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Leader–Member Exchange Between Academic Deans and Faculty in Community Colleges

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Walden University
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Abstract

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Colleges

by

Alexander L. Clifford

MBA, Thomas College, 1997

BS, Thomas College, 1996

AAS, Kennebec Valley Community College 1994

Doctoral Study Submitted in Partial Fulfillment

of the requirement for the Degree of

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Abstract

Between 2011 and 2016, 84% of senior leaders in community colleges indicated

retirement intentions and thereby exposed a need to provide better mentorship, training,

and early selection of potential replacements for college executives. The purpose of this

study was to determine the nature and extent of the relationships between the independent

variables (mentorship, leadership training, and time in the position as dean) and the

dependent variable (demonstrated leadership of academic deans in community colleges).

A popular approach that describes this dynamic is Graen and Uhl-Bien's leader–member

exchange theory, which was operationalized by the LMX–7 instrument. A causal–

comparative design was used to assess the effects of deans' time in the position, previous

mentorship, and leadership training on their LMX scores. I sent the LMX–7 to academic

deans and faculty members at 1,641 of the 1,655 community colleges in the United

States. Responses were received from 45 academic deans and 508 faculty members. A

linear regression showed no significant correlations between the deans' leadership

training, mentorship, or time in the position as academic dean and the LMX–7 score

reported by their faculty. On the other hand, the findings showed that LMX scores

generally were lower than was expected and suggested that gender equality may be an

issue during the selection process for deans. These findings may lead to a better

understanding of leadership at the community college level, the potential for beneficial

research into gender inequality during dean selection, and a deeper understanding of the

effect that previous leadership training, mentorship, and time as a dean have on the

dean's relationship with faculty.

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Dedication

To my supporting wife, family, colleagues, and God.

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Chapter 1: Introduction to the Study

Over a quarter century ago, Roueche, Baker, and Rose (1989) predicted a high

turnover of community college executives in the years 2005 to 2017. They also

recognized the early warning signs for community colleges to start training and

mentorship programs to prepare the next generation of leaders who will replace these

community college executives as they retire. More recently, Murray (2013) documented

this same phenomenon occurring. Specifically, between the years of 2011 and 2016,

approximately 84% of community college leaders will retire (Murray, 2013). As

Roueche et al. predicted the retirement of these senior leaders of the community colleges

has exposed a shortfall in the number of properly trained individuals to replace them.

Furthermore, Valeau and Raby (2016) stated that this turnover of community college

leaders has exposed a need to provide better mentorship, training, and early selection of

potential replacements for college executives.

Even though there are educationally qualified replacements for these executive

positions, Behling (2014) stated that there are no formal mechanisms that teach aspiring

academic deans how to be a dean. Community colleges typically hire candidates with

leadership or mentorship experience into presidency positions. This has left the lesser

experienced and less trained applicants to fill the role of academic dean and the training

and mentorship to prepare these candidates for the executive positions has not occurred.

Hiring lesser experienced, non–mentored, and less trained academic deans is a problem

because academic deans must possess the solid leadership, organizational, and

interpersonal skills gained through mentorship and training to prevent the alienation of

their faculty members and to prevent permanent damage to their relationships with peer deans across the institution (Behling, 2014).

Lastly, the lack of quality leadership in community colleges is causing job satisfaction and performance problems with faculty members (Sypawka, Mallett, & McFadden, 2010). Roueche et al. (1989) stated that quality community college leadership relates directly to subordinates' higher performance. McNair, Duree, and Ebbers (2011) further made the case that community college leadership directly relates to the quality of faculty instruction. Within the realm of academia, the leadership of a school has a direct effect on student achievement through the efficacy of faculty (Ronfeldt, Loeb, & Wyckoff, 2013).

Therefore, by not receiving leadership training or mentorship, community college academic deans are unprepared to effectively lead faculty (Gmelch, 2000). Because of this, faculty members are negatively impacted in two primary ways. First, by not having adequate role definition, faculty members will neither seek the guidance of their dean needed to resolve issues with curriculum, students, or other faculty members, nor seize opportunities to modernize their courses and programs. Second, faculty members will not develop a larger organizational vision to move their entire college forward.

Scholarly research was needed to investigate the effects that prior mentorship and leadership training have on an academic deans' leadership of their faculty members. According to McNair et al. (2011), community college leaders who received prior leadership training and mentorship reported greater job performances early on in their tenures. This issue is important in community colleges because academic deans within community colleges are not only concerned with faculty performance within their

institutions, they must also recognize the changes needed to keep the programs their faculty members teach modern and relevant (Yielder & Codling, 2004).

Even though McNair et al. (2011) studied the effects of leadership on the quality of instruction, little scholarly research has addressed the effects on faculty members by those academic deans who have not received leadership training or mentorship. One way to study the effects of leadership on subordinates is through Leader–Member Exchange (LMX) theory. LMX theory investigates the role-taking, role-making, and routinization of exchanges between leaders and their subordinates (Graen & Uhl-Bien, 1991). LMX became a prominent leadership theory after Graen and Uhl–Bien first used the term in their expansion of vertical dyad theory. Graen and Uhl–Bien developed the LMX–7 instrument that has since been used in hundreds of scholarly research articles to measure the relationship between supervisors and their subordinates. The LMX–7 scores are directly related to employee work satisfaction, work–team performance, and turnover intentions (Harris, Li, & Kirkman, 2014). Sheer (2014) provided a summary of 137 articles that documented research using LMX theory and the LMX–7 instrument in the previous 25 years.

According to Naidoo, Scherbaum, Goldstein, and Graen (2011), leaders tend to have higher LMX with subordinates who demonstrate the potential for high–quality work and future advancement in the organization. These high–LMX employees tend to be assigned more challenging and rewarding work experience opportunities. Those employees whom the leader feels do not have the potential for high–quality work and advancement in the organization typically have low LMX with their leaders and are assigned routine, meaningless tasks by the supervisor. If an academic dean is not

mentored and provided leadership training, they do not have as great an ability to recognize subordinates that are capable of greater responsibilities or more complex tasks. As a result, they will have a negative effect on faculty performance and overall institutional effectiveness. Due to this negative effect on faculty performance and morale, quality of instruction suffers and turnover intentions increase. This directly affects students as they prepare to become members of a trade or profession. As a result of the limited amount of scholarly research on the effects on LMX by leadership training and mentorship of academic deans, the problem addressed in this research focused on a lack of knowledge and understanding which adequately explains the effect on the leadership capabilities of academic deans who did not receive leadership or mentorship training prior to obtaining their posts.

Research Problem

For decades, scholars and practitioners have studied leadership and its antecedents (Mullen, 1965). Many of these studies used LMX theory (Breevaart, Bakker, Demerouti, & van den Heuvel, 2015; Furunes, Mykletun, Einarsen, & Glaso, 2015; Lloyd, Boer, & Voelpel, 2015). Leadership, under the paradigm of LMX theory, was studied at the community college level (Gillett-Karam, 2015; Holliday, Martin, & Martin, 2010; Poulson, Smith, Hood, Arthur, & Bazemore, 2011; Sypawka et al. 2010) and scholars have researched and documented skills needed by newly appointed academic deans (Gmelch, 2000). The scholarly research and literature has not addressed how academic deans' leadership development or mentorship affects their LMX with faculty members. As a result, there is a lack of knowledge and understanding about the effects of leadership or mentorship training on LMX development of academic deans.

Purpose of the Study

The purpose of this quantitative, causal–comparative study was to examine the effects that prior mentorship, leadership training, and time in the position have on academic deans' relationship with their subordinates as indicated by role-taking, role-making, and routinization of tasks with their subordinates. Role-taking, role-making, and routinization of tasks comprise LMX theory, which is an indication of leadership performance (Graen & Uhl-Bien, 1991). The academic deans who participated in this study are from community colleges in the U.S. In this study I closed the gap in the literature, and thereby enhanced the knowledge and understanding of factors influencing academic deans' effectiveness, by evaluating the impact of prior mentorship, leadership training, and time in the position on academic dean's relationship with their subordinates.

In this study I examined the relationship between the dependent variable (LMX–7 score) and the independent variables (leadership training, mentorship, and years of experience as an academic dean). The LMX–7 score is a composite index of three aspects of LMX theory: role-taking, role-making, and routinization of tasks that the dean develops with their subordinates.

Research Questions

The research question was, how does a dean's time in the position, previous mentorship or leadership training relate to his or her LMX score? In Chapter 3, I express the following sub–questions as quantitative hypotheses:

1. To what extent was LMX related to leadership training for academic deans?

2. To what extent was LMX related to mentorship for academic deans?

3. To what extent does the length of time an academic dean has served in that position relate to LMX scores?

Theoretical Framework

LMX Theory

LMX theory emerged from the seminal works on vertical dyad linkage (VDL) by Dansereau, Graen, and Haga (1975). In the original VDL literature, Dansereau et al. envisioned the subordinate as the dyad member and the direct supervisor as the dyad leader. Within VDL, an examination of the relationship between the dyad leader and dyad member occurred in terms of the frequency and quality of interactions between the leader and the member. VDL attempted to examine these interactions to measure the amount of organizational culture, vision, mentorship, and feedback provided to the member by the leader, and how much information and role clarification the leader provided.

The role-taking, role-making, and routinization of exchanges between leaders and their subordinates were defined by Graen and Uhl–Bien (1991). Since then, the VDL is now referred to as LMX. LMX theory states that various types of relationships develop between the leader and the subordinate (Naidoo et al., 2011). These dyadic relationships are characterized by (a) high frequency of communications but low in quality, (b) low frequency but high quality, (c) high frequency and high quality, or (d) low frequency and low quality. In Chapter 2, I analyze the current research into the influencing factors of LMX. Many of these studies examined the influencing factors of LMX on higher education leadership.

LMX theory has since evolved into the segregation of employees within the workplace. This segregation categorizes employees into the in–group or out–group for organizational favoritism. While this categorization is often unintentional, especially by the untrained leader, its occurrence can result in lower employee morale, lower productivity, and higher turnover intentions by the out–group employees (Cogliser et al., 2013).

Aspects of Academic Dean Leadership

Solis et al. (2011) examined the aspects and characteristics of the academic dean leadership role within community colleges. While Solis et al. stated that the majority (61%) of academic deans had their masters degree, one–third of the academic deans had their degree in an arts and humanity subject field and another third had degrees in various forms of workforce education. Noticeably under–represented from the demographic profile of academic deans in their study were deans who had education or experience in management, business administration, leadership, or organizational change.

Five variables of leadership were examined by Solis et al. (2011). These variables were *challenge the process*, *enable others to act*, *encourage the heart*, *inspire a shared vision*, and *model the way*. While all five of these variables have leadership implications, the concept of leadership was not directly measured. This further exposed the gap in the literature that indicates a need to examine the effects of leadership training and mentorship of academic deans on their ability to establish roles with their subordinates, as measured by LMX, and as a result provide better leadership.

The Leader–Member Exchange–7 (LMX–7) instrument is a tool used to quantify the strength of the LMX relationship between the leader and member in a dyadic

relationship. The LMX–7 instrument does not measure the direct results of leadership training or mentorship in a classical experimental design. I postulated that the LMX–7 instrument will yield data about the deans' relationships with their subordinates. While there is a vast array of possible influences on a deans' LMX score, I focused on the three potential explanatory variables of leadership training, mentorship, and experience in the position.

Nature of the Study

This causal–comparative research design determined to what degree mentorship or previous leadership training had on the dyadic relationship between academic deans of community college and their subordinates. I utilized a regression analysis of the dependent variable, LMX score; and the independent variables of previous mentorship, previous leadership training, and length of time served as an academic dean. I also considered the mediating variables, including the demographics of the deans and their institutions.

This quantitative approach fit the research question and problem because LMX theory is a dyadic relationship theory. LMX theorists use the LMX–7 tool to accurately measure the relationship between the leader and subordinate (Meng & Wu, 2015). According to Dulebohn, Bommer, Liden, Brouer, and Ferris (2012), LMX theory itself may initially appear to be a transactional leadership theory (emphasizing the exchange part of the leader–member dyad). LMX theory is linked to specific leadership styles. For example, Dulebohn, Bommer, Liden, Brouer, and Ferris successfully correlated LMX–7 results to transformational leadership styles. The findings of Dulebohn et al. indicated that higher LMX scores are associated with leaders whose styles were more

transformational. The leader–member dyad is at peak performance (therefore highest on the LMX–7 scale) when the leader and member have high levels of trust, autonomy, and work assignments that expand and challenge the scope and capabilities of the subordinate.

Subordinate faculty members comprised the units of analysis for this study. I surveyed academic deans of U.S. based community college to determine the amount of leadership training, mentorship, and tenure they have had as academic dean. I then asked the academic deans to send their faculty members a survey link to determine the LMX score associated with their academic dean. Dozens of scholarly, peer–reviewed articles and studies have used LMX theory and measured it using an existing Likert scale quantitative survey tool (covered in Chapter 2). Chapter 3 includes a discussion of the LMX–7 instrument. I used the LMX–7 instrument to assess faculty perceptions of their individual academic deans across a random sample of community colleges in the U.S. Questions added to the LMX–7 instrument informed the independent variables of previous mentorship, previous leadership training, and length of time as an academic dean.

Definitions

Academic dean: a position within a college whose responsibilities include hiring and firing faculty members, operationalizing the president's vision for the organization, resolving conflicts between students, staff and faculty members, and responding to external customers' requests (Behling, 2014).

American Conference of Academic Deans (ACAD): an organization which provides academic leaders with leadership resources, shared voices in higher education, and advancement in liberal education (ACAD, 2010).

Commission on Institutions of Higher Education (CIHE): the accreditation division of the New England Association of Schools and Colleges (New England Association of Schools and Colleges, n.d.)

Community college: a traditionally state–based, normally two–year, higher education institution that focuses on teaching technical or job–related skills to students who will either segue into the local workforce or continue on to a four–year college (Shulock, 2002).

Leader–member exchange: a leadership theory that posits that there is a dyadic relationship between the leader and the subordinate. This relationship is either positively or negatively affected through the quality and quantity of exchanges of organizational information and responsibilities between the leader and the subordinate (Naidoo et al., 2011).

Mentor: an individual who seeks to formally or informally expose a person in a subordinate position to roles and responsibilities of positions of greater importance (Jones, 2012).

Role–making: the ongoing process in which a leader delegates various tasks and responsibilities to different subordinates (Zhang, Wang, & Shi, 2012).

Role–taking: the role–clarification during initial interactions between leader and subordinate (Zhang, Wang, & Shi, 2012).

Routinization: repeating tasks known to belong to a subordinate after role–making and role–taking are negotiated (Zhang, Wang, & Shi, 2012).

Assumptions

Many community colleges call the academic dean position by other names. Some of these names include the chief academic officer, dean of academic affairs, or dean of student and academic affairs. Therefore, it was my assumption that faculty members in all institutions will know that the use of the academic dean title in my research will equate to the other named position within their institutions.

There are many primary languages spoken at various community colleges. Most non–English speaking community colleges are Spanish–speaking community colleges. Therefore, it was my assumption that the faculty members will speak English as a first or second language. I assumed all respondents were answering the survey questions honestly. Researchers have determined that the honesty of surveys administered online is greater than those of in–person surveys (Sue & Ritter, 2012).

Some survey instruments are not internally valid or structured well. I deployed the LMX–7 instrument through means and methods previously used by researchers. Statistical validity and reliability for the LMX–7 instrument has remained consistent through other researchers' studies, so there was no reason to assume it would not be in my study.

Scope and Delimitations

I limited exploration of leadership training, mentorship, and experience to the member side of the LMX dyad, and I excluded all other leadership theories except LMX. The questions addressed in this study were how leadership training, mentorship, and

experience increase the quality of role-taking, role-making, and routinization between an academic dean and their subordinates as measured through their LMX score. The scholarly literature (covered in Chapter 2) indicated that an increase in LMX score directly results in higher employee productivity, satisfaction, and lower employee turnover (Bakar, Jian, & Fairhurst, 2014). The moderating effect of experience as an academic dean (time in the position) was expected to correlate to LMX scores.

I limited this study to the U.S. for three reasons. First, community colleges in the U.S. are different from other areas of the world. Secondly, cultures other than the U.S. may have differing leadership training and mentorship expectations, which I did not account for in this study. Third, in the mission of community colleges, the leadership needs within those community colleges, and culture vary greatly outside of the U.S. (Robertson, 2015). Therefore, I limited this study to U.S.–based community colleges. I accessed community college academic deans and their subordinate faculty members through ACAD. See Appendix G for ACAD's willingness to distribute my survey. By being a member of ACAD, I had firsthand knowledge of the activity, thoughtfulness, and willingness to participate in fellow Dean's research.

I chose community colleges as the focus of this study instead of all higher educational institutions because community colleges have a unique role in higher education (Behling, 2014). According to Behling, academic deans of community colleges have a unique position of serving as the vice president or chief academic officer in addition to the academic dean. This uniqueness requires leadership and management that are different from the academic dean role of larger 4–year colleges or land–grant institutions. I chose the position of academic dean primarily because of the quantity of

literature that clearly defines the position's importance. Even though there are many articles on the importance of the academic dean, there is a lack of literature on the training or mentoring of academic deans.

Limitations

First, self–reported surveys such as the LMX–7 cannot account for the mood or attitude of the respondents at the time of the survey. Second, I did not account for individual bias of respondents toward their own feelings and about the need for leadership training or mentorship. Feelings in many situations are valid. The effects of feelings mitigate with a survey instrument when performing a quantitative analysis of the effects of leadership, mentorship, and experience. This was a limitation on my research because even though qualitative analysis of a phenomenon reduces some emotional bias, it does not fully mitigate the emotions and frame of mind present when a participant answers a Likert–scale survey instrument.

Third, it was impossible to ensure that respondents had adequate time or mental energy to fully ponder each of the seven questions. Fourth, the literature indicated use of at least four other LMX measurement tools. Each of these four other LMX measurement tools could provide insight into other aspects of leadership training, mentorship, and experience. I chose the LMX–7 instrument due to its long–standing use in the majority of LMX theory studies and its consistent reliability across multiple industries, cultures, and societies. This too was a limitation on my research because the other LMX measurement tools provide insight into aspects of the participant's perspective that may influence or further explain my research findings.

Fifth, there existed a potential under–coverage of my sample population due to ACAD organization membership limitations. Under–coverage in this case means that there may be a factor not measured in this study that contributes to higher LMX scores of academic deans who belong to professional organizations. In other words, it may be that only academic deans who have high LMX scores belong to ACAD, and therefore this study did not sample academic deans who have not had proper leadership or mentorship training and are not a part of ACAD.

