contribute to their life satisfaction. Hence, through involvement in student government, students are expected to (1) satisfy their affiliation needs; (2) help others, contribute to the community, and satisfy their need for achievement; and (3) achieve some of their personal and life goals for growth and development. On that basis, it is expected that student involvement leads to higher levels of life satisfaction.

Hypothesis 3: Student involvement in government positively predicts post-education life satisfaction.

5.3.2 Objective success

Regarding objective success, this chapter suggests that student involvement affects change in compensation, for several reasons. First, by networking, involved students are expected to develop increased awareness of the market and the relevant growth opportunities. This awareness would place them in a more confident position in the negotiation process, with a higher "best alternative to a negotiated agreement." As a result, these individuals are expected to apply to optimal positions and to better negotiate compensation packages. Second, by connecting the classroom to the community, involved students could develop higher levels of sensitivity to the environment and to others' needs. Through environmental sensitivity individuals are better aware of opportunities and of limitations that may hinder the achievement of the organization's objectives (Conger & Kanungo, 1987). Through their sensitivity to others, involved students would be aware of others' feelings, needs, and concerns. These sensitivities could lead to more considerate actions and could be valued as signs of charismatic leadership (Conger & Kanungo, 1987). These leadership traits are expected to be highly rewarded in the future. Finally, regarding their professional development, involved students are expected to develop their effectiveness, knowledge, and skills which could be rewarded in the future. Through their leadership experiences, they are more likely to acquire the necessary leadership knowledge and to be effective leaders in the future (Amit et al., 2009). Consequently, those individuals are expected to be rewarded for their effectiveness, experiences, and knowledge. Also, they "can acquire efficient organizational skills and work habits" that could be helpful for their job performance (Pascarella & Terenzini, 2005, p. 133). Furthermore, these students tend to help their peers grow and develop. As a result, they develop mentoring and coaching skills, which are necessary for leaders and managers. These skills could set them ahead of their peers and could be highly rewarded in the future. To conclude, involved students are expected to develop their (1) market awareness, (2) sensitivity to the environment and to others' needs, and (3) experiences, skills, knowledge, and habits for effectiveness and efficiency. Consequently, these students are expected to be compensated for these developments. Hence, it is expected that student involvement leads to higher levels of increase in compensation.

Hypothesis 4: Student involvement in government positively predicts the change in compensation within the last five working years.

This chapter also suggests that student involvement affects the number of job offers received, for several reasons. First, by networking, involved students could develop trust relationships with important sources of recruitment: the educational institution's administration and potential recruiters. Through frequent communication, these students are expected to develop trust relationships with the educational institution's administration (Laosebikan-Buggs, 2006). These trust relationships with the administration enable students to widen their network of connections and employment opportunities. Students could also receive strong employment recommendations from those administrators. As for potential recruiters, individuals who are involved in student government are perceived to have good standing in their community (Resnick, Kuwabara, Zeckhauser, & Friedman, 2000). They are also expected to signal trust at two levels: the "concern" dimension (i.e. they balance their self-interest against other parties' interests) and the "harmony" dimension (i.e. they have a collective identity and shared values) (Tzafrir & Dolan, 2004). The development of these trust-based relationships with potential employers could provide students an employment opportunity in the future. Second, by connecting the classroom to the community, involved students are expected to increase their awareness of market opportunities, better understand what employers seek, and enhance their market positioning. Third, regarding professional development, through their involvement in leadership experiences, students are expected to develop the necessary knowledge, to acquire the necessary leadership experience, and to signal potential skills for effective future leadership (Amit et al., 2009; Ming Chia, 2005). These points are expected to enhance the attractiveness of their profile and to enhance their chances of receiving a job offer. It is important to note that "employers and corporate recruiters place considerable weight on student extracurricular involvement during college, particularly leadership positions, in making hiring decisions" (Pascarella & Terenzini, 2005, p. 518). Students' participation in such activities is expected to enhance their profile's attractiveness and their chance of receiving job offers. Hence, involved students are expected to develop (1) trust-based relationships, (2) market awareness and positioning, (3) potential for effective future leadership, and (4) attractiveness of their profile. On that basis, involved students are expected to receive more job offers than their counterparts.

Hypothesis 5: Student involvement in government positively predicts the number of job offers that students receive at graduation.

5.4 Methods

5.4.1 Sample

The population comprises 1603 MBA students who participated in 7 cohorts of a development program at a top business school in Spain (1180 males, 423 females, Mage = 29.53 years, age range: 20-46 years). With individuals from more than 75 countries and from different professions and industries, the population is considered diverse. Furthermore, 96% of those individuals changed region, industry, or function after graduation.

A survey was sent through Qualtrics to the 1603 individuals. From the total population, 325 individuals responded—a response rate greater than 20%, (238 males, 87 females, Mage = 29.80 years, age range: 21-43 years). The sample is considered to be representative of the population in terms of demographic and control variables. There were 11 cases with some missing data, leading to a final sample of 314 complete responses. The descriptive statistics of the sample are presented in Table 5.1.

	n	Mean	*SD*	1	2	3	4	5	6	7	8
Gender	325	0.27	0.44								
GPA	325	8.00	0.40	0.02							
Age	325	29.80	3.51	-0.24 **	0.06						
Student representative	325	0.07	0.26	0.10	0.03	0.05					
Life satisfaction	325	3.70	0.66	-0.06	0.01	0.00	0.11				
Job satisfaction	314	3.77	0.71	-0.13 *	0.01	0.04	0.13 *	0.39 **			
Career satisfaction	325	3.59	0.69	-0.08	0.07	0.01	0.08	0.54 **	0.43 **		
Change in compensation (%)	325	2.95	1.36	-0.05	0.05	-0.21 **	0.02	0.15 **	0.17 **	0.35 **	
Job offers received[+]	325	2.57	1.17	0.00	0.04	-0.04	0.04	0.12 *	0.10	0.16 **	0.13 *

Notes. *n*: number of observations; *SD*: standard deviation; gender: 0 = male, 1 = female; GPA: grade point average, ranges between 0 and 10; student representative: 0 = no, 1 = yes; life satisfaction: mean score, Likert scale from 1 to 5; job satisfaction: mean score, Likert scale from 1 to 5; career satisfaction: mean score, Likert scale from 1 to 5.

[+] During a period of six months before and six months after graduation

[*] $p < 0.05$; [**] $p < 0.01$.

Table 5.1 - Descriptive statistics and correlation matrix

5.4.2 Measures

This study used the following measures: (1) student representative, to assess student involvement in government; (2) job satisfaction, career satisfaction, and life satisfaction to assess subjective success; (3) percentage increase in compensation (in the previous five working years) and the number of job offers received (within one year around the graduation date i.e. six months before and six months after), to assess objective success. In addition, this study used gender, GPA, and age as control variables. The descriptive statistics of the control variables are included in Table 5.1.

