Relationships Among Emotional Intelligence, Cultural Intelligence, Job Performance, and Leader Effectiveness: A Study of County Extension Directors in Ohio

DISSERTATION

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By

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Abstract

Leader effectiveness and job performance are measures important to organizational effectiveness. Personal capacities such as emotional intelligence and cultural intelligence, brought to life through behaviors on the job, are thought to be related to leader effectiveness and job performance. However, empirical studies that assess the relationships among measures of leader effectiveness, job performance, emotional intelligence and cultural intelligence are limited in general and specifically in the Extension system.

County Extension Directors (CEDs) employed by Ohio State University (OSU) Extension are responsible for providing administrative leadership for county offices. The changing environment, trends affecting OSU Extension, and challenges associated with working with diverse audience, together create the need for CEDs to serve as role models for building trusting work relationships, leading teams, and collaborating with diverse clientele. The purpose of this study was to explore the relationships among measures of job performance, leader effectiveness, emotional intelligence, and cultural intelligence of CEDs in Ohio, while controlling for potential effect of measures of leader behavior and trusting work relationship.

This study was descriptive in nature and utilized a correlational research design with quantitative methodology. The target population for this census study consisted of
CEDs in OSU Extension, and their subordinates and associates. Data collection was completed in three phases using historical data and online survey instruments. Data collection from CEDs included measures of cultural intelligence, and emotional intelligence. Subordinates and associates of CED respondents were invited to provide data on their perception regarding their respective CED for the measures of leader behavior, trusting work relationship, and leader effectiveness. Data for the job performance measure were collected from OSU Human Resources personnel. Data analysis involved the use of descriptive statistics, multiple regression, and correlation analysis.

Findings from this study showed that neither emotional intelligence, nor cultural intelligence explained a significant proportion of the variance associated with either the job performance or perceived leader effectiveness of Ohio CEDs, after controlling for the effect of intervening variables of perceived leader behavior and perceived trusting work relationship. The CEDs’ measure of job performance was not related to perceived leader effectiveness. Emotional intelligence of Ohio CEDs was positively related to their cultural intelligence, perceived leader behavior, and perceived leader effectiveness. Finally, perceived leader behavior also exhibited a positive relationship with perceived trusting work relationship, and perceived leader effectiveness.

Results of this study support previous research in suggesting that leader behavior and trusting relationships are important factors in leader effectiveness. The findings raised questions about whether existing CEDs’ job performance review can be used as an adequate proxy of their actual job performance in the role of administrative leadership.
Causal relationships among measures of emotional intelligence, leader behavior and leader effectiveness can be further explored through structural equation modeling analysis. Recommendations for administrative leaders in OSU Extension include: demonstrate leader behavior to engender trust; enhance leader effectiveness through a reciprocal process between leader behavior and trusting work relationship; and engage in leader behaviors that are informed by emotional intelligence.
This work is dedicated to my loving parents. Without their wisdom, guidance, and enormous support, I would not be able to strive to reach my dreams! Thank you!

Feng (Li)-Cheng Chen

1942-2012

In Loving Memory

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Leader effectiveness and job performance are measures important to organizational effectiveness. Leadership capacities related to effective leadership and job performance such as emotional intelligence and cultural intelligence are drawing increasing attention in leadership studies (Goleman, 2000; Kerr, Garvin, Heaton, & Boyle, 2005; Norhouse, 2013; Nwokah & Ahiauzu, 2010; Rosete, & Ciarrochi, 2005; Livermore, 2010; Thomas & Inkson, 2004;). However, empirical studies that assess the relationships among measures of leader effectiveness, job performance, emotional intelligence and cultural intelligence are limited (Groves & Feyerherm, 2011) in general and specifically in the Extension system.