Significance

The findings of this research were expected to lead to a better understanding of the effects that mentorship, leadership training, and time in position have on an academic dean's role-taking, role-making, and routinization with their subordinates in community colleges. There is not enough time to invest in formal advanced degrees in education, administration, and leadership, during the time that a board of trustees or community college leadership group is considering hiring an academic dean. This only leaves short–term experiences, of which there are very few, to train an academic dean. These short–term experiences primarily focus on the administrative, curriculum development, and human resources aspect of being an academic dean.

Other variables (for example, an academic dean's personality) may be significant factors is his or her leadership ability. Some research has shown that leadership training can mitigate poorly suited leadership personalities (McCleskey, 2013). The research on this is scarce. Therefore, one benefit of my research is the enhancement of the understanding of how mentorship, leadership training, and time in position will affect an academic dean's LMX score.

The topic of LMX between academic deans and faculty members is important to the field of education, management, and leadership because of the expected large volume of community college leaders retiring in the coming decade (Solis, Kupczynski, & Mundy, 2011). Understanding how leadership training, mentorship, and time in the position affect an academic dean's leadership performance will help guide community college leaders in their selection, training, and mentorship of future academic deans. Identification of faculty members who demonstrate an interest or talent toward being an academic dean, and then providing them with training and mentoring is paramount for a community college's long–term success.

I postulated that training and mentoring future academic deans would result in higher quality role-taking, role-making, and routinization, as reflected in higher LMX scores. Leadership training develops effective leaders (Day, Fleenor, Atwater, Sturm, & McKee, 2014). Mentorship relates to leadership development (Chang, Longman, & Franco, 2014) and is a significant predictor of a mentee's leadership performance in the future (Loh & Kim, 2012). Higher LMX scores lead to higher job satisfaction and increased production (Chang & Cheng, 2014). Therefore, leadership training and mentoring of future academic deans intuitively should result in higher LMX scores.

Higher LMX scores lead to higher quality of work by subordinates (Kim, Liu, & Diefendorff, 2015). Therefore, higher LMX for academic deans may result in teaching that is more effective by faculty members. The significance of my study is a better understanding of the premise that if community college leaders invest in developing those who have the potential of becoming academic deans, then their LMX scores with faculty members will be higher, leading to teaching that is more effective by faculty members.

Future researchers can use this study as a foundation to study other leadership factors that influence academic deans and their job performance within community colleges. Other leadership factors affecting academic deans include emotional intelligence, transformational versus transactional leadership styles, and multiple–location/virtual team effects of academic dean leadership. A scholarly investigation into faculty effectiveness leading to their students' productiveness for employers after graduation can use this research as its basis. Lastly, future researchers can replicate this study in non–U.S. based community college organizations to see if cultural or societal factors play a factor in community college leadership.

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

This chapter focused on the research problem: a lack of knowledge and understanding about the influence of training, mentorship, and experience on LMX score (a measure of role-taking, role-making, and routinization); and, in turn, the relationship of LMX score to leadership effectiveness and faculty performance. In this chapter, I presented the background, research problem, purpose of the study, research questions, theoretical framework (primarily LMX theory) aspects of academic dean leadership, nature of the study, definitions, assumptions, scope and delimitations, limitations, and significance scope. I also addressed the need to study the uniqueness of community college deans in the U.S.

Chapter 2 will focus on the literature that addresses the importance of academic deans, their unique role in higher education, and the specific role they play in community colleges. I will address the origin of LMX theory and its common use in the leadership literature. I will summarize the concept and importance of leadership training and

mentorship for future organizational leaders. In Chapter 2, I will explain what other

researchers discovered in relation to leadership training, mentorship, and experience and

their influence on leadership effectiveness. I will then be able to show what is lacking in

the scholarly research that leads to a lack of knowledge and understanding about the

factors that seem to influence academic deans' leadership effectiveness and the resulting

faculty performance.

Chapter 2: Literature Review

The purpose of this study was to determine the nature and extent of the relationship between mentorship, leadership training, and time in the position as dean to the demonstrated leadership of academic deans in community colleges. This literature review covers the current literature on the leadership role of academic deans, the importance of leadership and mentorship training, and LMX theory. An overview of the LMX–7 instrument used to measure leader–member exchanges in organizations, concludes this chapter.

Literature Search Strategy

The strategy for searching the literature relied on two techniques. The first was to search existing data repositories, in order to fully grasp the breadth of both the LMX and community college academic dean training and mentorship literature. To accomplish this, I searched Google Scholar, EBSCO Business Source Complete, and ERIC databases. Search term combinations of LMX, leader–member exchange, leader member exchange, and leader member were used to find literature that focused on LMX theory.

I discovered community college academic dean literature through Google Scholar, EBSCO Business Source Complete, ERIC, Education Resource Complete, and Education from SAGE databases. Search term combinations of academic dean, community college leadership, dean training or mentorship, LMX, and college leadership were used to find literature that refined the gap in the literature to identify the need for research on the effects of lack of leadership and mentorship training on LMX of academic deans in community colleges.

The second technique used to find emerging literature was to set up five Google Scholar alerts that would e–mail summaries for new literature being published. The five Google Scholar alerts were searching for academic dean mentor, community college academic dean, LMX community college, leader member exchange, and community college leadership. These five searches yielded between 10 and 25 article alerts per week, of which one or two per week were applicable to this study.

Theoretical Foundation

Leader–Member Exchange Theory

LMX theory emerged from the seminal works on VDL by Dansereau et al. (1975). In the original VDL literature, Dansereau et al. envisioned the subordinate as the dyad member and the direct supervisor as the dyad leader. Examining the relationship between the dyad leader and dyad member in terms of the frequency and quality of interactions between leader and member began LMX development. Users of the VDL theory have examined these interactions in an attempt to measure organizational culture, vision, mentorship, and the leader provided task feedback to the member. They also have examined how much information the subordinate sought during role clarification from the leader.

LMX became a prominent leadership theory after Graen and Uhl–Bien (1991) first used the term in their expansion of vertical dyad theory. Graen and Uhl–Bien developed the LMX–7 instrument that has since been used in hundreds of scholarly research articles to measure the role-taking, role-making, and routinization of tasks between supervisors and their subordinates. Beyond the use of the LMX–7 instrument, LMX theory itself has been extensively researched as a theory of organizational behavior

(Sheer, 2014). LMX theory revolves around the dyadic relationship between the leader and the subordinate (member). Each party in this relationship may benefit through the favor or efforts of the other party.

Graen and Uhl–Bien in 1991 defined the role-taking, role-making, and routinization of exchanges between leaders and their subordinates. Since Dansereau et al.'s (1975) definition of VDL is based on role-taking, role-making, and routinization of exchanges, researchers began calling VDL LMX. Researchers, including Harris, Li, and Kirkman (2014); Laseer, Raja, Syed, Donia, and Darr (2015); and Xu, Loi, and Lam (2015) examined the influencing factors of LMX. These researchers examined the influencing factors of LMX on leadership. None of these researchers focused on higher education leadership or more specifically the leadership of community college academic deans. Furthermore, these researchers did not focus on how previous leadership training, mentorship, or time in the position as a leader influenced LMX.

LMX theory uses two primary descriptions for the dyadic relationship between leader and member. The first is that LMX theory describes leadership. The second is that LMX theory prescribes leadership (Mapolisa & Kurasha, 2013). In–groups and out–groups are LMX theory's descriptive leadership aspects. In–groups are those groups of members who appear to be in favor with the leader since they receive tasks that are meaningful, rewarding, and developmental to their careers. The out–groups are those members who receive routine, non–rewarding tasks from the leader. This segregation categorizes employees into the in–group or out–group for organizational favoritism. This happens quite often by accident as a leader discovers talents, willingness, and desire with some employees. The leaders' communication with subordinates is often indicative of

the in–group and out–group status. While this categorization is often unintentional, especially by the untrained leader, its effect on the out–groups can result in lower employee morale, lower productivity, and higher turnover intentions (Mapolisa & Kurasha).

While other leadership theories have revolved around the implicit abilities of individuals as leaders, LMX theory provides a new approach to examining leadership through dyadic relationship development between superior and subordinate (Harris, Li, & Kirkman, 2014). These other leadership theories assume that a leader treats all subordinates the same, and that the leader assigns all subordinates similar tasks (Dansereau, Seitz, Chiu, Shaughnessy, & Yammario, 2013). LMX theory starts with the assumption that each subordinate has different tasks and relationships with their leader, and that each subordinate is different. The use and application of LMX theory in research exposed some negative tendencies both within the application of LMX and the research that supports it (Sheer, 2014).

These potential negative outcomes, according to Sheer (2014), begin with the fact that the literature provided no specific definition of LMX theory. Researchers are scattered in their focus of studying the various components of LMX (Sheer, 2014). For example, of the 137 articles Sheer reviewed which used LMX theory, 92 focused solely on the quality of exchange between leader and member and the remainder focused on role–making or latitude in job performance.

Table 1 contains Sheer's findings for the various themes of definitions for LMX theory over 137 articles.

Table 1

Conceptual definitions of LMX (K = 137)

Labels of LMX definition	Frequency	Percentage
Exchange	11	8.0
Quality of exchange	73	53.3
Exchange relationship	8	5.8
Quality of exchange relationship	7	5.1
Other leader–follower relationships	5	3.6
Quality of relationships	11	8.0
Negotiating latitude	7	5.1
Role making	4	2.9
Others (e.g., linking pin quality, participation opportunity/influence, leadership attention, trust in supervisor, leader making)	11	8.0

Note. Adapted from "'Exchange lost'' in leader–member exchange theory and research: A critique and a reconceptualization," by V.C. Sheer, 2014, *Leadership*, *p*.4.

The role-taking, role-making, and routinization of the relationship between the leader and subordinate is the defining factor in determining in–groups and out–groups of LMX (Sheer, 2014). In–groups within the LMX theory are those groups of subordinates who receive favor of the leader and typically get meaningful, career developing tasks from the leader. Out–groups within the LMX theory are those groups of subordinates who do not receive meaningful tasks or do not receive the majority of valued resources to complete their job assignments (Furunes, Mykletun, Einarsen, & Glaso, 2015). The conceptualization of in and out groups is evident through nearly every article that addresses LMX theory. The in and out groups are the various direct subordinates of the leader and not groups within other parts of the organization. This distinction is essential when examining the role that an academic dean takes when first acquiring their job as dean (Stumpf, King, Blendinger, & Davis, 2013).

Previous researchers examined the relationship between community college leader's LMX and the effects of the leader's personality temperament (Holliday et al., 2010). There is a gap in the literature addressing how an academic dean's previous leadership training, mentorship, and tenure within the dean position affects LMX as posited in the research questions from Chapter 1. One area that Calegari, Siley, and Turner (2015) addressed was the ability for a dean to obtain buy–in from faculty members for changes and new initiatives. The LMX between the academic dean and the faculty members would facilitate this buy–in if LMX were high.

LMX–7 Instrument

Early measurement tools for LMX theory were quantitative instruments with which researchers simply changed or added additional questions for their own purposes (Sheer, 2014). Coggins and Bocarena (2015) stated that Graen and Uhl–Bien developed the LMX–7 instrument in 1989 to provide an inclusive, yet brief, survey instrument for the measurement of LMX between superiors and subordinates. The LMX–7 instrument has become a valid and popular tool, widely accepted by peer–reviewed researchers. The LMX–7 instrument, when administered to subordinates, has a coefficient alpha internal–consistency reliability of .87 (Schriesheim & Cogliser, 2009). Appendix A is the permission to use the LMX–7 instrument from Mary Uhl–Bien, Ph.D.

In the body of literature on LMX, there is a link between high LMX scores and increased self–efficacy (Walumbwa, et al., 2011), decreased employee turnover, increased performance, and higher job satisfaction (Li, Kim, & Zhao, 2016). Figure 1 shows the antecedents of leader and member interactions, and when related to high LMX,

the areas of potential positive outcomes for both the organization, work group, leader, and subordinate.
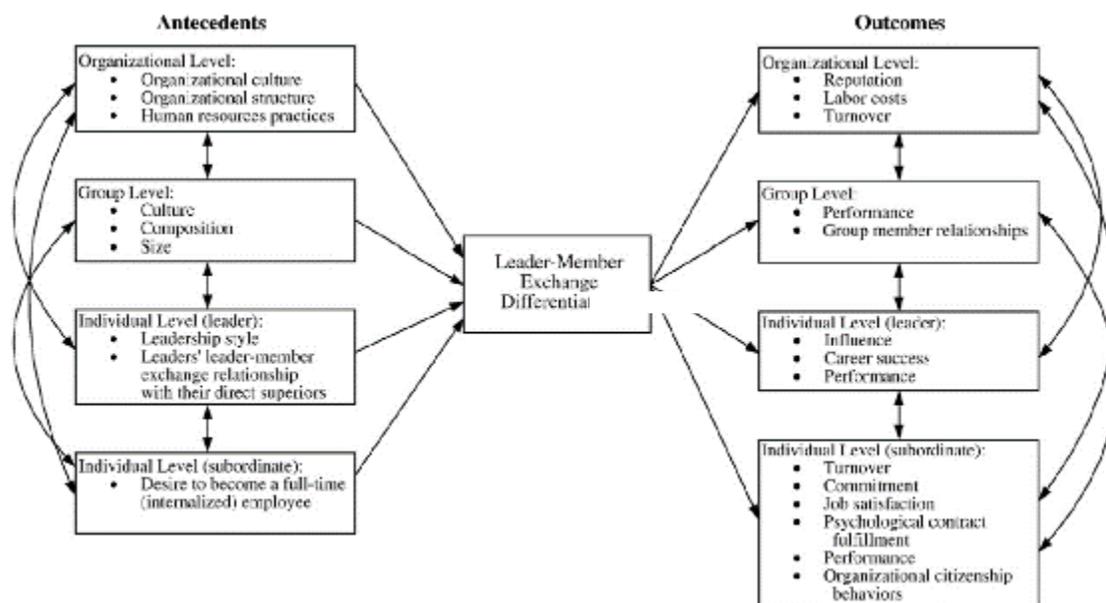
Figure 1. Antecedents and outcomes of LMX differentiation. This figure provides the framework for the relationships within LMX and how the links between organization, leader style and subordinate desire to organizational, group, leader, and subordinate outcomes. Adapted from "LMX differentiation: A multilevel review and examination of its antecedents and outcomes," by D.J. Henderson, R.C. Liden, B.C. Gilbkowski, and A. Chaudhry, 2009, *The Leadership Quarterly*, 20, *p*. 518. Copyright 2009 by Elsevier B.V.

Another LMX instrument that appeared in the literature was the leader–member exchange–multidimensional measurement (LMX–MDM) scale which attempted to measure the multidimensional aspects of LMX. This instrument was used in the literature to primarily focus on the personality attributes that the subordinates posses and how those attributes contribute to the LMX relationship (O'Donnel, Yukl, & Taber, 2012). The issue with LMX–MDM, according to Sheer (2014), is that it does not measure the exchange between subordinate and supervisor. The LMX–MDM instrument

only measures the personality traits of the subordinate and their perceptions of the superior.

Yet another LMX instrument is the leader–member social exchange (LMSX) scale. The LMSX instrument measures the behavioral aspects of LMX theory instead of the conceptual constructs of LMX theory. It is the course of actions, not personal attributes, that count in the LMX development between leader and subordinate (Sheer, 2014). In all cases of LMX instrument development, the responses are provided on a Likert scale and reflect the member and the leaders perceptions for how the other party will support them or give up their own organizational power to protect the other.

<div align="center">**Literature Review**</div>

Variable Role of the Academic Dean

Academic deans in higher education have a unique role. Within a community college, academic deans are the leaders for the internal organization while the college president is the leader of the external initiatives (Dorland & Mosto, 2014). Sarros, Gmelch, and Tanewski (2014) stated that the majority of academic deans are over 50 years old and have less than five years experience as an academic dean. This experience level will decline as approximately 84% of community college leaders will retire between the years of 2011 and 2016 (Solis et al., 2011). Since Solis et al. published their research; Sullivan and Palmer (2014) have cited the recession in the U.S. as having a mitigating factor on the retirement of the estimated 84% of senior college executives. Many of these executives have delayed retirement for both financial reasons and due to the poor quality of suitable replacements (Sullivan & Palmer).

According to Shulock (2002) there are eight domains that an academic dean must become competent in. These domains are funding and growth, governance, diversity, leadership recruitment and development, accountability, public relations and image, relations with the community, and curriculum. As the experience level declines, leadership training and mentorship for new academic deans will become more important to ensure initial job performance is satisfactory. To compound this problem, community college enrollment is increasing and operational budgets are declining (Barr & Turner, 2013). This lack of leadership development, inexperience of new leaders, decreasing budgets, and increasing enrollment make the importance of previous leadership training and mentorship even more crucial (Sullivan & Palmer, 2014).

The uniqueness of an academic dean's role stems from the positions' responsibilities (Stumpf, King, Blendinger, & Davis, 2013). While leadership is not unique to the position of academic dean, by developing the leadership capabilities of a future academic dean, greater positive outcomes will result (Halcomb, Andrew, Peters, & Salamonson, 2014). Formal leadership training is important; however, mentorship for future leaders provides real application of leadership principles.

Florczak, Collins, and Schmidt (2014) examined the effects of mentorship on future leaders. Mentorship not only provides a seasoned professional within a position an opportunity to give guidance to the younger mentee, but gives the mentee continued emotional and mental support for future challenges that they may face in their new role. Florczak et al. stated specifically that emotional support in the mentor/mentee relationship is the leading benefit of the relationship for future successful performance in a leadership role. This is not to say that the faculty members who serve under an

academic dean do not have their own unique stresses and needs (Delello et al., 2014).

According to Delello et al., nearly half of all full time professors are considering leaving

higher education due to stress. The majority of this stress originates at the organizational

level, over which academic deans have direct influence. Faculty members indicated that

the quality leadership from their supervisors was important to reduce stress. This is

another indicator that leadership training and mentorship for academic deans is important

to organizational success.

Leadership and Mentorship Training

I found only one scholarly reference to non–educational leadership degree

granting leadership–training academies during this literature review. The University of

San Diego School of Leadership and Education Sciences hosts the Community College

Leadership Development Initiatives Leadership Academy (Strom, Sanchez, & Downey-

Schilling, 2011). This leadership academy provides a four–day experience for new

community college leaders and focuses on communications, systems thinking, team

building, and change management. These four days have two main purposes. First is to

provide community college leaders with tools and education to become better leaders.