5.4.2.1 Student representative

This study focuses on students' involvement in government. The main duty of those students was to represent their peers and to act in their best interest. Therefore, student involvement was assessed by the "student representative" variable. This variable is binary and refers to whether or not the participant held a student representative position throughout the program. Participants were assigned a value of (1) if they held a student representative position throughout the program, or (0) if they did not. The operationalization of "student involvement in government" through "student representative" is theoretically plausible and consistent with the literature. In fact, student representatives in this program performed all three roles of student government: (1) they represented their peers; (2) they participated in the decision-making processes, they were the link with program management, and they could have brought about policy changes; and (3) they managed on-campus activities of clubs and organizations. On a separate note, student representatives in this program were elected and not appointed. They received no financial compensation for holding this position.

5.4.2.2 Job satisfaction

Job satisfaction was measured using the Brayfield–Rothe Satisfaction Index (Brayfield & Rothe, 1951). This scale consists of five items measured on a 5-point Likert scale. The items are included in Appendix 5.1. These items include "I feel fairly satisfied with my present job." The reliability and validity of this scale have been established in several studies. In this study, the reliability score for this scale was satisfactory (Cronbach's alpha = 0.85).

5.4.2.3 Career satisfaction

Career satisfaction was measured using the career satisfaction scale (J. H. Greenhaus et al., 1990). This scale consists of five items measured on a 5-point Likert scale. The items are included in Appendix 5.2. These items include "I am satisfied with the success I have achieved in my career." The reliability and validity of this scale have been established in several studies. In this study, the reliability score for this scale was satisfactory (Cronbach's alpha = 0.86).

5.4.2.4 Life satisfaction

The Satisfaction With Life Scale (SWLS) was used to measure life satisfaction (Diener et al., 1985). This scale consists of five items measured on a 5-point Likert scale. The items are included in Appendix 5.3. These items include "I am satisfied with my life." The reliability and validity of this scale have been established in several studies. In this study, the reliability score for this scale was satisfactory (Cronbach's alpha = 0.83).

5.4.2.5 Change in compensation

Change in compensation is a monetary variable that measures the percentage change in one's compensation in the past five years. Compensation is a variable that is commonly used to assess objective success. To avoid social desirability and respondents' sensitivity to questions about salary, they were asked to report the percentage change in their salaries. Respondents are more likely to report the percentage change in their compensation rather than report their current compensation package. Furthermore, the percentage change in compensation enables the comparison of individuals regardless of country, industry, and unit (euro, dollar, etc.). The change in compensation relates to the past five years. In this study, the last cohort was from 2012, which means that participants have at least five years of post-education experience. This variable is often used as a measure of objective success (Rubinstein & Weiss, 2006; S. L. Thomas & Zhang, 2005). The item used is included in Appendix 5.4.

5.4.2.6 Number of job offers received

This is a non-monetary variable that refers to the number of job offers that individuals received six months before and six months after graduation. This variable is considered an appropriate assessment of an individual's objective success (e.g. Ming Chia, 2005; Morriss & Henderson, 2008; Schuurman, Pangborn, & McClintic, 2008). It is considered, by many recruitment agencies and educational rating agencies, an appropriate indicator of graduates' marketability and success. In fact, the business school from which the participants were selected reports that 83% of the students are usually employed three months after graduation. Some of those individuals receive job offers several months before graduation and others several months after. Therefore, to widen the variability of the responses, individuals were asked to report the number of job offers received six months before and six months after graduation. The item used is included in Appendix 5.5.

5.4.3 Data analysis

Data analysis took place in three stages: exploratory data analysis, correlation analysis, and structural equation modeling. In the first stage, exploratory data analysis was conducted on the sample data. The data were checked for outliers, distribution, and normality using numerical measures (i.e. Grubbs test with $p < 0.01$, skewness, and kurtosis) and graphical representations (i.e. box plots, histograms, P-P plots, and Q-Q plots). In the second stage, the sample data were analyzed for correlation and multi-collinearity. In the third stage, structural equation modeling (Kaplan, 2009; Saris & Satorra, 1988) was run on the sample to test the hypotheses. In model 1, the measurement model was tested. In model 2, a modified measurement model was tested. In model 3, the structural model was tested. IBM SPSS software was used for stages one and two. R-software (R Core Team, 2017) was used for stage three.

5.5 Results

In the first stage, the data were explored to check for normality, outliers, skewness, and kurtosis. Using Grubbs test ($p < 0.01$), no significant outliers were identified. No signs of non-normality were identified. Except for the student representative variable (binary variable), no extreme values of kurtosis (mean of absolute values = 0.61) or skewness (mean of absolute values = 0.50) were identified. Individuals holding a student

representative position are less frequent than those not holding that position (1:13 ratio). Hence, high values of skewness and kurtosis are expected for this variable.

In the second stage, the correlations among all variables, as per Table 5.1, were low to moderate. These correlations indicate a low chance of multicollinearity. Furthermore, the variance inflation factors (highest value = 1.65) and tolerance levels (lowest value = 0.61) indicated no signs of multicollinearity.

In the third stage, the models were assessed using Hu and Bentler's (1999) thresholds, comparative fit index (CFI) > 0.95, root mean square error of approximation (RMSEA) < 0.08, and standardized root mean square of residuals (SRMR) < 0.06. In model 1, the measurement model for job, career, and life satisfaction was tested. As per Table 5.2, some of the fit indices for this model were not satisfactory. Upon inspection of the modification indices, some necessary modifications were identified. Modifications were limited to the plausible and justifiable ones. Hence, in the second model, three plausible modifications were identified. They were due to item wording. For instance, the third and fifth items of the job satisfaction index are both negatively worded. Because of the negative wording, the error terms of these two items are expected to be correlated. Upon modification, the fit indices of model 2 indicated significant improvements. In the third model, the structural part (i.e. the regressions) was added. As per Table 5.2, all fit indices are satisfactory for model 3.

	Model 1	Model 2	Model 3
χ^2	230.03	174.09	270.53
df	87	84	156
χ^2/df	2.64	2.07	1.73
Comparative Fit Index (CFI)	0.940	0.962	0.954
RMSEA	0.072	0.058	0.048
SRMR	0.055	0.049	0.043
n	314	314	314

Notes. *df*: degrees of freedom; RMSEA: root mean square error of approximation; SRMR: standardized root mean square residual; *n*: number of observations.