County Extension Directors of Ohio State University Extension are responsible for providing administrative leadership for Extension personnel at the county level. The changing environment, trends affecting OSU Extension (Cochran, Ferrari, & Chen, 2012), and challenges associated with working with diverse audiences, together create the need for County Extension Directors to serve as role models for building trusting work relationships and collaborating with diverse clientele. This study will explore the relationships among measures of job performance, leader effectiveness, emotional intelligence and cultural intelligence of County Extension Directors in Ohio.
Land grant universities, including OSU, have embraced a culture of extending the knowledge base of the institution to people who are able to benefit from its application. The Extension system was formalized as a land-grant university function with the passage of the Smith-Lever Act in 1914. Soon thereafter, land-grant universities established links with residents though the creation of Extension offices located in every county of the state. County Extension offices and staff were to serve as the educational link to the land-grant university that reached out to extend knowledge and to serve the needs and interests of the industrial class. Agriculture, home economics and mechanization were the primary focus of Extension systems when first created. However, Extension has broadened its programmatic focus to address societal problems and issues on a broader scale.

One implication resulting from the expanded scope of Extension programs is increased diversity among the target audience. Although early Extension programs focused predominantly on farmers and homemakers, Extension now embraces the concept of serving all residents without preference. Anyone who can potentially use, apply, and benefit from information provided through Extension is viewed as a member of the target audience. Coinciding with the reality that audience diversity has increased, Extension professionals therefore need to adapt their program offerings to accommodate the needs and interests of a more diverse clientele.

Administrative leadership of County Extension Directors is not only involved with planning, budgeting, staffing, and evaluation functions; but also for guiding, directing, coaching and mentoring professional colleagues and support staff. Leadership may
involve influencing behavior as a result of direct supervision, as well as indirect influence resulting from serving as a role model for others. County Extension Directors may also serve as role models for peers and subordinates during times of change. Prerequisite to serving as an effective role model, County Extension Directors need to be cognizant of emotional and cultural dimensions associated with changes in the environmental context. However, the research literature related to the emotional or cultural awareness of County Extension Directors is limited. This research was conducted to address the need for providing information about the emotional and cultural intelligence attributes of Ohio County Extension Directors.

Specifically, this research was conducted to assess relationships among County Extension Directors’ job performance and leader effectiveness, and measures of emotional intelligence and cultural intelligence. Research subjects in this study were County Extension Directors employed by Ohio State University Extension during the 2012 - 2013 fiscal year. This chapter presents background information, definitions of terms used in the context of this study, the research problem statement, the purpose of the study, research questions, a brief overview of the research methods, and the conceptual model. Basic assumptions, limitations, and significance of this study will also be presented.

**Background**

Extension is a non-formal education system staffed by employees who are expected to interact with and build collaborative relationships with diverse individuals and groups. Core competencies such as communication, problem-solving skills, interpersonal
relationships, and diversity are needed for success in Extension (Scheer, Cochran, Harder, & Place, 2011). The ability of Extension professionals to lead collaborative efforts to fulfill Extension’s mission and achieve organizational goals is essential for success. Such skills and competencies are especially important among those with administrative leadership responsibilities, particularly County Extension Directors.

In Ohio, County Extension Directors are responsible for providing administrative, personnel, fiscal, and legislative support to each county; engaging in strategic planning; and ensuring a positive work environment in the context of their respective county unit (The Ohio State University Extension, 2010). The majority of County Extension Directors in Ohio serve with dual roles as an Extension Educator, and Extension Administrator. County Extension Directors interact with internal and external audiences and stakeholders to ensure outreach collaboration and program success. County Extension Directors also supervise staff who provide support for the Extension office operation.

The Cooperative Extension System is approaching its centennial anniversary with its mission continuing to focus on improving people’s lives. The environment in which Extension professionals work has changed and will continue to change into its second century of operation. Extension professionals work with multi-generational colleagues and audiences who exhibit different age, gender, race, and religious backgrounds, all of which may be different from their own. To accomplish desired outcomes, the Extension system needs personnel who possess an expanded skill set. In addition to the current skill set from primarily focusing on custodial maintenance of the county Extension office, and
supervision of office secretarial staff to the entire Extension program at the county level (Radhakrishna, Yoder, & Baggett, 1994), the expanded skill set should include the ability to provide leadership based upon trusting relationships, collaborate in a team environment, and engage in multi-disciplinary and cross-cultural activities. The ability to build interpersonal relationships, solve problems, and collaborate with others in a changing environment is critically important for Extension leaders.