Second is to provide fundamental training in community college leadership.

Other community college training programs are available, but none of them

appeared in the literature. The only other major training opportunity mentioned in the

literature for future community college leaders were graduate school programs. Some of

these graduate programs encompass a field experience component to expose students to

various components of educational leadership such as budgeting, law, communication,

and strategic planning (Laureate International Universities, 2015). Graduate school

programs in education are general in nature; therefore, they do not specifically focus on higher education or community colleges. While there is a plethora of colleges offering advanced degrees in higher education administration and leadership, college leaders who were previously faculty members and held advanced degrees within the health sciences field scored the highest on leadership scales (Solis et al., 2011).

The instrument used in Solis et al.'s (2011) research was the Leadership Practices Inventory (LPI)–Self. This instrument measures the five areas of leadership behavior typically demonstrated by leaders. These five areas are to challenge a process, inspire a shared vision, enable others to act, model the way, and encourage the heart. This instrument is designed to measure a point in time of leadership.

Leadership Development

The typical composition of community colleges organizational structure concentrates formal authority toward the top of the organization (Solis et al., 2011). There are multiple stages, through which an academic dean progresses in his or her leadership development (Harvey, Shaw, McPhail, & Erickson, 2013). These stages, according to Harvey, et al., are seasons of a dean's tenure. The first season, referred to as spring, involves the learning curve of basic job responsibilities for a new dean. The second season, referred to as summer, is where a dean begins to bring some initiatives and relationships from the spring season to fruition. The third season, referred to as Fall, is where a dean shows their true abilities and takes advantage of the investments made during the first two seasons. In the final season, winter, a dean prepares for their transition out of the dean position and passes their legacy on to a new dean.

The majority of academic deans were previously faculty members and promoted to academic dean because of demonstrated excellence in the classroom and through faculty committee work (Chang, Longman, & Franco, 2014). While the understanding of faculty perspectives is paramount to a dean's success, the leadership of faculty and other aspects of the dean's job require leadership development (Gmelch W., 2000). According to Gmelch et al. (2011), there are distinct areas of leadership development for academic deans. Non–credit business and industry offerings are typically the focus of academic deans when hired from the business world without previous faculty experience (Strom et al., 2011). There is no research in the literature on former members of the military who have become academic deans.

One way to look at the areas of leadership needed by academic deans is in Figure 2. These distinct areas are conceptual understanding, skill development to deal with the pressures of the job, and reflective practice to be self–aware. The inculcation of these development areas lead to proper application of the humanistic skills to work through the challenges of being a dean, the grounded theory needed to stay focused on priorities and development of initiatives, and the actual practice of being an academic dean.

Figure 2. Dean leadership development. These three circles and their intersection represent the three main areas of leadership development for academic deans. Adapted with permission of the author from "Seasons of a Dean's Life: Understanding the Role and Building Leadership Capacity," by W.H. Gmelch, D. Hopkins, and S.B. Damico, 2011, Sterline, VA: Stylus Publishing.

According to Eddy (2012), employees of community colleges demand excellent leadership. The literature is silent on the subject of leadership development of community college leaders. Gill (2013) stated that starting in 2009 community colleges faced a leadership crisis due to the large number of retirements and the lack of leadership development training taking place. There is also a preference by community college presidents for their deans to be transformational leaders (Solis et al., 2011). Strom et al.

(2011) stated that the development network of potential future academic leaders for community colleges is not creating qualified candidates rapidly enough to replace those who are retiring. Strom et al. surveyed community college leadership about their plans to retire in the next 10 years. Their last survey indicated that 84% of community college leaders planned on retireing within the next 10 years. Strom et al. stated that neither their research nor the literature indicated any plans to develop future community college leaders in anticipation of mass retirements in the next 10 years.

These transformational leaders must be capable of taking the vision of the college leadership and operationalizing it to their subordinates. The process for operationalizing visions to subordinates requires a passionate, innovative leader who can navigate through the resistance that most organizations experience during change events (Schneider, 2016). The problem, as stated by Strom et al. (2011), is that current community college leadership does not even understand the paths that current leaders have taken to their current positions, nor do they understand the paths necessary to allow future community college leaders to evolve.

The lack of initiative to provide leadership training and mentorship within community colleges may be a result of the college leadership's lack of desire to invest time and resources into an employee who will benefit another institution. Jones and Jackson (2013) stated that of the community college presidents hired, 92% were from within community colleges. They also stated only 22% of presidents were hired from within the same institution. Jones and Jackson stated that this is a mental model for the career progression to becoming a community college president.

Solis et al. (2011) determined through the use of the LPI–Self questionnaire of 200 full–time faculty members at a Texas community college that the respondants did not link higher formal education to leadership abilities. In fact, leaders of colleges who had less than a masters degree scored higher in some leadership attributes than those who had earned doctorate degrees. This suggests that mentorship for future academic deans is important. Solis et al. also concluded that college leaders who had previously been faculty members had overall higher leadership scores than those who were not faculty members.

Regardless of the amount of leadership training or mentorship a new leader has, there are some things that formal leadership training, professional seminars, or mentorship cannot teach a new leader in higher education (Alexander, 2014). According to Alexander, the formal leadership training geared toward higher education executives is focused on new presidents of colleges. Even this form of training is sporadic in nature (Shulock, 2002). This sporadic formal leadership training is, according to Shulock, evidenced through the reduction in professional development funding and opportunities. Shulock stated that where there is professional development toward grooming those who may be interested in becoming a college executive, the majority of subjects covered focus on the administrative tasks and fund raising initiatives that a president must address.

Very little time within formal leader training programs was devoted to leadership interaction between the executive and their subordinates, and the challenges associated with leader–member exchanges (Shulock, 2002). A lack of leadership training and mentorship programs is a concern to faculty members who view this as having potential

future poor leadership of their colleges (Pate & Angell, 2013). This lingering effect will have a negative impact on employee attitudes and turnover (Zhang & Liao, 2015).

Positive social change within community colleges can occur when there is high LMX associated with well trained academic deans who clearly articulate their vision and are considered a trusted partner of the faculty members. Faculty members, as a second and third order effect, will then, in turn, perform at a higher level in the areas of research, teaching, and service to their college (Power, 2013). Conversely, those academic deans who score low LMX with their faculty members will experience more faculty–student related conflicts and higher faculty turnover.

Other Leadership Theories Considered

Other leadership theories were considered as a basis to analyze the effects of leadership training, mentorship, and time in the position of academic dean. Implicit Leadership Theory (ILT) is a theory that examines a follower's underlying assumptions, beliefs, and personal motivations. When compared to LMX theory in a longitudinal study, an employee's time in their position was not considered a factor in the LMX relationship development. Dulebohn et al. (2012) also determined that LMX relationships are developed earlier in a leader's tenure and help shape the factors associated with ILT.

I considered charismatic and transformational leadership theories as a theoretical foundation for this study, however neither of them focuses on the dyadic relationship between the follower and the leader (Chun, Cho, & Sosik, 2016). Chun et al. also concluded that charismatic and transformational leadership may take years to have a positive effect on the organization, while LMX is established within the first month of the

new leaders assignment to their post. This is an important factor when considering previous leadership training and mentorship prior to an academic dean being hired into the dean's position.

Segregation of LMX theory is prevalent in the literature. Social leader–member exchange (SLMX) and economic leader–member exchange (ELMX) are rooted in LMX theory and are designed to look at the social aspects or economic aspects of the leader–member dyad. The social aspects of LMX theory, as specialized within SLMX research, investigates the long–term socialization of the leader and member as their professional lives grow and expand. The economic aspects of ELMX theory view LMX relationships as economic transactional relationships where the leader is simply buying the time and talents of their subordinates (Buch, Kuvaas, Dysvik, & Schyns, 2014).

Summary

Through a thorough review of the literature using a variety of data sources, I discovered that there is a gap in the literature that needs to be addressed to understand the impact that leadership training, mentorship, and time in the position as dean for academic deans has on their LMX with subordinates. The problem is that academic deans, if not properly trained and mentored have a negative effect on faculty performance and morale. Due to this negative effect on faculty performance and morale, quality of instruction suffers and turnover intentions of faculty increase. This directly effects the faculty's students as they prepare to become members of a trade or profession.

This literature review is not intended to devalue the importance of those who receive advanced degrees in educational leadership. According to Orr (2015), the vast majority of these advanced degrees in education lack good educational leadership

components and forego any clinical or experiential components for future leaders. The focus of these degrees is mainly on the administrative and fund raising tasks needed for educational executives, which are also very important.

Exceptional leadership based programs from the Washington Danforth Educational Leadership Program and the California State University at Fresno are complete advanced degrees and provide no opportunities for advanced degree holders from other PhD disciplines to gain the leadership experience or education they need (Orr, 2015). These leadership training programs further support Dorland and Mosto's (2014) statement that there are no specific training programs for deans. The generalized nature of educational administration and leadership programs are not designed specifically for academic deans in community colleges.

In Chapter 3 I will address the LMX–7 instrument in detail. The research design approach, variables within the study, methodology used, threats to validity, and data collection and analysis techniques are also addressed. The settings and sample, sample size, and protection of participants are covered as well.

Chapter 3: Research Method

The issue that was the focus of my research, documented in a review of the scholarly literature, was that academic deans who were are not properly trained and mentored have a negative effect on faculty performance and morale. Due to this negative effect on faculty performance and morale, quality of instruction suffers, and faculty turnover increases. Academic deans who are not properly trained and mentored directly affect the students as they prepare to join a trade or profession. The problem addressed in my research was that, as a consequence of a lack of scholarly literature, there is a shortfall in the knowledge and understanding about the nature and extent of the influence that mentorship, leadership training, and time in the position as dean have on an academic dean's role-taking, role-making, and routinization of tasks with their subordinates (captured in their LMX score). The purpose of this research was to assess this relationship.

This chapter covers the following topics: research design and rationale, the variables as they were informed by the survey instrument, methodology, research questions and hypotheses, and data collection and analysis. The setting, a description of the population, the sample size, sampling methods, the LMX–7 instrument, and multiple linear regression are addressed. Lastly, a description of how hypotheses testing was performed and protection of the participants were covered.

This chapter also addresses the LMX–7 instrument that was used to collect data, its proven reliability and validity, the method of data collection process, and safeguards for data that were collected. Appendix B is the LMX–7 instrument with instructions for

administration, scoring, and interpretation of results. How the variables were informed by the survey instrument are also presented.

Research Question

The research question posited in Chapter 1 required a quantitative analysis to assess the effects of leadership training, mentorship, and time in the position of academic dean on a dean's leadership as viewed through the prism of LMX. Formally, the research question was, how does a dean's time in the position, previous mentorship or leadership training relate to his or her LMX score? Three subquestions (one for each independent variable), as follows, are in a single quantitative hypothesis:

1. To what extent was LMX related to leadership training for academic deans?

2. To what extent was LMX related to mentorship for academic deans?

3. To what extent did the length of time an academic dean has served in that position affect LMX scores?

Research Design and Approach

In this study, I utilized a causal–comparative research design using a random sampling web–based survey approach. Wells, Kolek, Williams, and Saunders (2015) summarized the causal–comparative research design as a research method used to understand the influences that the independent variables have on the dependent variable. Since I studied the correlation between mentorship, leadership training, and time in the position as academic dean to their LMX–7 score, the causal–comparative research design was the best fit for this study. By way of further clarification, a causal–comparative research design, also known as a quasi–experimental research, is where the researcher

observes the current state of the population and then infers conclusions based upon the variances observed in that sample (Wells et al., 2015).

The correlation I captured was the relationship of mentorship, leadership training, and time in the position as academic dean have to the LMX score of those academic deans as perceived by their subordinate faculty members. To research how prior leadership training, mentorship, and time in the position as dean affect academic leadership, I used the LMX–7 survey instrument and demographic data. The faculty members under these deans completed the LMX–7 survey instrument. I analyzed these relationships through multiple linear regression to evaluate the hypotheses, and to address the research questions. The results of a regression analysis could have indicated an association between LMX score (a measure of their relationship with their subordinates) and the extent which previous leadership training and mentorship, and the amount of time the academic dean is in their position influence that score.

I considered the following designs: descriptive, correlational, causal–comparative, and experimental. The causal–comparative research design, using the LMX–7 web–based survey, was preferable because it allowed me to collect data more efficiently than other methodologies. It also allowed me to reach a larger portion of the population through electronic mail survey instruments directed to the specific member of the population in a targeted manor, rather than a mass e–mail to a population that only partially encompasses the sub–population desired for this study.

Variables

The dependent variable for this study is the LMX score generated through the LMX–7 survey instrument from the faculty members—a continuous numerical variable.

I surveyed the academic deans separately to determine the independent variables (amount of leadership training, mentorship, and length of time in their position as an academic dean). Each of these independent variables is a discrete numerical variable.

The amount of leadership training is expressed in years and the expected range was from 0 to 16. The amount of mentorship was expressed in years, and the expected range was from 0 to 15. The length of time as an academic dean was measured in years and was expected to range from 0 to 35.

Subsequently, I asked the academic deans to send a link to their faculty members with an invitation message and link to the survey. This involved the deans copying and pasting the message with link into their organic e–mail system and sending the message to their faculty members. I analyzed the results from both the faculty members and the academic deans using multiple linear regression in SPSS to evaluate the research questions.

Methodology

Regression Equation

A single regression equation expresses the research questions mathematically. In the regression equation, there are three independent variables (Xi), with corresponding regression coefficients, β_i. The relationships between the independent variables (Xi) and dependent variable ($Y = $ LMX score) take the standardized form of the multiple regression equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

where ε is an error term or random variation in this model.

Hypotheses

The following is the mathematical expression of the hypothesis:

H1$_0$: No independent variables (X_i) influence LMX score (Y); all βs = 0.

where

X_1 = leadership training

X_2 = mentorship

X_3 = length of time an academic dean has served in that position

all three of which are discrete numerical variables expressed in years.

H1$_A$: At least one β_i is not equal to zero.

If a β_i = 0, then we conclude that the independent variable X_i does not exert an influence on the dependent variable, Y (LMX score).

Instrumentation

Survey Process

The survey process had two parts. First, I used ACAD's mailing listserve to send an invitation to academic deans to participate and a link to the academic dean survey. This invitation encompassed all of the known academic deans in community colleges in the U.S. Second, at the end of the academic dean portion of the survey, I provided a sample e–mail with survey link to the academic deans for them to send to their faculty members.

There were two survey instruments in this study, one for the dependent variable and one for the independent variables. For the independent variables, I surveyed academic deans of U.S. based community colleges to determine the amount of leadership training, mentorship, and tenure they have had as academic dean. For the dependent

variable, I surveyed faculty members using the LMX–7 instrument to determine the LMX score associated with their academic dean.

Survey Process for the Deans

Through ACAD's listserve I sent a survey to academic deans asking for their previous leadership training, experience (time in current or previous leadership positions), and mentorship. If division deans are present in a faculty's institutional structure, I requested the most senior dean by title of academic dean, vice president, chief academic officer, or dean of academic affairs complete the survey. The deans did not take the LMX–7 instrument as my goal was to measure the effects of their leadership training, mentorship, and time in the position of dean from their subordinate's perspective. Appendix C includes the survey for academic deans. The process that an academic dean went through to complete the survey was as follows:

1. The academic dean received the invitation for participation via e–mail from the ACAD listserve. I incorporated instructions for data usage, description of research, and why the research is important within this message. The informed consent for academic deans is included in Appendix D. The invitation also placed special emphasis on the time commitment of less than 5 minutes to complete the survey. Sending a reminder e–mail 10 days after the initial invitation increased response rates. I then randomly sampled a listing of community colleges in the U.S., e–mailing the deans listed on their website.

2. A "Next" box was present for participants to click on the welcome screen of the survey site that also has the informed consent. If a participant does not click the "Next" box, then they did not proceed into the survey.

3. The next page that loaded incorporated the academic dean survey as it appears

in Appendix C. Each response filed was set as a required field for submission to

ensure a complete record from each participant.

4. Upon submission, the last page of the survey appeared with a thank you for

participating message and a sample message with survey link for them to send to

their faculty members to complete the faculty portion of the survey. I provided

my email address for any questions or requests for completed dissertations copies

once I complete my study.

The LMX–7 Instrument for Faculty Participants

Graen and Uhl–Bien (1991) designed the LMX–7 instrument based upon U.S.

leadership characteristics and paradigms. The leadership attributes measured by the

LMX instrument, according to Joseph, Newman, and Sin (2011), are the viewpoints of

taskings, initiative, shared goals, role clarity, and perceived abilities of the other party.

While LMX theory focuses on role-taking, role-making, and routinization of tasks

between the leader and member, the varying styles of leadership, from transactional to

transformational, can be inferred through the LMX–7 instrument (Sypawka, Mallett, &

McFadden, 2010). Sypawaka et al. determined through their study of LMX theory that

leaders who score low on the LMX–7 instrument tend to be transactional leaders while

those leaders who score high on the LMX–7 instrument are more transformational in

their leadership style.

The LMX–7 instrument is a five–point Likert scale instrument, made up of seven

questions. The statements on the LMX–7 instrument capture the leadership tendencies of

academic deans from the perspective of each faculty member. The responses on the

LMX–7 instrument are from one to five and captured with negative or disagreeing statements. For example, a respondent might answer a question negatively by selecting the answer (1) indicating rarely, not a bit, or not at all, or they may answer positively or with a (5) indicating very often, a great deal, or fully. Additional questions added to the LMX–7 questionnaire given to the faculty included organizational information about the size of the college and approximate number of employees (discrete numerical variables). I have depicted the LMX survey in Appendix B.

The minimum score on the LMX–7 is 7 and the maximum score is 35. For example, if a participant answered 5 for each question, the total for their survey would be 35. Interpretation of the aggregated scores is as follows:

1. A very low LMX score is between 7 and 14 total points.

2. A low LMX score is between 15 and 19.

3. A moderate LMX score is between 20 and 24.

4. A high LMX score is between 25 and 29.

5. A very high LMX score is between 30 and 35 (Graen & Uhl-Bien, 1991).

I chose the LMX–7 instrument for this study for two main reasons. First, LMX–7 was specifically developed to measure LMX in support of LMX theory. Given the instrument's direct relationship to the theory, it has proven to be substantially reliable and valid as an instrument. Since many studies have used the LMX–7 instrument to measure LMX theory, its use allows for generalization of my findings across fields of inquiry and populations, which could allow for greater social change beyond higher education (Nichols & Cottrell, 2014).