Table 5.2 - Fit indices

Once satisfactory fit indices were achieved, the loadings and the regressions were analyzed. As per Table 5.3, all loadings are significant. There are no extreme loading values, except for item 3 of the job satisfaction index. As previously mentioned, this is attributed to item wording and to the need to allow the error terms of items 3 and 5 to correlate. As per Table 5.4, student involvement is significantly related to job satisfaction ($\beta = 0.46$, $p < 0.05$) and life satisfaction ($\beta = 0.33$, $p < 0.05$). Among the control variables, gender was significantly related to job satisfaction ($\beta = -0.32$, $p < 0.01$), with female respondents scoring lower than male respondents. Age ($\beta = -0.10$, $p < 0.01$) and gender ($\beta = -0.36$, $p < 0.05$) were negatively related to the percentage change in compensation. This indicates that males and younger graduates exhibited greater percentage increases in compensation than their counterparts. No variables were significantly related to career satisfaction or to the number of job offers received.

Latent variable	Observed variable	Estimate	SE	z-value	Std.all
Life satisfaction					
	Q1_1	1.00	0.67	0.80	
	Q1_2	0.79 **	0.07	11.19	0.65
	Q1_3	0.83 **	0.06	13.06	0.76
	Q1_4	0.76 **	0.08	9.84	0.59
	Q1_5	0.98 **	0.09	11.40	0.66
Job satisfaction					
	Q2_1	1.00	0.80	0.83	
	Q2_2	1.02 **	0.05	18.98	0.89
	Q2_3[+]	0.38 **	0.07	5.73	0.33
	Q2_4	0.94 **	0.05	18.70	0.88
	Q2_5[+]	0.75 **	0.05	13.85	0.71
Career satisfaction					
	Q3_1	1.00	0.68	0.79	
	Q3_2	1.01 **	0.06	15.61	0.82
	Q3_3	0.98 **	0.08	12.79	0.70
	Q3_4	1.03 **	0.07	15.59	0.82
	Q3_5	0.74 **	0.06	11.59	0.65

Notes. Observed variable: questionnaire items; SE: standard error; Std.all: standardized latent and observed variables.

[+] Negatively worded.

[*] $p < 0.05$; [**] $p < 0.01$.

Table 5.3 - Measurement model

DV	IV	Estimate	SE	z-value	Std.all
Life satisfaction					
	SR	0.33 *	0.16	2.02	0.13
	Age	0.00	0.01	-0.13	-0.01
	Gender	-0.08	0.10	-0.86	-0.06
	GPA	0.02	0.10	0.22	0.01
Job satisfaction					
	SR	0.46 *	0.18	2.56	0.15
	Age	0.00	0.01	0.13	0.01
	Gender	-0.32 **	0.11	-2.96	-0.18
	GPA	-0.01	0.11	-0.09	-0.01
Career satisfaction					
	SR	0.24	0.16	1.55	0.09
	Age	-0.01	0.01	-0.57	-0.04
	Gender	-0.16	0.10	-1.67	-0.10
	GPA	0.12	0.10	1.16	0.07
Change in compensation (%)					
	SR	0.21	0.29	0.71	0.04
	Age	-0.10 **	0.02	-4.47	-0.25
	Gender	-0.36 *	0.18	-2.01	-0.11
	GPA	0.19	0.19	1.04	0.06
Job offers received					
	SR	0.18	0.26	0.69	0.04
	Age	-0.02	0.02	-0.98	-0.06
	Gender	-0.04	0.16	-0.23	-0.01
	GPA	0.13	0.16	0.82	0.05

Notes. DV: dependent variable; IV: independent variable; SE: standard error; Std.all: standardized latent and observed variables; SR: student representative, 0 = no, 1 = yes; Gender: 0 = male, 1 = female; GPA: grade point average, ranges between 0 and 10.
* $p < 0.05$; ** $p < 0.01$.

Table 5.4 - Structural model

The model with the results is presented in Figure 5.1.

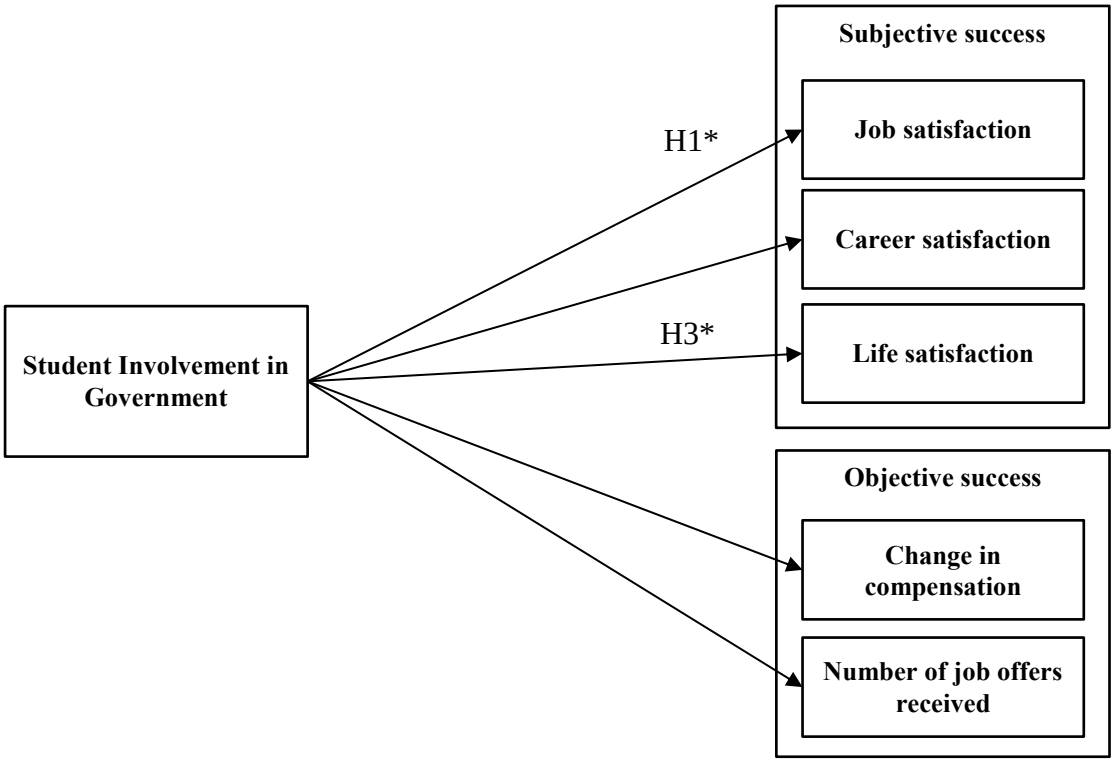

Figure 5.1 - Model and results (p <.05, ** p < .01)*

5.6 Discussion

This section discusses the study's findings and the implications for research and practice. This chapter studied objective and subjective success as outcomes of student involvement in a development program. The findings indicate that student involvement predicts job and life satisfaction. Through involvement, students connect the classroom to the community, engage in networking, and develop as professionals (S. K. Gardner & Barnes, 2007). Consequently, they develop necessary skills for the future job, develop awareness of the organizational structure, satisfy their needs for job success, and satisfy personal and life goals of development and growth. These outcomes are expected to enhance their satisfaction with their job and life.