County Extension Directors in Ohio are responsible for providing administrative leadership for Extension personnel at the county level. Therefore, as the diversity of clientele changes, County Extension Directors need to serve as role models for building trusting relationships and collaborating with diverse clientele. These abilities reflect two major employee qualifications sought by Extension for its talent pool: strong interpersonal skills and good teamwork skills (K. Smith, personal communication, Oct. 9, 2012).

Additional background information pertinent to this study will be described in the following sections of this chapter: (a) changing demographics, (b) trends affecting Extension, (c) the challenges of working with diverse audiences, (d) important measure of emotional intelligence, (e) leadership effectiveness operationalized for Extension Professionals, and (f) measure of job performance.

**Changing Demographics**

According to United States Census Bureau (2012), the U.S. population is projected to become more racially and ethnically diverse by 2060. The aggregate minority population is projected to become the majority by 2042 (U.S. Census Bureau, 2012). The
Hispanic population increase alone contributed more than half of the total growth in the U.S. population between 2000 and 2010. In Ohio, the growth rate of the Hispanic population is projected to increase by 0.3% during each five-year period between 2010 and 2020 (U.S. Census Bureau, 1994). Ohio is also projected to gain 247,000 residents through international migration between 1995 and 2025. This level of migration would rank Ohio as the 16th largest state in the U.S. based on the net gains through international migration (U.S. Census Bureau, 1996a).

The proportion of elderly population was also projected to increase rapidly in the South and Midwest regions of the U.S. after 2010, as the Baby Boom generation (i.e. those born between 1946 and 1964) reached retirement age (U.S. Census Bureau, 1996b). These changing demographics contributed to changes in communities and workplaces served by Extension professionals, who have targeted broader audiences than in the past.

Another example of Ohio’s diversity can be illustrated through the demographic profile of vegetable growers in the state, ranging from large-scale production operations utilizing modern machinery and equipment to small Amish farms that depend upon draft horses as a source of power (Kline, Kneen, Barrett, & Klienschmidt, 2012). Changes in farm size, aging population, multi-generational workforce, and increased Extension outreach and interdisciplinary collaboration have each contributed to a shift in the demographics of audiences served by Extension professionals. Therefore, the information needs of Extension audiences appear to be as varied as the demographic characteristics of each individual.

Research has shown that Extension education programs are more effective when
they are customized to address the needs of the culture and ethos of the intended audience (Bairstow, Berry, & Driscoll, 2002; Hobbs, 2004; Ingram, Dorsey, & Smith, 2004; Kline et al., 2012). There is an emerging need for Extension leaders to be able to build interpersonal relationships and collaborate with others to address the needs of the changing audience to ensure program success.

**Trends Affecting Extension**

OSU Extension identified several priority issues in the Ohio State University Extension Strategic Plan 2008 (Ohio State University Extension, 2008). Overall, six performance goals were identified in the Strategic plan: (a) helping build Ohio’s future, (b) defining Ohio State University Extension as the nation’s leading Extension program, (c) positioning Extension as the education and research resource for Ohio’s citizens, (d) developing and sustaining world-class Extension professionals, (e) creating a more diverse and inclusive Extension community, and (f) improving the quality of teaching and learning engagements (Ohio State University Extension Strategic Plan 2008, p. 5).