The second reason for choosing the LMX–7 instrument was that it is primarily adopted in the use of leader–only studies, such as in the case of this study. As a leader–only study, the LMX–7 instrument provides reflection of how subordinates perceive their tasks and roles with their leader. A third and less important rationale for using the LMX–7 instrument is that it is only seven questions long. This decreased the amount of time required for participants to complete the survey. This is vital to this study because faculty members have high demands on their time (Sauermann & Roach, 2013).

The process that faculty participants went through to complete the survey was as follows:

1. The faculty member received the invitation for participation via e–mail indicating that their academic dean had already participated. I integrated the instructions for data usage, description of research, and why the research is important within this message. The informed consent for faculty is included in Appendix E. The invitation also placed special emphasis on the time commitment of less than 5 minutes to complete the survey.

2. A "Next" box was presented for participants to click on the welcome screen of the survey site that also displayed the informed consent. If a participant did not click the "Next" box, then they did not proceed into the survey.

3. The demographic questions appeared on the next page.

4. The next page contained seven LMX–7 questions of the survey with their corresponding Likert scale answers. They choose a "Next" button to complete their survey.

5. This led them to the last page of the survey that had a "thank you for

participating" message and my e–mail address for any questions or requests for

completed dissertations copies once I complete my study. Tracking internet

protocol addresses ensured faculty members were provided one submission each.

Data Collection

I used SurveyMonkey, a nationally recognized survey administration website, to

administer the survey. In their security statement, SurveyMonkey addresses website

security, secure socket layer encryption, as well as physical network security compliance

(SurveyMonkey, 2014). Appendix F includes the entire security statement from

SurveyMonkey.

Ghasemi and Zahediasl (2012) stated that screening the data prior to conducting

initial analysis ensures that the conclusions drawn from the analysis are valid. Some

ways to determine these outliers, according to Ghasemi and Zahediasl, are through the

SPSS frequencies procedure, visual methods that include bell curve graphs, stem and leaf

plots, and P–P plot plots. Ghasemi and Zahediasl concluded that Q–Q plots are the

simplest and most accurate to use for larger sample sizes. SPSS shows the Q–Q plots as

standard boxplots, and displays a line within the box and interquartile ranges of 25%,

50%, and 74%. Q–Q plots also display whisker lines that extend from the top and bottom

of the box which represent minimum and maximum limits of the normalized data.

A complete response from each academic dean included the following: institution

domain name, dean's time in the position, the number of years of leadership training, and

number of years of mentorship. A complete response from each faculty member included

the following: The domain name of their instituion, all demographic information, and the

completed LMX–7 instrument. No incomplete records or missing data are be present in the data set as I used SurveyMonkey's required response feature for each question, therefore no incomplete surveys were submitted. For the purposes of the multiple linear regression, the basic unit of analysis is a record. Each individual record consists of an individual faculty member's responses (converted to an LMX score for the dependent variable), that faculty member's dean response (which will be a value for each of the three independent variables), and all appropriate demographic information pertaining to each record.

Setting and Sample

There are 1,655 community colleges in the U.S. (United States Government, 2005). According to the National Center for Education Statistics (2014), there are 377,696 full or part–time faculty members in community colleges (National Center for Education Statistics, 2014). The faculty of U.S.–based community colleges represents the population for this study. This survey reached community college academic deans as a survey through ACAD's member listerve. ACAD has comprehensive, current listings of academic deans of U.S. based community colleges and volunteered to send my survey request to their listing of academic deans. This provided me with an initial, unbiased contact with academic deans. This did not yield enough responses, therefore I randomly sampled from a listing of all community colleges in the U.S. and contacted them directly through e–mail for participation.

Sample Size

For this study I selected $\alpha = .05$, where α is the probability of a Type I error (false positive). This is the probability that I would detect a significant relationship between the

dependent variable and one of the independent variables, when none exists. The reason that I chose $\alpha = .05$ is that in Rockstuhl, Dulebohn, Ang, and Shore's (2012) review of the LMX–7, the majority of researchers found that this parameter was rigorous enough to provide meaningful results for their research. Baugh and Scandura (1999) also specifically used $\alpha = .05$ in a similar study of mentorship and organizational effectiveness using the LMX–7 instrument. Confidence is $1-\alpha$ and reflects how confident the researcher is that a detected effect is correct. An $\alpha = .05$ ensured an acceptable confidence in the quantitative outcome, a correct inference of the population, and a better generalization and comparison of my findings across other studies.

The probability of a Type II error is β (false negative): The probability I would fail to detect a significant relationship when one exists. Power is $1-\beta$. Power is the capability of detecting true effects in the data. Researchers such as Rockstuhl et al. (2012) used many different powers when researching LMX theory. Most LMX studies use a power of 0.80, but studies that are more rigorous, use a power of 0.95. Therefore, I chose the more rigorous power of 0.95. That is, there was a 5% chance of failing to detect that either training, mentorship, or time in the position of academic dean were associated with an increased LMX score.

The last piece of information needed to determine sample size was the effect size, or r. The effect size, or measure of the effects between variables, is defined as $r = 0.1$ (small effect), $r = 0.3$ (medium effect), and $r = 0.5$ (large effect) (Gaebel et al., 2014). Given the wide variety and variance of calculating effect sizes in the literature, I chose $r = 0.1$ as the effect size. This indicates that if the means did not differ by more than 0.1,

then any difference was negligible. It also represented the effect that I detected in this survey, with the chosen parameters for power and confidence.

Using the statistical power analyses tool called G*Power (Heinrich Heine Universtat Dusseldorf, 2013) and the effect size of 0.1, $\alpha = .05$, and a power of 0.95, the total sample size I calculated was 176 responses. Figure 3 is the G*Power screen with all parameters used to calculate the 176 required responses for this study. In other words, I needed 176 records composed of a survey response (LMX score) from a faculty respondent paired with their respective dean's responses for the three independent variables. Any responses in excess of 176 would have increased power and confidence.
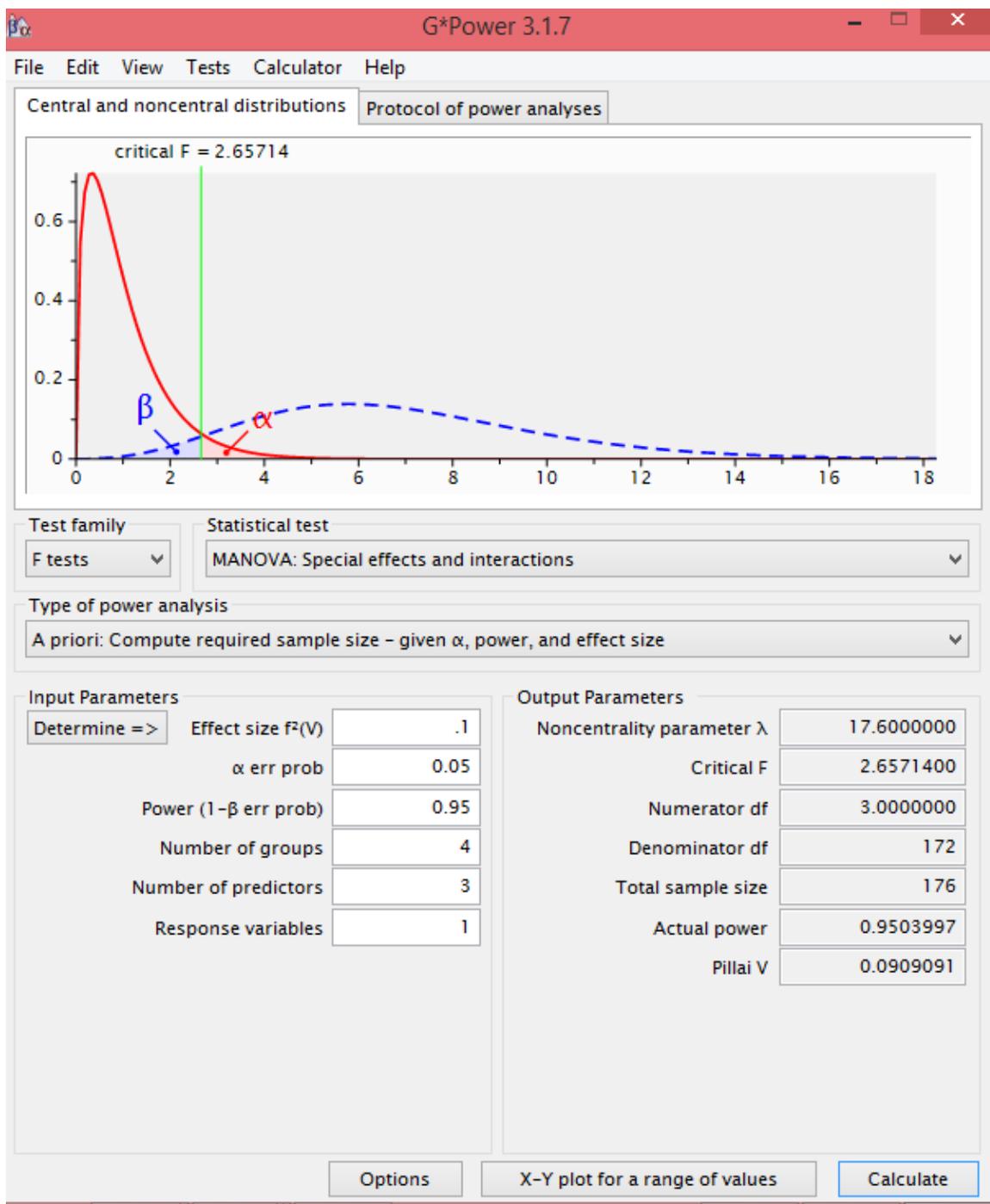
Figure 3. G*Power input screen depicting input parameters used to determine required sample size of 176 participants.

Monroe and Adams (2012) stated that the response rate to online surveys is approximately 11%. There are 1,655 community colleges in the United States (National Center for Education Statistics, 2014), therefore 1,655 academic deans are in community colleges in the United States. Contacting every dean should have resulted in approximately 182 responses from academic deans. Since there are 377,696 full or part–time faculty members in community colleges in the U.S. (National Center for Education Statistics, 2014), this means that there is an average of 228 faculty members per community college. Given Monroe and Adams 11% anticipation rate, I expected an average of 25 faculty responses per college.

Thus, if I had received 182 dean responses, and each has 15 faculty member responses, then my total effective sample size should have been 2730. Given my calculated minimum sample size of 176, this study would then have more than adequate power and confidence to detect an effect size of 0.1. To meet the minimum sample size of 176, and assuming no fewer than 15 faculty responses for each participating dean, I would in fact have needed only 12 deans to respond. This represents well under 1% of the community college deans. Therefore, I set a minimum of approximately 5% for participating deans, or 80 deans; with a corresponding total number of faculty participants equal to 1200. This, again, would have ensured that I achieved no less than the desired power and confidence to detect the desired effect size.

In order to participate in this research each participant was a faculty member, full–time, part–time, or adjunct, in a U.S.–based community college. The academic dean whom they are referencing in the survey held the title of academic dean, vice president, chief academic officer, or dean of academic affairs if a formal academic dean position is

not present in their institution. For larger colleges that have division deans in their

institutional structure, the responding faculty member referenced the most senior dean by

title of academic dean, vice president, chief academic officer, or dean of academic affairs.

Getting the Appropriate Number of Responses

I sent my survey electronically to U.S.–based community colleges through

ACAD. While they initially indicated that they would send the survey to academic

deans, their survey period had ended and suggested I send the survey through their

discussion posting listserv. Since academic deans communicate with their faculty en–

masse via e–mail distribution groups, I provided a link to the faculty survey at the end of

the academic dean survey. I also sent the dean a link to the faculty survey upon

submission and requested that they send that link to their faculty with a note of

encouragement to complete the survey. I then matched up the deans responses with their

corresponding faculty for analysis after the survey period ended.

I electronically administered my survey through the survey website

SurveyMonkey. SurveyMonkey automatically tracks the internet protocol addresses of

computers used to complete surveys to ensure that deans and faculty members only

completed one submission. This form of survey administration made this a convenience

sample of the population.

<div align="center">

Data Analysis

</div>

I used multiple linear regression (MLR) to analyze the data. My decision to use

MLR was because MLR is the statistical tool best used to assess the influence of multiple

independent variables on a single dependent variable. MLR is a commonly used and

well–accepted analysis technique within the LMX field, to include governmental and

healthcare uses LMX (Tummers & Bronkhorst, 2014), management implications for

LMX (Park, Sturman, Vanderpool, & Chan, 2015), and communication traits with LMX

(Sniderman, Fenton-O'Creevy, & Searle, 2015).

Hypothesis Testing

Teshnizi and Taghi (2015) stated that regression analysis is used to explain

observed relationships. In their description of the application for regression analysis,

Teshnizi and Taghi also stated that MLR derives regression coefficients (β) for each of

the predictor variables so that the predicted Y values are as close of a fit as possible to Y

within the actual data set. They further explained that β would represent the change in

the response variable for a unit change in the predictor variable. This will result in the

regression of coefficients minimizing the sum of squared deviations between the Y

variables predicted and the actual Y variables.

The F–statistic generated by multiple linear regression analysis shows how well

the regression model predicts the response variable. This in turn demonstrates the overall

fit of the regression model. F–tests compare the amount of variability explained by the

regression model to the same model's unexplained variability. F–test values that exceed

the critical values of F indicate that the entire regression model is a significant predictor

of the response variable.

A t–test is used to evaluate a null hypothesis for each predictor variable,

indicating that β is zero, or there is no change in the response variable for one unit of

change in the predictor variable. If t is greater than the critical value, then the

relationship between the predictor and the response variable is significant at the 0.95

confidence level. I will use SPSS to generate p–values (the probability of having a given

value of *t* when the null hypothesis is true; i.e., the value of β is zero for each predictor

variable). For *p*–values less than 0.5, I rejected the null hypothesis indicating that

relationship between the predictor and response variables was significant. Given this,

any or all of the independent variables (the amount of leadership training, mentorship,

and time in the position of academic dean) were included in a final regression model that

I used to predict the LMX score through the regression model, which I was anticipating

as significant.

Internal and External Validity

Internal validity in terms of the LMX–7 instrument means the strength of the

causal relationships that the instrument measures (Bhal & Dadnich, 2011). Joseph et al.

(2011) cited several literature reviews, which indicated that the LMX–7 instrument has

repeatedly strong internal validity, and is the most widely used instrument to measure

LMX. The internal validity of the LMX–7 instrument is particularly strong in studies

performed in non–academic settings (Berinsky, Huber, & Lenz, 2012). Walumbwa,

Cropanzano, and Goldman (2011) referred to LMX–7's internal validity as discriminant

validity, and through their analysis concluded the internal validity to be high. I used

Cronbach's Alpha reliability test to measure the relationship of the internal factors of the

LMX–7 instrument and the independent variables to determine the effects of one against

the other.

The external validity of any study is how well the replication of the experiment

can be accomplished or generalized in other settings (Berinsky, Huber, & Lenz, 2012).

Walumbwa et al. indicated high external validity within their research using LMX;

however, they noted there are additional studies needed to validate the external validity

across domains. My study of academic deans using LMX theory and the LMX–7 instrument will add to the body of scholarly understanding of external validity across domains.

Protection of Participants

As stated before, I did not specifically identify participants by their responses. Even though SurveyMonkey tracked IP addresses to prevent multiple submissions to the survey by one participant, I did not request these IP addresses as part of the SPSS data set. This prevented any temptation for IP address tracing to identify from which specific institutions that a respondent completed the survey. ACAD was going to send the survey requests out on my behalf, but I ended up e–mailing it to their listserve so I will not have access to individual e–mail addresses of potential participants.

Data gathered through this survey did not have any personally identifiable information. This study did not have participants from protected populations such as individuals incarcerated or minors. Raw response data is stored on SurveyMonkey's secure servers until the survey period ended. SurveyMonkey stores raw response data in a secured SPSS format. I download one extraction of the responses from SPSS to a removable USB storage device after the survey period was complete. These data are password protected, and the USB storage device is stored in a locked office that is in a building that has remotely monitored intrusion detection and fire detection. E–mailing of raw data did not occur. I incorporated a second USB storage device with major revisions of the SPSS file and I stored it in a locked file cabinet at my private locked office that is in a separate building from my private home office where analysis will take place.

Summary

This chapter addressed the methodology of my research on the effects of leadership training, mentorship, and experience time of academic deans in community colleges. The methodology facilitated the comparison of three independent variables to the dependent variable. In this chapter, I also addressed the setting and sample, LMX–7 instrument, data collection and analysis procedures, and protection of participants. The research population was all 1,655 U.S. based community college academic deans and their faculty. By using the LMX–7 instrument in an online survey, the data were collected in a manner that protected the personal information of all participants. In Chapter 4, I will present the demographics of the study participants and my results.

Chapter 4: Results

The issue that was the focus of my research, documented in a review of the scholarly literature, was that academic deans who are not properly trained and mentored have a negative effect on faculty performance and morale. Due to this negative effect on faculty performance and morale, quality of instruction suffers, and faculty turnover increases. Academic deans who are not properly trained and mentored directly affect the faculty they work with. This in turn increases faculty turnover intentions and affects the faculty performance in the classroom. These factors negatively affect students as they prepare to join a trade or profession (Boon & Biron, 2016).

The problem addressed in my research was that, as a consequence of a lack of scholarly literature, there is a shortfall in the knowledge and understanding about the nature and extent of the influence that mentorship, leadership training, and time in the position as dean have on an academic dean's role-taking, role-making, and routinization of tasks with their subordinates. One method to reflect this influence is through a comparison of the years of mentorship, previous leadership training, and time in the position as an academic dean to a dean's LMX–7 score as reported by their faculty. The purpose of this research was to assess this relationship in a manner that could lead to positive social change throughout U.S.–based community colleges, or even all higher education. A secondary purpose of this research was to determine if leadership, mentorship, and time in a position have an effect on LMX between supervisor and subordinate in higher education as it has in other industries (Brimhall, Lizano, & Barak, 2014).

This chapter covers instrumentation, data collection, demographics of respondents, and results of my research. This chapter will conclude with a summary of Chapter 4 and an overview of Chapter 5. The instrumentation for this study was the LMX–7 instrument. The LMX–7 is a seven–question instrument that was created by Graen and Uhl–Bien (1991) (Appendix B). The LMX–7 instrument is used in hundreds of leadership studies either as an independent measure to support research into LMX theory; or in conjunction with other instruments such as the Myers–Briggs Type Indicator, to research authentic leadership, and transformational or transactional leadership. Permission was granted for the LMX–7's use by Dr. Uhl–Bien (Appendix A).