Student involvement had no significant effect on career satisfaction. As per Table 5.4, the impact of involvement is the strongest on job satisfaction, with the highest standardized coefficient. This finding could be attributed to several factors. First, when assessing satisfaction, individuals anchor their responses to their ideal situation (Diener

et al., 1985). This means that one's current level of satisfaction is related to one's personal criteria of what an ideal situation is. The non-significant relationship between involvement and career satisfaction could be attributed to those individuals who have high aspirations for their careers and end up scoring lower on their satisfaction with what they have achieved so far. This is relevant for this study's context since the participants are MBA graduates who are expected to have high career aspirations, to be interested in personal growth, and to be keen on expanding their opportunities (Hay & Hodgkinson, 2006; Sinclair & Hintz, 1991). Second, when compared to career satisfaction, job satisfaction relates to shorter-term goals. As a result, the impact of involvement might be more visible on job satisfaction than on career satisfaction. Consequently, involvement's impact is expected to be more significant for job satisfaction than for career satisfaction. Finally, the number of factors affecting career satisfaction might be more than the number of factors affecting job satisfaction. This means there is a possibility that the relationship between involvement and career satisfaction is weakened by the exclusion of some variables from the analysis. Future research could add some factors that might impact the relationship between involvement and career satisfaction, such as career aspirations.

Furthermore, student involvement had no significant impact on both measures of objective success. This could be attributed to the student's motivation for being involved. Students were probably involved in the program for developmental and growth motives. As mentioned previously, involved students did not receive any financial compensation for their involvement. Hence, students' motivation for involvement is more developmental and intrinsic than monetary and extrinsic. As a result, involvement is expected to have a stronger association with subjective measures of success (e.g. satisfaction) than with objective measures of success (e.g. compensation).

5.6.1 Implications

5.6.1.1 Implications for research

This study has several contributions to and implications for research. The findings of this study enhance the predictive validity of the concept of involvement, by showing that it positively predicts job satisfaction and life satisfaction. The findings also provide additional evidence for the reliability and the factor structures of the scales used (e.g.

the Satisfaction With Life Scale). Furthermore, the results indicate the need to modify the scales and to allow the error terms of some items (e.g. items 3 and 5 of the job satisfaction index) to be correlated. This finding could help future studies better use the scale and better interpret their results.

5.6.1.2 Implications for practice

This study also has contributions to and implications for practice. These implications relate to educational institutions, organizations, and individuals. Regarding educational institutions, the findings suggest that student involvement, throughout development programs, is crucial for students' subjective success in the future. For positioning and ranking purposes, institutions tend to place more emphasis on objective measures of success. However, as suggested by some researchers (e.g. Richards, 2012), this investigation focuses on the viewpoint of the key stakeholders—the students—and places more emphasis on their subjective success in the form of students' satisfaction with their jobs, careers, and lives.

This study suggests that programs could provide students with education for involvement. Furthermore, educational institutions could promote involvement and motivate students to be more involved. They could involve students in board meetings, give them more authority, and invite them to participate in decision-making processes. Through these involvement activities, students would gain real-life experiences and would practice and learn leadership in a safe learning environment. Through these learning experiences, educational institutions would ensure a practical and effective development of leadership. The outcomes of such involvement activities include higher levels of job satisfaction and life satisfaction. Educational institutions could also train teachers in the methodologies that can boost student involvement.

At the organizational level, senior human resource managers and decision makers are recommended to motivate their employees or potential hires that are currently participating in development programs to be involved in these programs. Many organizations require their employees to pursue graduate degrees such as MBA. This investigation suggests that for employees' success in the future, it is not sufficient to passively pursue a degree. Those employees need to be involved in these degrees to achieve higher levels of subjective success. These senior human resource managers could provide their employees with the support and resources needed for their

involvement in these programs. By being involved in these programs, employees have a higher chance of being satisfied with their jobs and lives in the future. Employee satisfaction and well-being is a crucial concept for human resource management (Pfeffer, 1998; Taris & Schreurs, 2009). Involvement is a significant way for enhancing current and future employees' levels of subjective success.

At the individual level, it is suggested that individuals should seize opportunities to be involved in their graduate programs. These programs provide a safe environment for them to practice and learn leadership. Those who practice leadership at an early stage have higher chances of being effective future leaders (Amit et al., 2009). This study further shows that through involvement in government, individuals could become more satisfied with their job and life, in the future, than those who do not get involved.

5.6.2 Limitations and future research

The sample was extracted from the population of participants in a development program at one business school. This might challenge the external validity of the conclusions. However, this limitation was mitigated by the fact that the sample is diverse in terms of background and industry. The participants originate from more than 75 different countries, are currently living in different countries, and are working in different industries. Furthermore, these participants were from different cohorts, between 2006 and 2012, which further mitigates the threat to external validity.

Researchers could analyze this chapter's findings in different contexts, and could control for additional variables, such as experience and undergraduate education. On a separate note, this chapter investigates students' post-program levels of objective and subjective success, as outcomes of involvement. Future research could test the effect of involvement on other variables, such as on-the-job performance. Furthermore, future research could explore the relationship between different types of involvement and success.

5.7 Conclusion

The findings of this study indicate that student involvement is a crucial concept for graduate success. Student involvement in government predicts student's post-education levels of job satisfaction and life satisfaction. Some authors suggest that educational institutions should not just focus on theory, they should also focus on practice (A. Y.

Kolb & Kolb, 2005). By inviting students to be involved, organizations and educational institutions could effectively teach leadership, not only through theory, but also through practice. In fact, students learn leadership by practice (Eich, 2008). Through their involvement in government, students could practice leadership in a safe developmental environment, and consequently they could develop characteristics that are useful for their success in the future.

5.8 Appendices

Appendix 5.1

Job satisfaction index (Brayfield & Rothe, 1951):

To what extent do you agree with the following statements?

A five-point Likert scale (strongly disagree to strongly agree)

1. I feel fairly satisfied with my present job.
2. Most days I am enthusiastic about my work.
3. Each day at work seems like it will never end.
4. I find real enjoyment in my work.
5. I consider my job to be rather unpleasant.