Data were collected through the internet using a secure survey corporation called Survey Monkey. Academic deans were sent the initial survey invitation, and upon completion, they were provided a script to send to their faculty for participation. The demographics, as described below, were males and females, academic deans (or similarly titled positions) of United States–based community colleges, faculty members (full–time, part–time, and adjunct) of United States–based community colleges, all of whom have various levels of education, varying ages, and a wide range of experiences.

I used the statistical analysis program called SPSS to perform MLR and other analysis on the data gathered. In total, 1,641 of the 1,655 community colleges in the United States were contacted to participate, representing a sample size similar to the entire population. I received 148 responses from academic deans and 591 faculty responses.

Research Question and Hypotheses

The research question posited in Chapter 1 required a quantitative analysis to assess the effects of leadership training, mentorship, and time in the position of academic dean on a dean's leadership as viewed through the prism of LMX. The research question was, how does a dean's time in the position, previous mentorship or leadership training relate to his or her LMX score? As articulated in Chapter 2, role-taking, role-making, and routinization of tasks are the three foundational concepts of LMX theory. Three subquestions (one for each independent variable), as follows, were addressed in a single quantitative hypothesis:

1. To what extent was LMX related to leadership training for academic deans?

2. To what extent was LMX related to mentorship for academic deans?

3. To what extent did the length of time an academic dean has served in that position affect LMX scores?

Regression Equation

A single regression equation expresses the research questions mathematically. In the regression equation, there are three independent variables (Xi), with corresponding regression coefficients, β_i. The relationships between the independent variables (Xi) and dependent variable ($Y =$ LMX score) take the standardized form of the multiple regression equation:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$$

where ε is an error term or random variation in this model.

Hypotheses

The following is the mathematical expression of the hypothesis:

H1$_0$: No independent variables (X_i) influence LMX score (*Y*); all βs = 0.

        where

    X_1 = leadership training

    X_2 = mentorship

    X_3 = length of time an academic dean has served in that position

    all three of which are discrete numerical variables expressed in years.

H1$_A$: At least one β_i is not equal to zero.

If a β_i = 0, then we conclude that the independent variable X_i does not exert an influence on the dependent variable, *Y* (LMX score).

Instrumentation

Summarizing the LMX–7 instrument description from Chapter 3, the dependent variable for this study was the LMX score generated through the LMX–7 survey instrument from the faculty member—a continuous numerical variable. I surveyed the academic deans separately to determine the independent variables (amount of leadership training, mentorship, and length of time in their position as an academic dean). Each of these independent variables is a discrete numerical variable. I analyzed the results from both the faculty and the academic deans using multiple linear regression in SPSS to evaluate the research questions.

Graen and Uhl–Bien (1991) designed the LMX–7 instrument based upon U.S. leadership characteristics and paradigms. The leadership attributes measured by the LMX instrument, according to Joseph, Newman, and Sin (2011), are the viewpoints of

taskings, initiative, shared goals, role clarity, and perceived abilities of the other party. While LMX theory focuses on role-taking, role-making, and routinization of tasks between the leader and member, the varying styles of leadership, from transactional to transformational, can be inferred through the LMX–7 instrument (Sypawka, Mallett, & McFadden, 2010). Sypawaka et al. determined through their study of LMX theory that leaders who score low on the LMX–7 instrument tend to be transactional leaders while those leaders who score high on the LMX–7 instrument are more transformational in their leadership style.

The LMX–7 instrument is a five–point Likert scale instrument, made up of seven questions. The statements on the LMX–7 instrument capture the leadership tendencies of academic deans from the perspective of each faculty member. The responses on the LMX–7 instrument are from one to five and captured with negative or disagreeing statements. For example, a respondent might answer a question negatively by selecting the answer (1) indicating rarely, not a bit, or not at all, or they may answer positively or with a (5) indicating very often, a great deal, or fully. I added questions to the LMX–7 questionnaire given to the faculty to obtain organizational information about the size of the college and approximate number of employees (discrete numerical variables). I have depicted the LMX survey in Appendix B.

The minimum score on the LMX–7 is 7 and the maximum score is 35. For example, if a participant answered 5 for each question, the total for their survey would be 35. Interpretation of the aggregated scores is as follows:

1. A very low LMX score is between 7 and 14 total points.

2. A low LMX score is between 15 and 19.

3. A moderate LMX score is between 20 and 24.

4. A high LMX score is between 25 and 29.

5. A very high LMX score is between 30 and 35 (Graen & Uhl-Bien, 1991).

I chose the LMX–7 instrument for this study for two main reasons. First, LMX–7 was specifically developed to measure LMX in support of LMX theory. Since I posited that leadership, mentorship, and the amount of time a dean has in their position effects their relationship with their subordinates, LMX theory and the supporting LMX–7 instrument were logical choices. Given the LMX–7 instrument's direct relationship to LMX theory, the LMX–7 instrument is substantially reliable and valid as an instrument. Since many studies have used the LMX–7 instrument to measure LMX theory, the use of the LMX–7 instrument allows for generalization of my findings across fields of inquiry and populations, which could allow for greater social change beyond higher education (Nichols & Cottrell, 2014).

The second reason for choosing the LMX–7 instrument was that it is primarily adopted in the use of leader–only studies, such as in the case of this study. As a leader–only study, the LMX–7 instrument provides reflection of how subordinates perceive their tasks and roles with their leader. Since I posited that the amount of leadership training, mentorship, and the number of years as an academic dean would effect the dean's relationship with their faculty, LMX theory and the LMX–7 instrument are an appropriate fit for this study. I have depicted the LMX survey in Appendix B.

A third and less important rationale for using the LMX–7 instrument was that it is only seven questions long. This decreased the amount of time required for the faculty member to complete the survey. This was vital to this study because faculty members

have high demands on their time (Sauermann & Roach, 2013). The demands for a faculty member's time include preparing for their lectures, lecturing or facilitating their learning environment, creating assignments, assessing those assignments, communicating with students, advising their students on class selection and career pathways, participating in committee meetings and college governance activities, and professional development.

Data Collection

After receiving Walden University IRB approval, I initiated my data collection plan as articulated in Chapter 3. The IRB approval number was 01-20-16-0297673. I collected data from January 28, 2016 through March 29, 2016. As stated in Chapter 3, ACAD agreed to e–mail my invitation message to their membership. Upon request to send my e–mail out, ACAD clarified that they would have sent my survey out to their membership during their annual Dean's survey in September and did not feel it was appropriate for them to send it out independently. They suggested edits to my welcome message that would make it more appealing to their membership and provided me the opportunity to send it to their listserv e–mail distribution address.

I sent the initial survey through ACAD's listserv, and 10 days later, I sent a follow–up e–mail to the same email listserv. In the first 10 days, there were only 10 deans who responded to my survey. The same day that I sent the follow–up e–mail, I began random sampling colleges listed at the AACC website. This website contains a searchable database where I could search for all community colleges in the United States by the title academic dean, dean of academic affairs, chief academic officer, or dean of instruction.

In addition to the AACC website, I also used a listing of community colleges in the United States. From this list of United States–based community college names, I researched their websites, and e–mailed their academic dean, dean of academic affairs, chief academic officer, or dean of instruction directly. Prior to sending the e–mail from this data source, I cross–referenced the e–mails I had previously sent to ensure I was not sending the same invitation to the same college executive multiple times.

Because I used these three methods to make initial contact with the academic dean, I could no longer track responses from each data source to determine which data source yielded the most responses. Even though tracking the effectiveness of reaching out to academic deans through multiple data sources would be an interesting observation, this type of data was not essential to my understanding of the effects of leadership training, mentorship, or the time in the position as dean. Survey response rates from academic deans would be an interesting future study to determine if deans who respond to requests for survey have a higher LMX with their subordinates.

Fifty-five faculty members responded during the first 10 days. As stated in Chapter 3, I provided the deans a welcome message with a link to the faculty survey at the end of the dean's survey. I asked the deans to copy the message and send it to their faculty for their participation. Faculty members completed additional surveys after the reminder email and random sampling of community colleges through the AACC website and listing of all community colleges began.

Through the AACC website, I e–mailed each college that listed an academic dean, chief academic officer or similarly titled position. This yielded 374 e–mails, 83 of which came back as undeliverable. Next, I took the list of those undeliverable e–mails and

researched each college's website to find the most current Academic Dean listed and contacted them. By this time in my data collection process, I had already e–mailed the current academic dean of nearly all 83 previously undeliverable e–mails.

During my research of Academic Deans listed on the listing of all community colleges, I referenced back to my sent e–mails from the AACC website to ensure I was not e–mailing the same dean, or the same college, twice. During this research process, I learned that some community colleges use multiple domains for the same college. For example, the City University of New York has a network of community colleges under its preview and they have cuny.@schoolname.edu as their domain structure where @schoolname represents the unique school within the CUNY network. The deans, however, will often simply have cuny.edu as their domain, making it impossible to match the deans' domain to their faculty. I deleted these responses from the dataset before analysis began.

In total, I sent 1,641 e–mails to community college Academic Deans in the United States, receiving 148 responses. Of these responses, 45 were complete or had matching faculty responses. I also received 591 faculty responses. Of these responses, 509 were complete and had matching dean submissions. In some cases, faculty members used their personal e–mail domains, for example @google.com, instead of their school domains, therefore making it impossible to match with a dean's submission.

While sending out my invitation e–mails two deans contacted Walden University's IRB to question my research. One inquiry caused Walden's IRB to request that I cease data collection until they answered the question, and the other did not. During the IRB's review of my procedures, I did not collect any data. I began collecting

data again after I made required changes to my invitation e–mail. Neither this delay nor the change in invitation e–mail caused a change in data replies or the fundamental concept of my research.

Six deans forwarded my invitation letter to their own internal IRB. Each of the six IRBs was professional to work with, and had accelerated processes in place that only required one to two page forms for submission. All six IRBs accepted my Walden University IRB approval documents as evidence of valid, scholarly research.

Of the six colleges that had IRB processes, only one of them denied me to use their college for my study, citing reduced staffing on their executive team and burdens on their faculty. Two of the remaining five IRBs requested that I provide a copy of my dissertation once approved. Several academic deans and faculty members contacted me after completing their survey to request a copy of my dissertation once approved. The ACAD leadership also invited me to submit my findings during their next call for presenters for their 2017 annual academic dean's conference.

Demographics

I collected demographics from both the deans and the faculty members. The demographics collected from the deans were gender, race/ethnicity, age, highest education level, years of mentorship received prior to becoming an academic dean, years of leadership training prior to becoming an academic dean, and length of time in the position of dean. I also asked the deans to provide their domain names, for example @waldenu.edu, so that I could match their responses with their faculty members. Table 2 is a summary of the demographic data provided by the deans.

Table 2 shows that 66.7% of deans who responded were females. There is no scholarly evidence indicating what percentage of deans in community colleges are female. According to Levin and Kater (2013), 29.0% of community college presidents are women. Comparably, 64.6% of faculty members who responded were female (see Table 3). According to Bateh and Heylinger (2014), 47.0% of college faculty members are female.

The majority of deans in my study had earned their doctorates, with the remaining having their master's degrees, except for three who had bachelor's degrees. Exactly 60.0% of deans were between the ages of 51 and 60 with no dean younger than 31 or older than 65. White deans made up 88.9% of all deans who responded with no other ethnic group representing over 5% of the population.

Table 2

Frequency Counts and Percentage of the Demographic Variables of Deans (n = 45)

Variable	Frequency	Percent
Gender		
Female	30	66.7
Male	15	33.3
Age		
31–35		4.4
36–40	3	6.7
41–45	6	13.3
46–50	3	6.7
51–55	16	35.6
56–60	11	24.4
61–65	3	6.7
Race		
Asian / Pacific Islander	2	4.4
Black or African American	2	4.4
Multiple ethnicity / Other (please specify)	1	2.2
White / Caucasian	40	88.9
Education		
Bachelor's Degree	3	6.7
Master's Degree	17	37.8
Doctoral Degree	25	55.6

The demographics collected from the faculty members were gender,

race/ethnicity, age, highest education level, number of students at their college, and

number of employees at their college. I also asked the faculty members to provide their

domain names, for example @waldenu.edu, so that I could match their responses with their deans. The faculty members' ages ranged between 30 and 60. The majority of deans were over the age of 50. This is in alignment with Sarros, Gmelch, and Tanewski (2014) who stated that the majority of academic deans are over 50 years old and have less than five years experience as an academic dean.

Table 3 is a summary of the demographic data provided by the faculty members. Even though 60.0% of deans were between the ages of 51 and 60 with no dean younger than 31 or older than 65, 35.9% of faculty members were between the ages 51–60. Faculty ages ranged from 21 to over 71 years old. White faculty members made up 90.1% of all faculty members who responded with no other ethnic group representing over 5% of the population.

The majority of faculty members had their master's degree, with fewer doctoral degree holders, and even fewer faculty members with only bachelor's degrees. Since many community colleges offer training and education in trade areas such as automotive, plumbing, and electrical, it is common to find faculty members reporting associates, high school, or no degree at all. In the community college setting, these trades faculty members are hired and considered experts in their field through international, national, or state credentials and federal or state licensure.

Table 3

Frequency Counts and Percentage of the Demographic Variables of Faculty (n = 508)

Variable	Frequency	Percent
Gender		
Female	328	64.6
Male	180	35.4
Age		
21-25	1	0.2
26-30	23	4.5
31-35	38	7.5
36-40	56	11
41-45	73	14.4
46-50	62	12.2
51-55	75	14.8
56-60	107	21.1
61-65	48	9.4
66-70	18	3.5
71	6	1.2
Race		
American Indian or Alaskan Native	5	1
Asian / Pacific Islander	6	1.2
Black or African American	16	3.1
Hispanic	6	1.2
Multiple ethnicity / Other (please specify)	8	1.6
White / Caucasian	462	90.9
Education		
High School Diploma	2	0.4
Associates Degree	22	4.3
Bachelor's Degree	57	11.2
Master's Degree	344	67.7
Doctoral Degree	79	15.6

Results

The model summary, MLR, and correlations related to my research question are presented in this section. Beyond the plan stated in Chapter 3, the data indicated further analysis was needed. This anaysis revolved around the indication that gender could be an influential factor on LMX scores from either the dean or faculty perspective.

Table 4

Model Summary

Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	.070[a]	.005	-.068	7.050

Table 5

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	9.981	3	3.327	.067	.977
Residual	2037.931	41	49.706		
Total	2047.911	44			

Table 6

Pearson Correlations

		Y	X_2	X_1	X_3
Pearson Correlation	Y	1.000	-.224	-.122	.104
	X_2	-.224	1.000	.148	.158
	X_1	-.122	.148	1.000	-.193
	X_3	.104	.158	-.193	1.000

Table 7

Coefficients

	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for *B*	
	B	Std. Error	*Beta*	*t*	Sig.	Lower Bound	Upper Bound
X_1	.129	.302	.069	.428	.671	-.481	.740
X_2	-.080	.383	-.034	-.209	.835	-.854	.693
X_3	.032	.307	.017	.103	.918	-.588	.652

Given the results listed in the Tables 4 and 5, I can conclude the following: Since the *F*–statistic = 0.67 is less than the critical value of *F*, and the *p*–value = .977 is greater than my level of significance (.05), I did not reject the null hypothesis and concluded that there is insufficient evidence that the overall model is significant. The r^2 of .005 indicates that only about 0.5% of the variation in LMX score can be attributed the the full regression model, and that other variables may be influencial.

Descriptive Statistics for LMX Scores

Table 8 shows the descriptive statistics for all 508 LMX scores generated during my research. The mean of 23.31 and median of 24.00 indicate that overall the LMX scores were moderate. With a standard deviation of 6.95, the expected scores for the entire population deviate between very low and acceptable on the LMX results analysis.

The skewness of -.305 indicates that the responses were in general skewed to the lower end of the LMX scale, indicating a lower relationship. The range of 29 indicates that with a potential score of 7 to 35 for the total LMX score results, there was a total difference of 28 scoring points in all responses. A skewness of -3.05 indicates that the LMX-7 scores distribution has a long tail in the negative direction.

Table 8

Descriptive Statistics for LMX Scores (n = 508)

Mean	23.31
Median	24.00
Std. Deviation	6.952
Skewness	-.305
Std. Error of Skewness	.108
Range	28

Subquestions Individually Analyzed

Using MLR and not finding a significant relationship between LMX score and the amount of mentorship, leadership training, or time in the position as dean, I evaluated the influence of each independent variable on the dependent variable of LMX–7 score. This analysis further supported answering my three sub–questions as stated in Chapter 1:

1. To what extent was LMX related to mentorship for academic deans? For this subquestion I posited that with an increasing amount of mentorship of the dean prior to their acceptance of the dean position, the deans' LMX score with faculty is higher.

2. To what extent was LMX related to leadership training for academic deans? For this subquestion I posited that with an increasing amount of leadership training of the dean prior to their acceptance of the position, the deans' LMX score with faculty is higher.

3. To what extent did the length of time an academic dean has served in that position affect LMX scores? For this subquestion I posited that with an increase

in the length of time as an academic dean, the deans' LMX score with faculty is higher.

From the t–tests of each of the independent variables in Table 7, I observed the following:

There is not a significant relationship between LMX–7 score and years of mentorship received prior to becoming an academic dean, $t(43) = -.209, p = .835$.

There is not a significant relationship between LMX–7 score and years of leadership training received prior to becoming an academic dean, $t(43) = .428, p = .671$.

There is not a significant relationship between LMX–7 score and the length of time as an academic dean, $t(43) = .103, p = .918$.

Through an analysis of the data gathered in my research, there were no significant effects by the independent variables. Therefore, I can conclude that there is not an effect on the role-taking, role-making, and routinization of community college leaders from time in the position as dean, mentorship, or leadership training prior to becoming academic deans. The data did, however, indicate that additional analysis around the genders of both deans and faculty was warranted.

Additional Results: The Issue of Gender

The analysis of the data indicated further inquiry into how gender may influence LMX scores from either the dean or faculty perspective. While the independent variables of mentorship, previous leadership training, and time in the position as dean were not found to be significant in this analysis, gender may be an influencing factor.

Faculty–reported LMX scores by gender—all deans. The high percentage of female respondents for both deans and faculty called for additional analysis. With 67.0% of dean and 65.0% of faculty responses being female, I compared faculty–reported LMX scores based on dean gender. The average female faculty–reported LMX score for all deans was 23.2 as compared to male faculty–reported LMX score for all deans whose average was 23.3 (Table 9). Since I did not specifically design my research to investigate this phenomenon, it is interesting to note that male and female faculty members have virtually the same LMX relationship with their deans.

To perform further analysis of the LMX–7 scores for deans, I accomplished a t–test of the mean LMX scores for male versus female faculty respondents, where the null hypothesis was that there is no difference in mean scores for male versus female respondents. As shown in Table 10, for Levene's test of variance, $F = .551$ and $p = .458$, which means that I do not reject the null hypothesis that the variances are equal, and therefore I used a pooled variance t–test. Also as shown in Table 10, $t = .672$ and the p–value = .502.

Therefore, I do not reject the null hypothesis and conclude there is insufficient evidence of a difference in the mean scores for male versus female respondents. Nevertheless, further investigation may be warranted to understand the phenomenon of male versus female deans. Regardless of the gender differences of LMX scores in this study, it is important to remember that LMX scores between 20–24 indicate a moderate relationship between the academic dean and their faculty. Further discussion of this occurs in Chapter 5.

Table 9

Group Statistics

	What is your gender?	N	Mean	Std. Deviation	Std. Error Mean
Y	Male	180	23.59	6.805	.507
	Female	328	23.16	7.037	.389

Table 10

Independent Samples Test

		Levene's Test for Equality of Variances		*t*–test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	*t*	df	Sig. (2–tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Y	Equal variances assumed	.551	.458	.672	506	.502	.433	.645	-.834	1.701

Faculty–reported LMX scores, all faculty—deans by gender. Inquiring

further, I segregated the data by male and female deans to investigate the relationship

between gender as a dean and their self–reported LMX score. Male deans had an average

LMX score of 23.4. Female deans had an average LMX score of 23.2 (Table 11).

Referring to Table 12, based on Levene's test in Table 11 (*F* = .503 and *p* = .482), I do

not reject the null hypothsis that the variances are equal, and therefore I used a pooled

variance *t*–test. With *t* = 1.092, with a *p*–value of .281, I failed to reject the null

hypothesis and conclude there is no difference between male and female deans' faculty–

reported LMX scores given both genders of faculty members.

Table 11

Group Statistics

	What is your gender?	N	Mean	Std. Deviation	Std. Error Mean
Y	Male	15	23.40	6.300	1.627
	Female	30	25.47	5.823	1.063

Table 12

Independent Samples Test

		Levene's Test for Equality of Variances		t–test for Equality of Means						
						Sig. (2–tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.	t	df				Lower	Upper
Y	Equal variances assumed	.503	.482	1.092	43	.281	-2.067	1.892	-5.882	1.749

Faculty–reported LMX scores—deans by gender. Next, I looked at male

versus female faculty LMX score as compared to male versus female deans. For male

deans, female faculty members reported an average LMX score of 23.1 while male

faculty members reported an average LMX score of 24.0. Figure 4 shows the differences

in LMX scores for the male and female faculty members given their male dean. Female

deans who had female faculty members reported an average LMX score of 23.2 while

their male faculty members reported an average LMX score of 23.3. Figure 5 shows the differences in LMX scores for the male and female faculty members given their female dean. Through a two–way ANOVA as shown in Table 13, with $F = 2.328$ and $p = .128$, I conclude that dean gender is not a significant influence on LMX score. Likewise, I conclude based on $F = 0.891$ and p–value $= .346$, faculty gender is also not a significant influence on LMX score. Considering the two–factor interaction between faculty gender and dean gender, shown in Table 13, $F = 2.681$ and $p = .069$ the interaction between both genders of faculty members and deans is also not a significant influence on LMX score.

Table 13

Two–way ANOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	134.172[a]	2	67.086	1.390	.250
Intercept	90839.630	1	90839.630	1882.528	.000
Faculty Gender	43.010	1	43.010	.891	.346
Dean's Gender	112.342	1	112.342	2.328	.128
Faculty Gender * Dean's Gender	257.168	2	128.584	2.681	.069
Error	24368.306	505	48.254		
Total	300505.000	508			
Corrected Total	24502.478	507			

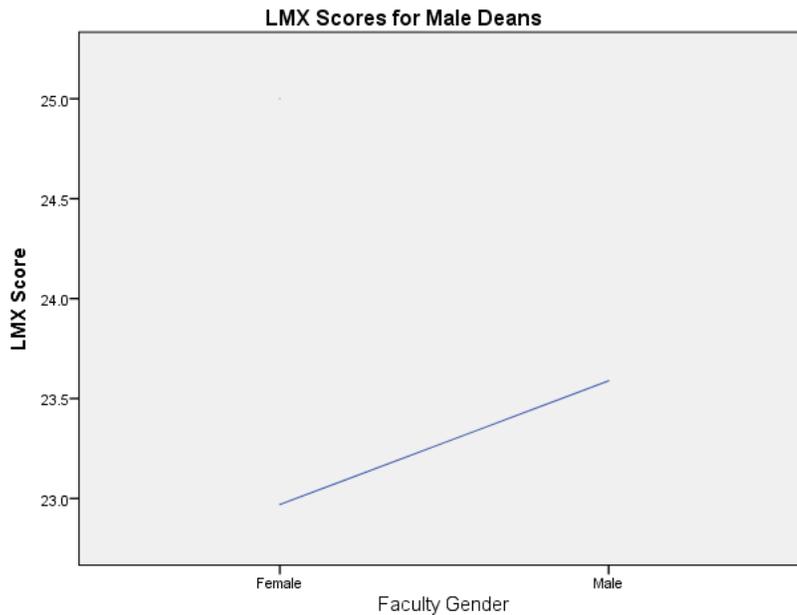a. R Squared = .005 (Adjusted R Squared = .002)

Figure 4. LMX scores for male deans by faculty gender.
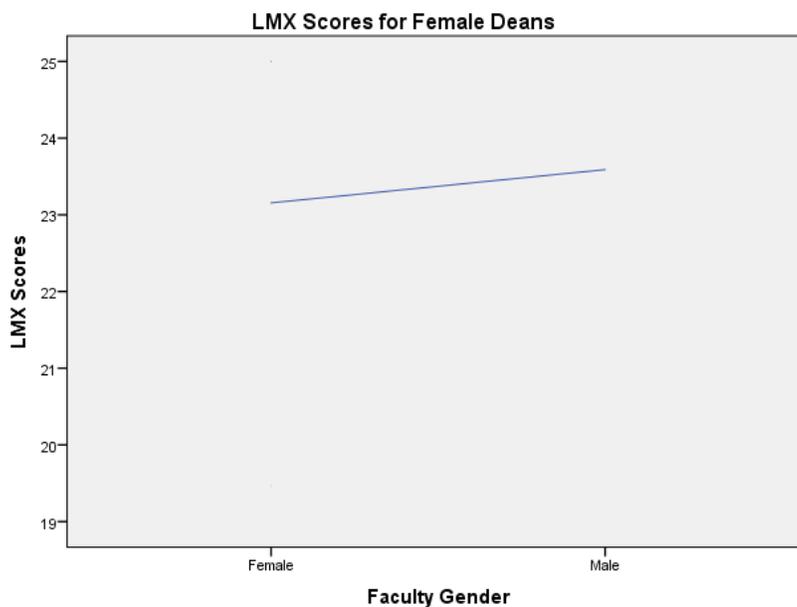
Figure 5. LMX scores for female deans by faculty gender.

It is important to note that a LMX–7 score of less than 24 is an indicator that the

leader treats their subordinates (members) as an out–group, meaning that according to

Graen and Uhl–Bien (1991), the dean does not give the faculty member career–

expanding assignments. It is also an indicator that the deans do not have a well developed relationship with faculty members, and the subordinates (faculty members) may have stronger turnover intentions. Additionally, lower LMX–7 scores are often associated with lower morale, less initiative in their work, and lower job commitment. All of the individual scores I analyzed were between 7 (very low LMX) and 35 (very high LMX). Having 508 normally distributed LMX scores with an average of less than 24 indicates that overall, the deans' relationships with their faculty were less than desirable (Furunes T. , Mykletun, Einarsen, & Glaso, 2015).

Leadership training, mentorship, and time in the position as dean, by gender. I then looked at the amount of leadership training, mentorship, and time in the position as dean, by gender. Male deans had an average of 1.53 years of previous mentorship, 4.53 years of leadership training, and 4.80 years as a dean. Female deans had an average of 1.77 years of previous mentorship, 4.67 years of leadership training, and 4.70 years as a dean. A *t*–test comparing the means from male to female deans revealed that there were no significant differences between male and female deans' years of mentorship, leadership, and years as a dean.

Table 14

Group Statistics for Years of Previous Mentorship

	Dean Gender	N	Mean	Std. Deviation	Std. Error Mean
Mentorship	Male	15	1.53	2.774	.716
	Female	30	1.77	2.944	.538

Table 15

Independent Samples Test for Years of Previous Mentorship

		Levene's Test for Equality of Variances		t–test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2–tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Mentorship	Equal variances assumed	.156	.695	-.255	43	.800	-.233	.914	-2.076	1.610
	Equal variances not assumed			-.261	29.66	.796	-.233	.896	-2.063	1.596

Table 16

Group Statistics for Leadership Training

	Dean Gender	N	Mean	Std. Deviation	Std. Error Mean
Leadership Training	Male	15	4.53	3.871	.999
	Female	30	4.67	3.594	.656

Table 17

Independent Samples Test for Leadership Training

| | | Levene's Test for Equality of Variances | | t–test for Equality of Means | | | | | | | |
| | | F | Sig. | t | df | Sig. (2–tailed) | Mean Diff | Std. Error Diff | 95% Confidence Interval of the Difference | |
									Lower	Upper
Leadership Training	Equal variances assumed	1.115	.29	.08	43	.931	.100	1.150	-2.219	2.419
	Equal variances not assumed			.09	31.861	.928	.100	1.097	-2.136	2.336

Table 18

Group Statistics for Time in the Position as Dean

	Dean Gender	N	Mean	Std. Deviation	Std. Error Mean
Time in the Position	Male	15	4.80	3.299	.852
	Female	30	4.70	3.789	.692

Table 19

Independent Samples Test for Time in the Position as Dean

		Levene's Test for Equality of Variances		t–test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	*t*	df	Sig. (2–tailed)	Mean Differenc e	Std. Error Differenc e	Lowe r	Uppe r
Time in the Positio n	Equal variance s assumed	1.11 5	.29 7	.08 7	43	.931	.100	1.150	-2.219	2.419
	Equal variance s not assumed			.09 1	31.86 1	.928	.100	1.097	-2.136	2.336

Summary

In this chapter I assessed the relationship between a dean's previous mentorship, leadership training, and time in the position as dean; and scores from the LMX–7 instrument. In this chapter I also covered instrumentation, data collection, and the demographics of the participants. I used MLR to analyze the data and determined there were no significant relationships between leadership training, mentorship, or time in the position of dean to LMX–7 score. Each independent variable was then analyzed against LMX–7 scores from faculty members to analyze the effects of leadership, mentorship,

and time in the position as academic dean independent of each other. Lastly, I explored the relationship between gender of both deans and faculty members as compared to their LMX–7 scores, and the gender of faculty members as compared to the gender of academic deans.

In Chapter 5 I include a discussion of my findings, limitations of this study, recommendations for future studies, implications of the findings of this study to academia, and positive social change that may occur from my study on academic deans and their relationship with faculty.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this research was to assess the relationship between a dean's previous mentorship, leadership training, and time in the position as a dean and their relationship with faculty members as measured by the LMX–7 instrument. The issue that was the focus of my research, documented in a review of the scholarly literature, was the premise that academic deans who are not properly trained and mentored have a negative effect on faculty performance and morale. Due to this negative effect on faculty performance and morale, quality of instruction suffers, and faculty turnover increases. Academic deans who are not properly trained and mentored directly affect the students as they prepare to join a trade or profession. The problem addressed in my research was that, as a consequence of a lack of scholarly literature, there is a shortfall in the knowledge and understanding about the nature and extent of the influence that mentorship, leadership training, and time in the position as dean have on an academic dean's role-taking, role-making, and routinization of tasks with their subordinates (captured in their LMX score).

I conducted my research to gain insight into these relationships. Scholarly research and understanding into the phenomenon of deans and their relationship with faculty members are expanded through this study. In this study, I framed the relationship between academic deans and their faculty members through the theory of LMX, which I posited is influenced by the amount of previous mentorship, leadership training, and time in the position as an academic dean. In this chapter, I interpret the results in Chapter 4, analyze the limitations of the study, make recommendations for future research, and examine the positive social change that may occur as a result of this study.

Summary of the Results

In Chapter 2, I cited that LMX theory revolves around the dyadic relationship between the leader and the subordinate (member). The more frequent and more complex the relationship between the leader and the member, a higher LMX is present. This means that the leader is typically giving career–expanding, challenging, and rewarding assignments to the member. Conversely, when the leader and the member have transactional, infrequent, and low–meaning conversations or interactions, the member is part of the out–group for an organization. This is an indication that the member will only receive routine assignments that do not lead to their further development or lead to career expansion opportunities.

Graen and Uhl–Bien (1991), who developed LMX theory from VDL theory, also designed the LMX–7 instrument to measure the strength of LMX between superior and subordinate. Researchers use the LMX–7 instrument when examining the LMX relationship of supervisors and subordinates. Researchers also use the LMX–7 instrument as a comparative tool for other leadership theories and often posit that if a leader has a high LMX–7 score with their subordinate, they must be a certain type of leader.

Of the 1,641 colleges contacted, 146 deans replied. Of those 146 deans, 45 provided complete responses and subsequently had faculty responses. There were also 591 faculty members who replied. Of those 591 faculty members, 508 provided complete responses and had corresponding dean submissions. In Chapter 4 I indicated that among my data gathering mediums (ACAD listserve, AACC website, and a listing of

all community colleges in the United States) I was not able to determine which medium yielded the most responses.

I used a quantitative method of multiple linear regression (MLR) to analyze these independent variables against the dependent variable of LMX–7 score. Through further inquiry, I also analyzed each independent variable against LMX–7 score. I then used ANOVA to compare male faculty responses to all deans, female faculty responses to all deans, male deans to all faculty members, and female deans to all faculty members.

The resulting analysis indicated that there is not a relationship between the amount of previous leadership training, mentorship, and time in the position of academic dean and their LMX score with faculty members, though overall LMX scores were moderate. There also was no evidence that gender, either among deans or faculty members, has significant influences on LMX score. Since there was no literature specifically exploring the influence of previous leadership training or mentorship, as indicated in Chapter 2, then this study contributes to the body of literature so that future researchers can focus their efforts on alternate aspects of LMX between academic deans and their faculty members and what may influence it.

Findings

I interpreted the results by comparing them to the theoretical framework of LMX theory. For example, the mean LMX score for all faculty members was 23.39. The LMX–7 score is interpreted as follows: very high = 30–35, high = 25–29, moderate = 20–24, low = 15–19, and very low = 7–14. Scores in the upper ranges indicate stronger, higher–quality leader–member exchanges (e.g., in–group members); whereas scores in the lower ranges indicate exchanges of lesser quality (e.g., out–group members).

Therefore, with a mean LMX score of 23.39 for all faculty members of community colleges, faculty members of community colleges are generally considered out–group members in their relationship with their academic dean (though there are certainly individual institutions in which LMX scores were higher in the spectrum). In Chapter 2, I cited Mapolisa and Kurasha (2013) who stated that out–group members of organizations might have lower morale, lower productivity, and higher turnover intentions. If faculty members are out–group members of their organizations, then this will effect faculty members' classroom instructional performance as well as their depth of participation in college governance meetings, curriculum development or modernization, and advising of students.

This moderate LMX score finding may also be an indication of other types of leadership styles that academic deans possess. As shown in Chapter 2, the literature indicates that leaders who have higher LMX scores with their subordinates also tend to possess the leadership style known as transformational leader. The literature also indicates that leaders who have lower LMX scores with their subordinates tend to possess the leadership style known as transactional leader. I will explain more about these potential linkages between LMX scores and leadership styles later in Chapter 5.

Descriptive Statistics for LMX Scores

With 508 LMX scores generated and a mean of 23.31 and median of 24.00, this is an indication that the overall relationship between deans and their faculty members is moderate. This moderate indication, according to Graen and Uhl–Bien (1991), is an indication that deans view the faculty members as out–groups members of their organization. Out–group members of organizations typically do not know where they

stand with their supervisor, do not feel that they can go to their supervisor with job problems and needs, do not feel that their potential is recognized, and do not feel that their supervisor would stand up for them in organizational conflict at their own expense.

This may be a symptom of the phenomenon where academic deans are having to perform significantly more work in their community outreach and fundraising domain than previous deans have had to do. With increasing costs on all functional areas of every college, increasing retirements, and shrinking pools of potential student candidates, academic deans are having to focus more of their time externally. Additionally, the increasing reporting requirements of the United States government for college report cards, iPeds, data clearing houses, and employment data are causing academic deans to spend more time on external reporting requirements instead of with their faculty members. These factors, coupled with each regional accreditation bodies increasing requirements for colleges to prove academic rigor, instructor qualification, student success, and cost savings measures, all cause community college leadership to focus on these external requirements in order to protect their faculty members and staff from layoffs, losses of funding, loss of financial aid, and revocation of accreditation status.

The Issue of Gender

While I did not design my study based upon LMX differences between genders, the data indicated an exploration of gender was warranted. I compared faculty LMX scores by dean gender, faculty gender by dean, and faculty gender by dean gender. In each analysis, the LMX score varied by less than one point, always remaining in the moderate interaction results range. Using ANOVA and t–test results for each variation indicated, I failed to reject the null hypothesis in each case, and I concluded that there is

insufficient evidence of differences between male and female faculty members or deans

LMX scores based upon gender.

The *t*–test performed for the amount of leadership training, mentorship, and time

in the position as dean, by gender (Table 15), revealed no differences between male and

female deans. This indicated that both males and females are receiving equitable

opportunities for mentorship and leadership training. It also indicated that males and

females are remaining in the dean position for a similar length of tenure.

Through the demographics displayed in tables 2 and 3, it becomes evident that

faculty members work as faculty members into their early to mid 60s, with nearly 5% of

the faculty population working into their 70s, while deans work in their positions until

their early 60s and then either retire, aspire into a presidency, become a part of the faculty

ranks again, or move into a different career. Conversely, it also indicates that regardless

of gender, previous leadership training, mentorship, and time in the position as a dean,

LMX scores are still moderate between deans and their faculty members.