Appendix 5.2

Career satisfaction scale (J. H. Greenhaus et al., 1990):

To what extent do you agree with the following statements?

A five-point Likert scale (strongly disagree to strongly agree)

1. I am satisfied with the success I have achieved in my career.
2. I am satisfied with the progress I have made toward meeting my overall career goals.
3. I am satisfied with the progress I have made toward meeting my goals for income.
4. I am satisfied with the progress I have made toward meeting my goals for advancement.
5. I am satisfied with the progress I have made toward meeting my goals for the development of new skills.

Appendix 5.3

Satisfaction With Life Scale (Diener et al., 1985):

To what extent do you agree with the following statements?

A five-point Likert scale (strongly disagree to strongly agree)

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Appendix 5.4

Change in compensation:

What is the percentage change in your total compensation (basic salary + bonus) over the past 5 working years (excluding MBA period)?

1. [-100, 0%[
2. [0, 50%[
3. [50, 100%[
4. [100, 150%[
5. [150, 200%[
6. 200% or more

Appendix 5.5

Job offers received:

In total, how many job offers did you receive within one year around your MBA-graduation date (six months before and six months after)?

1. Zero
2. One
3. Two
4. Three
5. Four or more

6

Discussion, contributions, limitations, future research, and concluding thoughts

As research and practice point toward effective leadership, leadership development has become central to education. Many educational institutions have developed leadership-development programs (Astin, 1991; Dugan & Komives, 2010). These programs aim to develop leadership and to expose individuals to leadership experiences. However, leadership development is a complex theme, is inherently multilevel and longitudinal, is a dynamic process, and involves numerous individuals and interactions that persist over time (Day et al., 2014). The development of effective leadership involves more than simply deciding on which leadership theory or model to invoke. Institutions and organizations are more interested in learning and applying the most effective and efficient manner in which to develop leaders and leadership (Day et al., 2014).

However, students learn leadership by practice (Eich, 2008). Several researchers highlight the importance of providing opportunities for students to have leadership experiences at early stages of their lives and careers (Amit et al., 2009). Through these early leadership experiences, individuals are more likely to become effective leaders in the future (Amit et al., 2009). These experiences enhance their self-efficacy, self-perception as a leader, and leadership-related knowledge (Amit et al., 2009). One of the ways for students to learn and practice leadership is through their involvement in their programs (Astin, 1977, 1993; Pascarella & Terenzini, 2005). Through these involvement experiences, students are exposed to real-life situations and are more likely to achieve their learning goals and to be successful (Kuh et al., 2006; Wooten et al., 2012).

The overarching research question of this thesis is:

> *Do learning styles, competencies, and operating philosophies account for post-education success of students involved in government experiences?*

This question was investigated in two stages. The first stage analyzed the antecedents of student involvement in government (Chapters 3 and 4). The second stage analyzed the outcomes of student involvement in government (Chapter 5). The general findings of this work are presented in the two following sections, corresponding to the two main stages: *antecedents* and *outcomes* of student involvement.

6.1 Antecedents of student involvement

Student involvement has been shown to be crucial for education (e.g. Astin, 1977, 1993; Pascarella & Terenzini, 2005). Yet, research on the antecedents of student involvement has been limited. Learning styles, competencies, and operating philosophies are related concepts and have been commonly used in education (Batista-Foguet et al., 2015). They have been associated with several fundamental variables for education, such as student success (Amdurer et al., 2014; Barmeyer, 2004; Boyatzis et al., 2000; Boyatzis & Saatcioglu, 2008; A. Y. Kolb & Kolb, 2005; Kuh et al., 2006; McClelland, 1973). However, prior to this thesis, no research has explored the relationship between these concepts and student involvement in government. This thesis analyzes these relationships and presents several findings.

First, it shows that learning styles are crucial for student involvement, specifically, the diverging and accommodating learning styles. Individuals with these learning styles have tendencies toward the concrete experience learning mode. This learning mode involves learning through emotions, senses, and feelings. This means that invoking emotions in the learning process increases the chance of students being involved.

Second, it shows that competencies are also crucial for student involvement, especially the relationship management competencies. These competencies involve coaching and mentoring others, inspiring and motivating them, and enhancing their educational experiences through conflict management. These competencies enhance students' chance of being involved in government, where they represent their peers, act in their best interest, and enhance their educational experience.

Finally, it studies gender's moderator effect on the relationship between the previously mentioned concepts and student involvement. Research findings in the literature have suggested different effects of gender on relationships between these concepts—especially emotional intelligence—and dependent variables (e.g. success, performance) (Hopkins & Bilimoria, 2008; Mandell & Pherwani, 2003; K. V. Petrides & Furnham, 2006; Salguero et al., 2012). Chapter 3 suggests that gender does moderate the relationship between competencies and student involvement. This moderation favors females over males. However, when analyzed at the cluster level (Chapter 4), the moderation effects of gender appear to be in different directions for different clusters. The relationship between self-awareness and involvement is stronger for females. The

relationship between cognitive competencies and involvement is stronger for males. This means that when examining gender's moderator effect on the relationship between emotional intelligence and dependent variables, important relationships that are only visible at the cluster level might be disregarded. Hence, Chapter 4 suggests that when examining gender's moderator effect, it needs to be done at the cluster level.

6.2 Outcomes of student involvement

With regard to the outcomes of student involvement, several researchers have identified a significant relationship between involvement and students' psychological well-being, confidence, and drive to achieve (House, 2000; Kilgo et al., 2016; Webber et al., 2013). Some researchers have also suggested an association with important competencies and skills, and with academic success (Astin, 1984; Laosebikan-Buggs, 2006; Pascarella & Terenzini, 2005; P. V. Thomas & Higbee, 2000; Webber et al., 2013; Whipple & Murphy, 2004). Most empirical research that studied the outcomes of student involvement has focused on academic success (e.g. grade point average, retention, graduation). Research on the impact of student involvement on post-education success has been limited. This thesis analyzes the effect of students' involvement in higher education on their post-education success.

Research on success has mainly focused on objective success (e.g. salary; Dyke & Murphy, 2006). This thesis studies the impact of student involvement on both types of success, objective success and subjective success (Dyke & Murphy, 2006; Gattiker & Larwood, 1986; Hay & Hodgkinson, 2006; Melamed, 1996; Schein & Van Maanen, 1977). It assesses objective success in terms of change in compensation over the past five years and the number of job offers received before and after graduation. As for subjective success, it measures graduates' levels of job satisfaction (Brayfield & Rothe, 1951), career satisfaction (J. H. Greenhaus et al., 1990), and life satisfaction (Diener et al., 1985) several years after their graduation.