Variations in LMX Scores

The theoretical framework for LMX is founded on the dyadic relationship

between the leader and the member (subordinate) and the terms of frequency and quality

of interactions between the two (Graen & Uhl-Bien, 1991). This relationship develops

over time, and can benefit either party. If there is a high LMX between the leader and

member, then career–expanding, rewarding assignments are given with a high level of

high quality conversations. If there is a low LMX between the leader and the member,

then routine tasks are typically assigned with low quality, low frequency conversations.

While I did not detect a significant influence of leadership training, mentorship, or time in the position as dean over LMX, I did discover that the average LMX score between deans and their faculty members, across all respondents, are moderate. This means that faculty members, in general, are only receiving routine tasks with low frequency and low quality communications from their deans. Of the 508 faculty respondents, 158 (31.1%) reported LMX scores that were low or very low, indicating deeper issues of trust, responsibility, and organizational dedication between the dean and their faculty members. Lower LMX scores are also an indication of less organizational commitment and higher turnover intentions by the faculty members.

Conversely, 247 faculty members (48.6%) indicated high or very high LMX scores with their deans. These high or very high LMX scores indicate a relationship between the dean and the faculty that is trusting, provides career expanding assignments, and increases commitment to their organization. These relationships, if they continue to flourish, may result in higher student achievement rates in their classes, and in their future careers. Referring back to my analysis in Chapter 4, there is no evidence that previous leadership, mentorship, or time in the position as dean affect LMX score. However, Wang, Sui, Luthans, Wang, and Wu (2014) stated that LMX scores are often an indicator of authentic leadership. Leroy, Anseel, and Garner (2015) also indicated that authentic leadership and LMX are interrelated positively and help influence a leader–member partnership to help further the organization. Other leadership styles, such as transformation leadership, are also linked to high LMX (Kim, Liu, & Diefendorff, 2015).

Limitations of the Study

There were several limitations to my study. The first limitation to my study was that I did not distinguish between full–time and adjunct faculty members in community colleges. Adjunct faculty members have a different view of college leadership, and a different level of engagement from full–time faculty members (Greenberg, 2014). This difference may mean that there are significant differences in the LMX between deans and adjunct faculty members, meaning that the adjunct faculty members would report different LMX–7 scores than full–time faculty members. While full–time and adjunct faculty members are both included in my survey responses, deeper insight into the dean–faculty relationship may exist if the two groups were separated in the research.

The second limitation to my study was that not all community college leadership is structured the same way. This means that at one college there were chief academic officers over multiple deans, who had multiple faculty members reporting to them while at another there was a dean of instruction who had all faculty members reporting to him or her. This means that some dean respondents were the bosses' boss (two levels of leadership removed from faculty) instead of the direct supervisor of faculty. This relationship was not measured by the LMX–7 instrument in my research.

The third limitation to my study was that I only received 45 valid responses from deans out of 1,655 community college deans in the United States. This is far fewer than the 20.0% that is typically seen in online surveys (Sauermann & Roach, 2013). According to Sauermann and Roach, I could have used techniques such as personalization of each e–mail message, financial incentives, or e–mailing only on statistically proven high response days and times.

Recommendation for Future Research

The most pressing issue that I see needing future research is from my observation about the percent of female deans who responded to my survey. There is no scholarly evidence indicating what percentage of deans in community colleges are female. In my research, 67.0% of the respondents were female yet according to Levin and Kater (2013), only 29.0% of community college presidents are women. The issue is that if the 67.0% of female deans is even close to an accurate reflection of the population of deans, what conditions exist that propel such a greater number of women into the dean role than men? Future studies could research what percentage of deans at community colleges are female and if there is a large disparity between that percentage and the 29.0% of community college female presidents. This research could discover what barriers exist that prevents the other 38.0% of female deans from becoming presidents.

Along this same topic, according to Bateh and Heylinger (2014), 47.0% of college faculty members are female, yet nearly 65.0% of faculty members who responded were female. This may warrant investigation by future researchers. The issue is whether females reply to online survey requests at a higher rate than men do, or female faculty members reply to online surveys at a higher rate than men do.

Given my discovery that each community college has vastly different dean structures, ranging from one combined dean of academics and student affairs to multiple layers of CAO's to deans of instruction, to departmental deans, future researchers may want to investigate the effectiveness of these structures in a comparison type study. This research might focus on the effectiveness of college governance, flexibility of systems

within the college, or instructional effectiveness as compared to various forms of college executive structure.

Many studies look at the effects of leadership within organizations by veterans of the U.S. armed forces. Future research could focus on the LMX between academic deans of community colleges and their faculty members and how their LMX–7 scores differ between veteran and non–veteran deans. This research may lead to an investigation into what qualities a veteran dean possesses and how executives of community colleges might replicate the military training that led to those qualities within the veteran.

Now that I have identified that there is a moderate level of LMX between deans and their faculty members, future research could investigate what experiences, trainings, or education have a positive effect on LMX. This will help current college executives and leadership allocate their time and resources in the most effective and efficient manner. I will address this suggested future research in light of the three independent variables from my study: mentorship, leadership training, and time in the position as dean.

Recommendations for Each Independent Variable

Mentorship. One of the keys to my own success in becoming a dean was that as a faculty member, my department chair and academic dean at the time, ensured I was mentored properly. Over the course of 16 years as a faculty member, I spent several years on committees such as labor–management, faculty senate, faculty association (as president and negotiator), and curriculum committee. The chair and dean also mentored me through several curriculum development processes and multiple accreditation

preparations and visits. These experiences gave me a larger view of the organization and prepared me well for my current position as a dean.

The majority of deans come from faculty, either at their own or other institutions. Since most deans come from faculty, the mentorship of faculty members who demonstrate the desire to potentially become a dean is a key to future deans success. The literature indicates that mentorship not only increases LMX with that subordinate, but it also increases the overall professional development with that member (Raghuram, Gajendran, Liu, & Somaya, 2015). Future research could study the LMX of deans who were once faculty members versus those who were not.

Leadership training. In Chapter 2 I reviewed literature indicating that there are multiple short–term programs for new college executives to attend after they become executives. These programs are often only days long, and typically focus on management of systems and regulatory/ accreditation standard compliance issues. Leadership training and experiences are not typically a part of these experiences. Future research could examine the LMX of deans who attended various short–term programs, by institute type, to determine which of those programs has the most positive effect on LMX scores.

Time in the position as dean. Many deans desire to become a college president, and view the time serving as a dean developmental toward that goal. The deans who aspire for a presidency naturally seek new challenges and experiences to make themselves relevant in the presidential search. Future research could study the LMX of deans who aspire to become a college president versus those who have no aspirations beyond their current dean role.

Full–time and Adjunct Faculty Variations of LMX Scores

I did not ask the faculty members for their employment status within their institution. The employment status for faculty members at community colleges can be either full–time or adjunct. Adjunct faculty members typically do not spend as much time on campus, in committee meetings, or in curriculum development conversations.

Most adjunct faculty members in community colleges arrive to teach their courses and then leave the college, or teach online courses and rarely come to campus. Adjunct faculty members are only employed for the courses they have contracted for and have no long–term commitment from the college for future employment. Therefore, they are not as organizationally committed and the academic deans are not as committed to developing relationships with them. Future research between full–time and adjunct faculty members' LMX scores with their academic dean may yield worthy contributions to the literature.

Greenberg (2014) provided some insight into the relationship between full–time faculty members and adjunct faculty members, and adjunct faculty members to their academic dean. Greenberg stated that by the year 2020 nearly 40% of all workers in the United States might work in insecure conditions. By insecure conditions, Greenberg clarified that these workers feel underpaid and lack the benefits that their full–time counterparts enjoy.

Adjunct faculty members are currently beyond the 40% estimate that Greenberg cited. The adjunct faculty members comprise about 75% of all faculty members in the United States. If there is a difference of LMX relationships between full–time and adjunct faculty members, the adjunct faculty relationship might be the direst. I posit that

adjunct faculty members have lower LMX with their academic dean as compared to their full–time counterparts because of the following:

1. Many adjunct faculty members are employed at multiple colleges, making it nearly impossible to fully assimilate into the culture of each college.

2. While being employed at multiple colleges, adjuncts do not have the time to invest in developing meaningful developmental relationships with their academic dean.

3. Many adjunct faculty members work full–time and use their adjunct teaching positions as extra income or as a way to give back to their profession.

Liu and Zhang (2013), using the term part–time and adjunct faculty members synonymously, studied the varying use of adjunct faculty members through four lenses:

1. Public and private institutions hire adjunct faculty members in different percentages of the total faculty workforce.

2. There is a relationship between the number of part–time students and part–time faculty members.

3. There is a positive relationship between college revenues and part–time faculty employment.

4. Increased use of adjunct faculty increases the possibility of unionization of faculty.

Liu and Zhang (2013) concluded that there is a difference in the percentage of part–time to full–time faculty employment between public and private institutions. With private institutions employing nearly 11% more part–time faculty members than public institutions, it would be interesting to investigate the varying LMX of these faculty

members to their academic deans. In addition, an investigation examining the differences in LMX scores of faculty members in public versus private institutions could provide insight into dean and faculty relationships in these two types of institutions.

Liu and Zhang (2013) also detected a positive correlation between the amount of part–time students and part–time faculty members. This correlation indicated that for every 10% increase in part–time student population, there is a 4% increase in part–time faculty employment. This may be because when enrollment increases, colleges must add additional sections of courses to meet that need. Since this enrollment varies from semester to semester, it logically indicates that part–time faculty members are added or subtracted to match this demand. If there are LMX variances between full–time and adjunct faculty members with their dean, then the variance could be even greater with the courses added to meet varying course demand.

Next, a positive correlation exists between a college's revenues and part–time faculty employment. Liu and Zhang (2013) indicated that for every 10% increase in college revenues, there is a 2% increase in part–time faculty employment. This may be because points in enrollment, colleges must add additional sections of courses to meet that need. Since this enrollment varies from semester to semester, it logically indicates that part–time faculty members are added or subtracted to match this demand.

The results of unionization were two fold in Liu and Zhang's (2013) study. First, they concluded that there was an increase in unionization of part–time faculty members with an increase in part–time faculty members use as compared to full–time faculty members. Second, Liu and Zhang concluded that with an increase in part–time faculty unionization also resulted in an increase in full–time faculty unionization. It would be

interesting to investigate the changes of LMX scores between unionized versus non–unionized full–time faculty members and unionized versus non–unionized part–time faculty members and their academic dean.

My own personal experience with the unionization of part–time faculty members began in 2010 when I was a full–time faculty member, and the president of our local full–time faculty union. The part–time faculty members wanted a written pay scale, professional development funding, and a seniority listing so that the most experienced part–time faculty members received preferential rights in course assignments. They received the written pay scale and the preferential rights for course assignments but management denied their request for funding for professional development. Management cited this denial of professional development funding on the fact that adjuncts were a transient population that had less organizational commitment than full–time faculty members and financial constraints.

Throughout the unionization process for adjunct faculty members, they met frequently with management, including the academic dean. This form of formalized meetings should increase LMX between the academic dean and the adjunct faculty members because they are having engaging, career expanding conversations, which include discussions about their commitment to the organization. This leads me to believe that further study into the LMX between unionized and non–unionized adjunct faculty members warrants further investigation. Additionally, management's perspective that adjunct faculty members are transient and less committed to the organization warrants further investigation. From my own personal experience, adjuncts are committed to the college they teach for, but choose to remain in an adjunct status, even when there are

full–time opportunities, because of their full–time career commitments or other personal reasons.

Lastly, while my study did not yield significant results on the overall combined influence of leadership training, mentorship, or years in the position as dean on LMX–7 scores, given the moderate LMX–7 scores between deans and their faculty members, it indicates the need for future research to investigate this phenomenon. As the literature indicated, low LMX between leaders and subordinates leads to poor employee performance, high turnover intentions, and low morale. With today's shrinking budgets in higher education, and increasing pressure from the Federal Government and accreditation bodies for institutional effectiveness, every college needs highly motivated faculty members who are not only dedicated to their college's mission but also to excel at their craft of educating tomorrow's workforce. My recommendation for future research is that a qualitative study investigating why faculty members feel they have a moderate or low LMX with their academic dean could reveal insight into the phenomenon that is causing faculty members to feel like an out–group member of their organizations.

Implications

Improving LMX with Current Deans and Faculty

Leader–member exchange is typically a natural relationship that evolves over time. However, it is my recommendation that current deans intentionally create a climate of leadership that increases their LMX with faculty members. In my own career as a dean, I find it difficult to connect with faculty members in person due to their work routines. By this, I mean that faculty members are unavailable for me to talk to when in class. While this may only be 15–20 hours a week, their time out of class is either

consumed by meeting with students, various committee meetings, attending professional development events on and off campus, preparing lessons, or grading student work on and off campus.

While this may seem a daunting obstacle to overcome, there are mechanisms already in place for a dean to communicate with their faculty members in a higher quality manner. One mechanism is the faculty evaluation. Myself as a dean and my dean colleagues find it hard with our own schedules to do a proper in–class evaluation and follow up conversation with each faculty member. However, if the evaluation form is used as a springboard of conversation, this 30–45 minute session can go from a routine review of blocks checked and minor observations to a professionally developing conversation. A base knowledge of the faculty member's goals and desires for professional development and a common sharing of best practices can ensure and both the dean and the faculty members will have a higher LMX.

A second method of increasing LMX with faculty members is the use of student evaluations. In most institutions, student evaluations are used as an informal informative tool that holds little weight on the performance of the faculty member due to its imprecise nature. In most colleges, the faculty members are provided the student evaluations either via an electronic means or placed in their mailbox for their review with little or no commentary from the dean. This could be an additional opportunity for the dean to briefly meet with the faculty member after the faculty member has reviewed the evaluations. The conversation could again be about the faculty goals and desires for their own professional development and a sharing of best practices.

Some faculty members routinely seek feedback from their dean. Lam, Peng, Wong, and Lau (2015) cautioned against the overuse of feedback–seeking behaviors to increase LMX between the follower and the leader. Top–performing employees from all industries do use feedback–seeking behavior in their daily work. The overuse of this behavior is counterproductive to the LMX relationship. What is expected of the member in high LMX relationships is a feeback–seeking behavior that seeks quality feedback information from traditional and non–traditional feedback sources as they work toward their own goals of professional improvement.

Development of Future Deans Who Will Have Higher LMX

Now that I have identified that there is a moderate level of LMX between deans and their faculty members, specific focus on developing higher LMX between deans and their faculty members is warranted. This will help current college executives and leadership allocate their time and resources in the most effective and efficient manner. I will address this potential development in light of the three independent variables from my study; mentorship, leadership training, and time in the position as dean.

Mentorship. The majority of deans come from faculty, either at their own or other institutions. Since most deans come from faculty, the mentorship of faculty members who demonstrate the desire to potentially become a dean is a key to future deans success (Kemp, Page, & Wilson, 2014). If my recommendations, that is increasing LMX with faculty members through the further use of constructive evaluations and feedback processes, are taken into effect, then current deans will know which of their faculty members' desire to become deans or have the potential to become deans. Of course, a dean demonstrating deliberate mentorship with a faculty member will naturally

increase the LMX between the dean and that faculty member. The literature also indicates that mentorship not only increases LMX with that subordinate, but it also increases the overall professional development with that member (Raghuram, Gajendran, Liu, & Somaya, 2015).

One of the keys to my own success in becoming a dean was that as a faculty member, my department chair and academic dean at the time ensured I was mentored properly. Over the course of 16 years as a faculty member, I spent several years on committees such as labor–management, faculty senate, faculty association (as president and negotiator), and curriculum committee. The chair and dean also mentored me through several curriculum development processes and multiple accreditation preparations and visits. These experiences gave me a larger view of the organization and prepared me well for my current position as a dean.

Therefore, if current deans were to invest in their faculty members who aspire to the dean role, even if it is not within their own institution, then future deans could have higher LMX with their faculty members. Of course, simply by investing time and effort into mentoring of certain faculty members, an academic dean will have a higher LMX with the faculty members they mentor. As a mentee they will naturally have a deeper insight into their co–worker's desires, challenges, and organizational vision.

Leadership training. My recommendations for future deans to receive leadership training is multi–fold. First, current college executives can arrange for potential deans to have cross training opportunities over college breaks and summer time. These cross training opportunities could be in–house experiences where the potential dean spends a day or two with current deans working on leadership issues at their current

college, or they could be placed at another institution to work in an environment that they are not familiar or have organizational bias toward.

Next, these future deans should be enrolled in their local community leadership institute. For example, my local chamber of commerce hosts the Kennebec Leadership Institute (Kennebec Valley Chamber of Commerce, 2016). This leadership institute, and others like it, have facilitators who work with the participants over the course of months on topics such as leadership style identification, communications, conflict resolution, negotiations, problem–solving, team building, meeting management, and goal setting/action planning. In Chapter 2, I reviewed literature that indicated that the varying role of the academic dean includes many of these factors (Behling, 2014).

These locally instructed leadership institutes serve an additional purpose of creating contacts with peers in the community network that a dean will work within. The mentorship aspect of dean development focuses primarily on internal college processes, and the leadership institutes will expose them to the opportunities in their communities and create a network of peers across industries in their area. This will serve a vital purpose as new deans will need to forge relationships with industry partners to foster effective advisory boards and develop new credit and industry specific course offerings.

While locally delivered leadership institutes will provide a foundation and networking base for local deans, many states, such as the State of Maine, offer state–wide leadership institutes that include a nomination process in order to attend (Maine Leadership Institiute, 2016). Often, leadership institutes focus on military style of leadership, because in today's global leadership environment military models of strategic and operational leadership are often necessary and proven to work. These state–level

leadership institutes are often the initial proving grounds for future high–level political figures, corporation chief executive officers, and college presidents.

      Time in the position as dean. Many deans desire to become a college president and view their time as a dean developmental toward that goal. Toward that end, a dean could seek a mentor and attend a leadership institute. Beyond these recommendations, a dean could focus on their LMX with their faculty members through increased high–quality communications and delegate meaningful tasks to them for their own development.

Eight Domains of Academic Dean Competency

      Within the eight domains of academic dean competency, there are implications for academic deans who desire to increase their LMX with faculty members. In Chapter 2 I stated that the eight domains for academic dean competency are funding and growth, governance, diversity, leadership recruitment and development, accountability, public relations and image, relations with the community, and curriculum (Shulock, 2002). Perhaps academic deans are investing too much time, effort, and talent into the domains that do not foster direct communications or development of faculty members.