Chapter 5 shows that student involvement has an impact on job satisfaction and life satisfaction. Those who were involved in the program had significantly higher levels of job satisfaction and life satisfaction than their counterparts. However, there was no significant impact of involvement on objective success or career satisfaction. Hence, the conclusion is that student involvement helps enhance graduates' subjective success—specifically, their job satisfaction and life satisfaction.

6.3 Contributions and implications

This section focuses on the contributions of this thesis and its implications for research and practice.

6.3.1 Research

This thesis contributes, in different ways, to research in the fields of leadership, education, learning, and psychology. The following paragraphs highlight the main contributions to research.

First, it invokes theories from these fields to identify the antecedents and outcomes of student involvement. Specifically, it investigates learning styles, competencies, and operating philosophies as antecedents of student involvement, and subjective and objective success as outcomes.

Second, it develops and tests models of the relationships between (1) learning styles, competencies, and operating philosophies; (2) student involvement; and (3) objective and subjective success. It uses advanced methodology to test these models and it takes into account recent updates to these methodologies (e.g. Batista-Foguet et al., 2015).

Third, it adds to the construct validity (predictive, concurrent, convergent, and discriminant) of the different concepts used. In terms of predictive validity, the three studies show that some constructs (e.g. involvement) help us better understand other constructs (e.g. success). As for concurrent validity, the studies show that the constructs help distinguish between groups that are supposed to be theoretically different (e.g. involved students are different from non-involved students in terms of their competencies and learning styles). Regarding convergent validity, the three studies exhibit satisfactory correlations between constructs that are supposed to be theoretically associated (e.g. competencies and learning styles). As for discriminant validity, the studies show that the constructs were not related to constructs that they are not supposed to relate to (e.g. competencies and general intelligence as measured by GPA).

Fourth, it supports the reliability of the scales used (ESCI, the Satisfaction With Life Scale, etc.). The reliability coefficients of all scales used were satisfactory and sufficiently high. In addition, these scales exhibited satisfactory inter-correlations. For instance, the abstract conceptualization learning mode was significantly correlated to cognitive competencies. Moreover, this thesis finds that, as research suggests, the

concrete experience learning mode is significantly related to the humanistic operating philosophy (Boyatzis et al., 2000).

Fifth, it supports the factor structures of the scales used. However, the measurement models of some scales required some modifications. There is a need to modify some of the scales and to allow the error terms of some items (e.g. items 3 and 5 of the job satisfaction index) to be correlated (item specificity). This finding could enhance the interpretability of the scale's results in future studies.

Sixth, it provides support to the current clustering of the competencies into self-awareness, self-management, social awareness, relationship management, and cognitive competencies (Boyatzis, 2009). It also shows that this clustering is necessary; not all clusters predicted student involvement, only the relationship management cluster did. Hence, this thesis endorses the suggestion by Boyatzis (2009) that when using the behavioral approach to emotional intelligence, it is necessary to cluster the competencies into emotional self-awareness, self-management, social awareness, relationship management, and cognitive competencies.

Finally, it studies gender's moderator effect on the relationship between the different concepts (learning styles, competencies, and operating philosophies) and student involvement. Gender had a significant moderator effect on only one relationship—the one between competencies and student involvement (Chapter 3). However, when the relationship was analyzed at the cluster level (the five competency clusters), gender's moderator effect was diverse for different clusters (Chapter 4). For instance, females were favored in the relationship between self-awareness competencies and student involvement, whereas males were favored in the relationship between cognitive competencies and student involvement. Hence, the conclusion is that gender does have a moderating effect, yet the effect varies for different competency clusters. This study adds to the current debate on gender's role and suggests that when examining its moderator effect on relationships between competencies and outcome variables, it is necessary to do so at the cluster level.

6.3.2 Practice

This thesis shows that competencies (relationship management) and learning styles (diverging and accommodating) are necessary for student involvement and that student involvement is associated with graduates' job satisfaction and life satisfaction. It also shows that gender has a moderator effect on the relationship between competencies and student involvement. Based on these findings, this thesis has some implications for practice. These implications relate to educational institutions and programs, organizations, and individuals. This section presents and discusses these implications.

6.3.2.1 Educational institutions and programs

Institutions, program managers, and practitioners can achieve substantial developments, but only if adequate analysis is conducted so as to ensure that the right development program is provided to the right individuals (Collins & Holton, 2004). These programs need to focus on students and need to ensure an alignment between the institution's aim, strategy, and operations (Bush, 2003). By focusing on development areas that matter for students' future, educational institutions and program managers could achieve significant improvements and could enhance programs' efficiency and effectiveness. The areas that this thesis focuses on and identifies as crucial for the students are learning styles and competencies. These areas enhance the likelihood of students being involved in their programs. Through their involvement at early stages of their careers, students practice leadership (Eich, 2008) and gain real-life experiences (Kuh et al., 2006; Wooten et al., 2012) through which they learn to deal with issues that they are expected to handle in the future (e.g. power struggles, conflicts, and emotions). By introducing these concepts to their development programs and through effective training, educational institutions and program managers could help bridge the gap between education and practice.

Several institutions consider leadership-development as a strategic aim, yet, they operationalize their development efforts through theories and text-driven education. Leadership development should not solely focus on theory, but should also focus on practice (A. Y. Kolb & Kolb, 2005). These institutions could provide the opportunity for students to learn leadership through practice. Through involvement activities, students learn leadership by engaging in it and educational institutions ensure a practical and effective development of leadership. Furthermore, educational institutions could

invite students to be more involved. They could give students more authority, listen to their opinions, include them in board meetings, and allow them to participate in decision making. These involvement activities provide students with real-life experiences through which they could practice and learn leadership in a safe learning environment. Through these learning experiences, educational institutions would promote a practical and effective development of leadership. The outcomes of such involvement activities include higher levels of job satisfaction and life satisfaction.

This thesis suggests that student involvement is crucial for students' subjective success in the future. However, educational institutions and ranking agencies tend to place more emphasis on objective measures of success than on subjective ones. This thesis focuses on a central party in the education system—the student (Richards, 2012)—and places more emphasis on subjective success in the form of students' satisfaction with their jobs, careers, and lives. Competencies and learning styles help involve students and enhance their future levels of subjective success. Hence, it is crucial to focus on these two development areas. This thesis suggests that program managers and educational institutions could tailor their programs to focus on the assessment and development of students in these two areas. First, they could develop and train students based on experiential learning. This theory is helpful for student involvement. The concrete experience learning mode—in which students learn through senses, emotions, and feelings—is extremely relevant. For this purpose, case studies and culture simulations would be helpful (Barmeyer, 2004). Second, they could develop students' awareness and management of emotions (emotional and social competencies). There is evidence that these competencies could be developed (Amdurer et al., 2014; Boyatzis & Saatcioglu, 2008; Boyatzis et al., 2002).

It is recommended that program managers design leadership-development classes to be more recursive than discursive. These classes could shift away from text-driven education toward a process of experiencing, reflecting, thinking, and acting (A. Y. Kolb & Kolb, 2005). Throughout that process, they could focus on students' learning styles and provide them more opportunities to learn through concrete experience. Concrete experience is crucial for student involvement, enabling students to understand their environments through emotions, senses, and feelings. Concrete experience is strongly associated with interpersonal abilities which are necessary for involved students.

Among the different competency clusters, relationship management competencies are found to be the most important for student involvement. Educational institutions are advised to develop their students' competencies, especially their relationship management competencies. Most of these competencies focus on helping and developing others (e.g. coaching and mentoring, teamwork). By emphasizing these competencies, institutions could promote a culture of helping others and a holistic learning environment (Wooten et al., 2012). This culture would invite students to be involved in campus life and to enhance the educational experience in general, for all students.

Competencies could be developed and they have a long-lasting effect (Amdurer et al., 2014; Boyatzis & Saatcioglu, 2008). Students could be trained in relationship management competencies: what they are, how they could be developed, and how they impact the involvement process and the student experience in general. Through the development of these competencies, educational institutions could adequately train their students for involvement and they could enhance the effectiveness of the involvement efforts of those students. These competencies (e.g. conflict management) could prepare students to better deal with situations they are expected to handle in student government and in their future careers, such as conflicts, internal power struggles, chaos, and disorganization. Educational institutions could involve specialists to oversee the process and to ensure that relationship management competencies are properly assessed, developed, and implemented.

Furthermore, program managers are advised to accommodate for individual preferences and differences. Males and females exhibit different levels of association between their competencies and their involvement (Chapters 2 and 3). These differences could be related to individual preferences or to the nature of the task that they will be involved in. By understanding and appreciating these differences, educational institutions would support the personal development and growth of the students. One way to do so is to cater to student needs and to develop students' competencies based on those needs. Individuals who have stronger tendencies toward cognitive competencies could be assigned to positions that have a stronger need for those competencies (e.g. head of finance club). This could be a helpful method to encourage students to be involved in tasks that they value. Through the careful assessment of (1) the students (their competencies and preferences), and (2) the involvement tasks (their nature and required

competencies), institutions could better match individuals to tasks and they could involve students in an effective manner.

As part of the program, institutions could develop learning spaces and environments that enable students to better understand their environments through emotions. One way of doing so is by involving experts to guide the students and to ensure that a safe environment is provided for them to learn leadership by doing it. These holistic learning environments could provide students with opportunities to be involved and to practice leadership. For instance, institutions could create committees, teams, and clubs and let students manage them. These groups could focus on a variety of issues that matter to students such as campus life, environmental issues, educational issues, social issues, and recruitment issues.

Furthermore, teachers, faculty, and staff play an important role in student involvement (Astin & Astin, 2000). Educational institutions could provide them with training in the methodologies that can affect student involvement. These trainings could focus on methods that develop competencies and that invoke experiential learning. It is crucial for teachers to be aware of the impact of these methodologies on students' future success. Furthermore, institutions could incorporate metrics that help teachers and program managers assess and monitor students' development and involvement. These metrics would be crucial for ensuring the effectiveness of the training efforts.

6.3.2.2 Organizations

Many organizations require their employees to pursue graduate degrees such as an MBA. This thesis suggests that for employees' subjective success in the future, it is not sufficient to pursue the graduate degree in a passive fashion. Rather, those employees need to be involved in these degrees to achieve higher levels of subjective success. It is recommended that senior human resource managers and decision makers encourage their employees or potential hires that are currently participating in development programs to be involved in these programs. These managers could provide their employees with the necessary support and resources for their involvement in these programs. By being involved in these programs, employees have a higher chance of being satisfied with their jobs and lives in the future. Employee satisfaction and well-being is a crucial concept for human resource management (Pfeffer, 1998; Taris &

Schreurs, 2009). Involvement is a significant way of enhancing current and future employees' levels of subjective success.

Involvement in the form of representation provides an opportunity to practice leadership (Eich, 2008) and is predictive of leadership potential (Amit et al., 2009; Astin, 1993). Hence, by focusing on involvement and its predictors, companies could prepare their employees for future endeavors and enhance their chances of emerging as effective future leaders. It is suggested that companies could invest more resources in assessing competencies, learning styles, and early-stage involvement. Furthermore, they could encourage their employees to join and to be involved in development programs that focus on competencies and that consider individual learning styles. Their involvement in such programs enhances their leadership potential and their chances of being successful in the future.

6.3.2.3 Individuals

Several development programs have emphasized the importance of competencies and learning styles (Boyatzis et al., 2013, 2002). This thesis establishes a positive effect of competencies and learning styles on involvement. It is recommended that individuals who are interested in leadership development join programs that focus on experiential learning and on the development of competencies. It is not sufficient to join these programs; it is important to be involved in them. Being involved in such programs provides individuals with the opportunity to practice leadership and to enhance their potential for effective future leadership (Amit et al., 2009; Eich, 2008). This thesis further shows that through involvement in government, individuals have a higher chance of being satisfied with their job and life, in the future, than those who do not get involved.

In addition, based on the relationship between the CE learning mode and the likelihood of being involved, individuals are advised to constantly experience and understand their environments with their senses, feelings, and emotions. The more emotions they invoke into their understanding of their environment, the stronger their connection with their environment will be; and consequently, the higher their chances of being involved and practicing leadership.

Furthermore, individuals are encouraged to seize opportunities to develop their competencies, especially the relationship management competencies. Development

programs provide a safe environment for them to develop these competencies and to practice and learn leadership through involvement. Those who practice leadership at an early stage have higher chances of being effective future leaders (Amit et al., 2009).

6.4 Limitations, threats, and future research

One main limitation of the studies is that they are not experimental or quasi-experimental; they are correlational by design. This means that causality cannot be invoked. Hence, when discussing an "effect" or "impact" of one variable on another, this referred to the variance that one explained of another. In the future, the findings could be tested in experimental studies, through which causality could be established.

6.4.1 Construct validity

The studies might be subject to some threats to construct validity (Trochim, 2001). Some of the constructs have been criticized for their validity. For instance, there has been continuous dispute regarding the validity of the concept of emotional intelligence and the measures used to operationalize it. The measures of emotional intelligence have been criticized for their psychometric characteristics which might thereby lead to invalid conclusions (e.g. Landy, 2005; Locke, 2005; Murphy, 2006; Zeidner, Matthews, & Roberts, 2004). Additional methodological analyses could be helpful to improve the current measures and to enhance emotional intelligence's construct validity.