      The main domains that would foster relationships with faculty members are governance, accountability, and curriculum. The college governance is a shared responsibility where faculty members, staff, and administration participate in meetings and processes that ensure all voices within the organization are heard. College governance activities in U.S.–based community colleges may involve the academic dean as a direct participant or as a consulting authority on college matters. For example, many community colleges have a faculty senate, in which the leadership for the faculty senate

is voted on by the faculty members, and is solely run by the faculty. The only members of the faculty senate are faculty members, however the faculty senate president meets with the academic dean after each faculty senate meeting to discuss items of concern or opportunities seen by the faculty.

The unionized adjunct faculty members are now frequently members of the faculty senate. Previously, adjunct faculty members were not participants in the senate, thus removing them from organizational awareness, inclusion in initiatives, and fostering a climate of us versus them between full–time and part–time faculty members. Even though adjunct faculty members are not directly engaging with the academic dean at faculty senate meetings, several factors of LMX theory are engaged when this layer of college governance involved the adjunct faculty members.

Other community colleges have a community council or a community forum meeting where the president meets with all college employees, including faculty members. At these community council or forum meetings, the president has each dean, including the academic dean, speak on their current initiatives and give updates on their progress and plans for the future. Then, the president of the college opens the floor to all employees to ask questions or state their opinions about the initiatives and plans of the college. This is a very public way of sharing organizational vision, and allows the deans to have interactions with all employees.

Within many community colleges, the academic dean, dean of student affairs, and director of human resources have monthly meetings with the faculty union president, faculty union vice president, and one at–large member of the unionized faculty meet in a meeting known as labor–management committee. In this form of college governance, if

an academic dean has a higher LMX with their faculty members, then the topics for negotiation at these meetings are not adversarial. The topics are of broadening faculty responsibilities, scholarship, and opportunities, working toward a shared vision of academic excellence in a fair, trusting, and collegic environment.

The last implication of higher LMX between academic deans and their faculty members is the academic curriculum committee. The members of this committee are responsible for the academic integrity and academic excellence of both programs and individual courses taught in the college. The members of a community college academic curriculum committee are typically the faculty department chairs, three to six at–large faculty members, the academic dean, dean of student affairs, registrar, and assistant academic dean.

They key LMX building activities within the academic curriculum committee are when the president and vice–president of the curriculum committee, who are both faculty members, meet with the academic dean to set the agenda and review the priorities that the committee members will work on and when the academic dean works with individual faculty members on their proposals for the academic curriculum committee so that they can present a professional product to the committee. The items that the academic dean works with faculty members are typically modernization of syllabi, program/course sequencing changes within a degree, or even the creation of a new degree program.

A dean holding him or herself accountable to the organization could include communications of activities and initiatives (vision sharing) with faculty members. The activities a dean could communicate to the faculty are summaries of meetings or conferences attended. Formal vision sharing opportunities stated above are through

various college–wide meetings that include community council, community forum, labor–management meetings, and the academic curriculum committee.

Beyond participating in college governance meetings, there are additional ways that an academic dean can increase their perceived accountability to the organization. The first is to hold frequent open forums specifically for their departmental chairs. There are many ways that information and vision flow through a community college, and formal chain of command type communication is one of them. Additional open forums might include the academic dean holding open office hours for faculty members to stop by and chat about any topic, or the dean may have faculty members open forums to discuss a few key points that are of interest to both the dean and their faculty members.

Another organizational accountability technique to increase LMX between the dean and the faculty is for the academic dean to walk about the college and engage faculty members in the hallways or in their offices as they are available. The key for this type of walk–about leader engagement is to not have a specific agenda to accomplish, but for the dean to have a few talking points about things in the organization to start conversations with faculty members. Once the academic dean does this type of walk–about engagement a few times faculty members will come to expect it from time to time and conversations will not need talking points but will become a stream of consciousness between the dean and their faculty members.

Lastly, when the dean is not seen on campus, faculty members will feel disengaged from the dean and will be curious about his or her location and activities. Among the eight domains of an academic dean (Shulock, 2002), many will require the dean to be away from faculty members, engaging outside entities. A technique to

increase LMX between the academic dean and their faculty members in these instances is for the dean to hold him or herself accountable through e–mailed trip reports. In these trip reports the dean can highlight the main points of the trip, conference, or external meeting to their faculty members. These highlights can emphasize the parts of the shared organizational vision and how the meeting will either benefit the college, academics, or specific faculty initiatives.

Positive Social Change

The faculty members within the United States community colleges have the mission to take any student, from any demographic, cultural, or economic background, and prepare them for a profession or transfer to another institution to further their education. They, as faculty members, have the responsibility of not only being a master of their profession or trade, but also be masterful in delivering the content in an engaging, meaningful, and rigorous manner. If these faculty members are properly led, then they will be well resourced, challenged to become better at their craft and skill, and engaged with not only their students, but their institution.

Through this engagement at many levels, the faculty members, and the only faculty members, can have a positive impact on their students. Through this positive influence on their students, the students will have more success in their professional lives. In turn, their employers will have greater success, and higher profits that they can then reinvest in their employees, their business, or in the societies they serve. Through higher profits employers can pay their employees more, hire more employees, invest in the betterment of their employees, or invest in their communities. These communities are the

foundation from which both community colleges and employers draw upon to further their organizational missions.

This positive social change will be hampered if there is not strong, engaged leadership at the dean level. Through the dean's role as moderator, conflict resolver, resource provider, mentor, and faculty members voice to senior leadership, the dean can have either a positive or negative effect on their relationship with their faculty members. It will take both faculty members and deans to make their relationship stronger.

If the academic deans and faculty members of United States–based community colleges focus on their relationship with each other, the organizational vision of the community college can prosper. Conversely, if the academic deans and faculty members of U.S.–based community colleges create an adversarial, untrusting environment for each other, their institutions may survive but the quality of education, and ultimately their students future will suffer. There is no in–between for the academic deans and their faculty members.

Conclusion

The purpose of this quantitative study was to begin closing the gap in the literature that was exposed when I attempted to learn more about the effects of LMX on the dean and their faculty members. This was an important study because without proper relationships with faculty members, deans can have a negative impact on faculty turnover intentions, motivation at work, and effectiveness in the classroom. Even though the research question concerning the influences of leadership training, mentorship, and time in the position as academic dean on LMX scores did not result in a significant

relationship, there are many things that I have contributed to the literature through this study.

The fact that overall, deans and their faculty members in United States–based community colleges have a moderate LMX relationship in itself is worthy of further investigation. Additionally, the exposed significant reduction in the percentage of female deans as compared to female presidents in community colleges is in need of scholarly research. The subject of LMX between full–time and adjunct faculty members in community colleges, and the increasing reliance on adjunct faculty members in community colleges is of interest to future scholars. Lastly, the unionization of adjunct faculty members across the United States opens many opportunities for scholarly investigation between these unionized adjunct faculty members and their deans.

With the pending retirement of a large percentage of community college leaders, it is in the best interests of all current boards of trustees, college presidents, and other college leaders to make plans to develop the future of their organizations (Eddy, 2012). I hope that future researchers can use this research to inform their research and explore the relationship between the dean, their faculty members, gender issues, and unionized adjunct faculty members.

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Appendix A: E–mail approval to use the LMX–7 Instrument

From: Mary Uhl-Bien
Sent: Wednesday, February 26, 2014 11:19 AM
To: Alexander Clifford
Subject: Re: LMX-7 Instrument Use

The LMX-7 as published in Graen and Uhl-Bien 1995 is a publicly available measure so you are free to use it.

All best with your research.
Mary

Mary Uhl-Bien, Ph.D.
Professor and Howard Hawks Chair in Business Ethics and Leadership
Department of Management
University of Nebraska
Lincoln, NE 68588-0491

On Wed, Feb 26, 2014 at 9:50 AM, Alexander Clifford <alexander.clifford@waldenu.edu> wrote:
Greetings Dr. Uhl-Bien-

My name is Alex Clifford, PhD candidate at Walden University.

For my dissertation, I am proposing to use the LMX-7 instrument.

Through my search of the literature it appears that you are the author of this instrument.Â

May I use this instrument in my dissertation (see attached prospectus for details of my proposed research)?

If you are not the copyright holder, can you point me in the direction of who is?

Thank you for your time-

Alexander Clifford
PhD Management (2015)
Walden University
alexander.clifford@waldenu.edu
207-877-1287

Appendix B: The LMX–7 Instrument

Instructions: This questionnaire has items that ask you to describe your

relationship with either your leader or one of your subordinates. For each of the items,

indicate the degree to which you think the item is true for you by circling one of the

responses that appear below the item.

1. Do you know where you stand with your leader (follower) . . . [and] do you usually know how satisfied your leader (follower) is with what you do?

   Rarely   Occasionally   Sometimes   Fairly often   Very often

   1   2   3   4   5

2. How well does your leader (follower) understand your job problems and needs?

   Not a bit   A little   A fair amount   Quite a bit   A great deal

   1   2   3   4   5

3. How well does your leader (follower) recognize your potential?

   Not at all   A little   Moderately   Mostly   Fully

   1   2   3   4   5

4. Regardless of how much formal authority your leader (follower) has built into his or her position, what are the chances that your leader (follower) would use his or her power to help you solve problems in your work?

   None   Small   Moderate   High   Very high

   1   2   3   4   5

5. Again, regardless of the amount of formal authority your leader (follower) has, what are the chances that he or she would "bail you out" at his or her expense?

   None   Small   Moderate   High   Very high

   1   2   3   4   5

6. I have enough confidence in my leader (follower) that I would defend and justify his or her decision if he or she were not present to do so.

Strongly disagree   Disagree   Neutral   Agree   Strongly agree

          1   2   3   4   5

7. How would you characterize your working relationship with your leader (follower)?

Extremely ineffective Worse than average Average Better than average Extremely ineffective

    1   2   3   4   5

By completing the LMX 7, you can gain a fuller understanding of how LMX theory works. The score you obtain on the questionnaire reflects the quality of your leader–member relationships, and indicates the degree to which your relationships are characteristic of partnerships, as described in the LMX model.

You can complete the questionnaire both as a leader and as a subordinate. In the leader role, you would complete the questionnaire multiple times, assessing the quality of the relationships you have with each of your subordinates. In the subordinate role, you would complete the questionnaire based on the leaders to whom you report.

Scoring Interpretation

Although the LMX 7 is most commonly used by researchers to explore theoretical questions, you can also use it to analyze your own leadership style. You can interpret your LMX 7 scores using the following guidelines: very high = 30–35, high = 25–29, moderate = 20–24, low = 15–19, and very low = 7–14. Scores in the upper ranges indicate stronger, higher–quality leader–member exchanges (e.g., in–group members), whereas scores in the lower ranges indicate exchanges of lesser quality (e.g., out–group members).

Appendix C: Survey sent to Academic Deans

1. Your colleges name: _____

2. How many years of mentorship did you receive prior to becoming and academic

   dean? ____years.

3. How many years of previous leadership training did you have prior to becoming

   and academic dean? ____ years.

4. How long have you been an academic dean? ____ years.

5. Please provide your e–mail address so that I may send you a link that you can

   send to your faculty with a short survey to support my research:

   _____

Appendix D: Informed Consent for Academic Deans

My name is Alexander Clifford and I am a student at Walden University working on a

PhD in Management Doctoral degree. My research study is on the leader–member

exchange between academic deans and their subordinate faculty. I postulate that there is

a relationship between previous leadership training, mentorship, and time in the position

as academic dean to an increase in leader–member exchange as measured by the LMX–7

instrument.

One or more of your faculty provided me with your information during the

completion of their portion of my study. Your participation is voluntary and you may

stop answering the survey at any time. The survey should take you less than 10 minutes

to complete. This study could be published, but your individual answers or identity will

not be revealed.

By clicking "I Accept" below, you are agreeing that you understand the nature of this

study, and that your individual participation answers will be kept confidential. You are

also acknowledging that you are an academic dean or in a position of similar

responsibility within a U.S. based community college.

For additional information, questions or concerns, you may reach me at

alexander.clifford@waldenu.edu.

Appendix E: Informed Consent for Faculty

My name is Alexander Clifford and I am a student at Walden University working on a PhD in Management Doctoral degree. My research study is on the leader–member exchange between academic deans and their subordinate faculty. I postulate that there is a relationship between previous leadership training, mentorship, and time in the position as academic dean to an increase in leader–member exchange as measured by the LMX–7 instrument.

Your participation is voluntary and you may stop answering the survey at any time. The survey should take you less than 10 minutes to complete. I will contact your academic dean for their portion of the survey; however, I will not reveal your participation or answers. This study could be published, but your individual answers or identity will not be revealed.

By clicking "I Accept" below, you are agreeing that you understand the nature of this study, and that your individual participation answers will be kept confidential. You are also acknowledging that you are a faculty member within a U.S. based community college.

For additional information, questions or concerns, you may reach me at alexander.clifford@waldenu.edu.

Appendix F: SurveyMonkey Security Statement

Millions of users have entrusted SurveyMonkey with their survey data, and we make it a priority to take our users' security and privacy concerns seriously. We strive to ensure that user data is kept securely, and that we collect only as much personal data as is required to provide our services to users in an efficient and effective manner.

SurveyMonkey uses some of the most advanced technology for Internet security that is commercially available today. This Security Statement is aimed at being transparent about our security infrastructure and practices, to help reassure you that your data is appropriately protected.

Application and User Security

- **SSL/TLS Encryption:** Users can determine whether to collect survey responses over secured, encrypted SSL/TLS connections. All other communications with the surveymonkey.com website are sent over SSL/TLS connections. Secure Sockets Layer (SSL) and Transport Layer Security (TLS) technology (the successor technology to SSL) protect communications by using both server authentication and data encryption. This ensures that user data in transit is safe, secure, and available only to intended recipients.

- **User Authentication:** User data on our database is logically segregated by account–based access rules. User accounts have unique usernames and passwords that must be entered each time a user logs on. SurveyMonkey issues a session cookie only to record encrypted authentication information for the duration of a specific session. The session cookie does not include the password of the user.

- **User Passwords:** User application passwords have minimum complexity requirements. Passwords are individually salted and hashed.

- **Data Encryption:** Certain sensitive user data, such as credit card details and account passwords, is stored in encrypted format.

- **Data Portability:** SurveyMonkey enables you to export your data from our system in a variety of formats so that you can back it up, or use it with other applications.

- **Privacy:** We have a comprehensive privacy policy that provides a very transparent view of how we handle your data, including how we use your data, who we share it with, and how long we retain it.

- **HIPAA:** Enhanced security features for HIPAA–enabled accounts.

Physical Security

- **Data Centers:** Our information systems infrastructure (servers, networking equipment, etc.) is collocated at third party SSAE 16/SOC 2 audited data centers. We own and manage all of our equipment located in those data centers.

- **Data Center Security:** Our data centers are staffed and surveilled 24/7. Access is secured by security guards, visitors logs, and entry requirements such as passcards and biometric recognition. Our equipment is kept in locked cages.

- **Environmental Controls:** Our data center is maintained at controlled temperatures and humidity ranges which are continuously monitored for variations. Smoke and fire detection and response systems are in place.

- **Location:** All user data is stored on servers located in the United States and Luxembourg.

Availability

- **Connectivity:** Fully redundant IP network connections with multiple independent connections to a range of Tier 1 Internet access providers.

- **Power:** Servers have redundant internal and external power supplies. Data center has backup power supplies, and is able to draw power from the multiple substations on the grid, several diesel generators, and backup batteries.

- **Uptime:** Continuous uptime monitoring, with immediate escalation to SurveyMonkey staff for any downtime.

- **Failover:** Our database is log–shipped to standby servers and can failover in less than an hour.

Network Security

- **Uptime:** Continuous uptime monitoring, with immediate escalation to SurveyMonkey staff for any downtime.

- **Third Party Scans:** Weekly security scans are performed by Qualys.

- **Testing:** System functionality and design changes are verified in an isolated test "sandbox" environment and subject to functional and security testing prior to deployment to active production systems.

- **Firewall:** Firewall restricts access to all ports except 80 (http) and 443 (https).

- **Patching:** Latest security patches are applied to all operating system and application files to mitigate newly discovered vulnerabilities.

- **Access Control:** Secure VPN, multifactor authentication, and role–based access is enforced for systems management by authorized engineering staff.

- **Logging and Auditing:** Central logging systems capture and archive all internal systems access including any failed authentication attempts.

Storage Security

- **Backup Frequency:** Backups occur hourly internally, and daily to a centralized backup system for storage in multiple geographically disparate sites.

- **Production Redundancy:** Data stored on a RAID 10 array. O/S stored on a RAID 1 array.

Organizational & Administrative Security

- **Employee Screening:** We perform background screening on all employees.

- **Training:** We provide security and technology use training for employees.

- **Service Providers:** We screen our service providers and bind them under contract to appropriate confidentiality obligations if they deal with any user data.

- **Access:** Access controls to sensitive data in our databases, systems and environments are set on a need–to–know / least privilege necessary basis.

- **Audit Logging:** We maintain and monitor audit logs on our services and systems (our logging systems generate gigabytes of log files each day).

- **Information Security Policies:** We maintain internal information security policies, including incident response plans, and regularly review and update them.

Software Development Practices

- **Stack:** We code in Python and C# and run on SQL Server 2008, Ubuntu Linux, and Windows 2008 Server.

- **Coding Practices:** Our engineers use best practices and industry–standard secure coding guidelines to ensure secure coding.

Appendix G: ACAD Agreement to Distribute Survey

Sun 10/25/2015 7:18 AM
Alex Clifford <aclifford@wccc.me.edu>
FW: Dissertation Research

> Alex Clifford

-----Original Message-----
From:
Sent: Monday, March 10, 2014 12:29 PM
To: Roy Marc _____ , _____
Cc: Alex Clifford <alexander.clifford@waldenu.edu>
Subject: Re: Dissertation Research

Dear Alex:

I just wanted to add my agreement to Marc's comments below. I think we could work together on a survey with a goal to send it out in mid to late September as that is an ideal time of year to generate the most responses. And, I think it would work best to come from ACAD and include your questions and it sounds like that's a win for you too.

I've included my personal email address here (rzepka@acad-edu.org) so perhaps we can correspond through that email from this point forward. I received your other message mentioning you had some difficulty with this email. Perhaps the other one will work better but, I'll follow-up on your gmail address if I don't hear from you.

I'm looking forward to working with you on this survey and would be happy to schedule a phone call if we need to talk through things.

Best,
Laura

Laura A. Rzepka
Executive Director
American Conference of Academic Deans
1818 R Street, NW
Washington. DC 20009