Another threat to construct validity is confounding variables. This means that the main cause for the observed effects could be due to variables that were not included in the analyses. However, the studies here have incorporated several constructs that are correlated and that have been shown to have incremental validity (e.g. over personality traits). Furthermore, these studies have controlled for several relevant variables such as age and grade point average. In the future, research could test the hypothesized relationships while including additional variables.

6.4.2 Internal validity

The studies might be subject to several threats to internal validity (Shadish, Cook, & Campbell, 2002). History could be one. This refers to large-scale events that affect participants and blurs the differentiation of whether the changes in the dependent variables are due to changes in the independent variables or to the event itself. The financial crisis might pose a history threat to the internal validity of the findings since

some of the participants are from cohorts before the crisis while others are from the period after. To mitigate this risk, the year of entry was incorporated in the analyses to ensure that the impact of the financial crisis is controlled for.

Furthermore, maturation could be another threat to internal validity. This threat means that one would not be able to tell whether the changes in the dependent variable are due to changes in the independent variable or to time. This threat is applicable to the three studies since the participants belong to cohorts between 2006 and 2012. This means that at the third stage of the data collection process, in 2017, some had a five-year lag while others had an eleven-year lag. To mitigate this risk, the year of entry was included in the analyses. By controlling for this variable, the maturation threat is mitigated. Future research could conduct a longitudinal study to analyze the variables' evolvement over different periods of time.

Confounding variables could be another possible threat to internal validity. This threat relates to external variables that might be causing the observed changes in the dependent variable. The three studies control for several important variables (e.g. age, year of entry, grade point average) including ones that Rosnow and Rosenthal (1991) classify as bio-social effects. These variables are considered satisfactory control variables for these studies. Future research could conduct additional analyses to investigate the potential effect of other variables such as education background and other personality traits.

6.4.3 External validity

The external validity of the conclusions of the studies might be challenged by the fact that the population was extracted from one program at one business school (Trochim, 2001). This means that the findings and conclusions might not be generalizable to the entire population of students, educational institutions, programs, or practitioners in different sectors. However, several factors helped mitigate this possible limitation.

First, participants have international backgrounds. They originate from more than 75 different countries and have worked in different industries. Also, at the third stage of the data collection process, many graduates had relocated to different countries and had changed professions and industries. The population and the used samples are considered to have sufficient variability. This variability helps ensure that the findings are not bounded to a specific country, culture, profession, or industry.

Second, these participants were selected from different cohorts, between 2006 and 2012. This helps ensure that the findings apply to different cohorts. Third, the concepts used in this thesis are reliable, coherent, and valid for assessing individuals in diverse cultures and countries (e.g. Emmerling & Boyatzis, 2012). Hence, the threat to external validity is mitigated. Researchers could test these findings in different contexts, and could control for additional variables, such as experience and undergraduate education.

6.4.4 Statistical conclusion validity

The findings of the studies might be subject to some threats to statistical conclusion validity (Shadish et al., 2002). This thesis focuses on student involvement in government. The variable that measures this concept is binary. Due to its reduced variability, this variable could weaken the correlations (Sackett, Lievens, Berry, & Landers, 2007). Yet, many correlations were high and significant. This means that, even though some of the correlations might be weakened, this threat is considered acceptable. Future research could develop a scale for this type of involvement or could test the hypothesized relationships in this thesis, but with other types of involvement that have existing scales.

Furthermore, to enhance statistical conclusion validity, variables were standardized when possible. The comparison of the standardized values to the non-standardized ones suggests that the threat to statistical conclusion validity is mitigated. Also, the three studies controlled for as many extraneous variables as possible, including grade point average, year of entry, and so forth. Future research could include other relevant variables that could affect the analyses.

6.4.5 Future research

This line of research has analyzed important relationships for education, management, and other fields. Yet, these relationships were investigated using correlational studies. A main arena for future research is the examination of these relationships using experimental or quasi-experimental research designs. These designs could enable us to establish causality and they could help prevent threats to the internal validity of the findings. In addition to this main arena and to the previously-mentioned suggestions, this section provides other suggestions for future research.

First, this thesis has analyzed the impact of learning styles, competencies, and operating philosophies on student involvement. Future research could include additional independent variables that might be related, such as the different types of motives (McClelland, 1975). Furthermore, research could also include additional dependent variables that might be related to student involvement, such as engagement.

Second, it also analyzed the impact of student involvement in government on the students' post-education levels of objective and subjective success. Future research could explore the effect of involvement on other variables, such as on-the-job performance, engagement, and so forth. It could also study the association between their involvement in education and their future leadership style. Furthermore, future research could look at other types of involvement and analyze the relationship between them and success.

Finally, it focused on student involvement in government which was assessed by whether or not the individual held a student government representative position. Student representatives were elected to hold that position. Among the individuals who ran for student representation, some won and others lost. Those who lost the elections were not discarded from the population. With that considered, student representatives were significantly different from their peers (those who did not run for the elections and those who ran and lost). This strategy enhanced the validity of our conclusion, that student representatives are significantly different from their peers in terms of their learning styles, competencies, and subjective success. However, this thesis did not explore the election process and did not distinguish those who did not run for the elections from those who ran but lost; all of them were considered as non-representatives. Future research could focus on the election process and on the different categories of students: won, lost, and did not run.

6.5 Concluding thoughts

Leadership is learnt by practice (Eich, 2008). This thesis presents a model for students to learn leadership by practice. It suggests that through their involvement in the government of their programs students are more likely to be satisfied with their jobs and lives in the future. Although research places more focus on objective success (Dyke & Murphy, 2006), this thesis analyzes both objective and subjective success. It invites educational institutions to place more emphasis on student involvement. They are

advised to inspire their students to be involved, to network, to connect their classroom to the community, and to grow. These activities are expected to strongly contribute to the students' levels of job satisfaction and life satisfaction. At the end of the day, how could students become effective future leaders if they are not satisfied with their jobs and lives? How would they understand others' needs and concerns if they are not involved in their communities?

The completion of this thesis brought about a series of developments at the professional and personal levels. Each step of the process had its own challenges and lessons learned—from the development of the research proposal, to the decisions on the empirical approaches and methodologies, to the development and administration of the survey, to the analysis of data, and finally, to the evaluation of the contributions and limitations of this research. These limitations open the door to new beginnings. They represent a plan for future research; they spark the beginning of a career in leadership development, involvement, and success.

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