Several authors (ECOP, 2010, 2002, 1987; Harriman, 1989; Harriman & Daugherty, 1992; Ladewig & Rohs, 2000; McGee, 2006; Seervers et al., 2007; Warner, Rennekamp, & Nall, 1996) have described trends affecting Extension organizations. The trends included changes in technology, greater diversity, increased competition for limited resources, globalization, and an expanding knowledge base. Globalization refers to the fact that geographic location is becoming a less important factor affecting the work of Extension professionals and the needs of their clientele (Cochran et al., 2012). Alon and Higgins (2005) stated that with increased globalization, organizations experienced
increased interaction with global customers, competitors, suppliers, and employees. The
OSU Extension system is experiencing similar trends.

Cochran et al. (2012) completed a study that described factors affecting the OSU
Extension system. Some of the trends included changing and complex conditions;
increased competition for limited resources; increasingly complex organizational
structures; changing demographics; and technology and life in the internet-enabled e-
world. Changes in factors affecting OSU Extension often create unique challenges for
County Extension Directors who are expected to serve dual roles as Extension
administrators and Extension educators.

Cochran et al. (2012) suggested several behaviors to manage the increased
complexity in Extension operations posed by the trends described in the preceding
paragraphs. Suggested behaviors included being flexible and proactive; embracing
change; more effectively managing work and life balance issues; and building
relationships to better collaborate in a diverse work environment. County Extension
Directors especially need effective interpersonal skills to work with diverse audiences
and stakeholders. Thus, there appears to be a growing need for County Extension
Directors to exhibit leadership qualities and capabilities that model the suggested
behaviors.

**Challenges of Working with Diverse Audiences**

The nature of Extension work includes a variety of interpersonal interactions.
Challenges facing Extension professionals originate from inside and outside the
Extension system. Therefore, efforts to address challenges associated with diverse
audiences need to come from inside and outside the system (McCray, 1994). Diversity encompasses the changing cultural demographics of those served by Extension. Schaubert and Castania (2001) suggested that a new skill set and institutional framework is required to manage diversity. They further indicated that providing training to staff, and hiring professionals with the capacity and interest in working with diverse audiences is necessary in the Extension system. However, attracting, hiring, and retaining a diverse workforce has been one of the biggest challenges faced by Extension administrators (Schauber & Castania, 2001).

Extension professionals involved in program delivery also face challenges working with diverse audiences and delivering culturally-sensitive programs (Schauber & Castania, 2001). Shrinking financial resources have been identified as a constraint to reach more culturally diverse audiences, in addition to serving the needs of the existing clientele base (Schauber & Castania, 2001). Increasingly, complex social and community issues add to the challenge of working with diverse audiences in Extension. Culture, socio-economic status, ethnicity, race, and language differences present challenges that need to be addressed by Extension professionals as they engage in trans-disciplinary partnerships (Thering, 2009). Cultural intelligence, a capability of effectively functioning across cultures (Earley & Ang, 2003), can serve as a construct to help Extension professionals navigate the best way to engage with various stakeholders and clientele.

In addition, Hassel (2004) further indicated that the success of cross-cultural programs depends upon building trust and maintaining interpersonal relationships, while
content expertise also remains absolutely essential in the same time. Trust has been recognized as a critical element of effective leadership that can influence followers (Dirks & Skarlicki, 2004). Kramer (2011) stated that in order to be effective at employing influence over others, it appears helpful if leaders are trusted. He further elaborated that trust in a leader can be viewed as a function comprised of at least two components: (a) the motives and intentions attributed to the leader, and (b) the leaders’ perceived competence (Kramer, 2011).

Similarly, Kouzes and Posner (2002) stated that followers would take risks, make changes, and keep organizations and movements alive if “. . . leadership is a relationship founded on trust. . . ” (p.19). However, Dirks and Skarlicki (2004) noted that little research was focused on “. . . illuminating how trust in leaders contributes to the effective functioning of groups and organizations and how it can be leveraged to meet this objective. . . ” (p. 21). Despite that theories about trust and leadership constructs have developed independently, with a significant overlap in the concerns and effect of respective constructs, very limited research have systematically investigated the similarity and differences between trust and leadership constructs (Brower, Schoorman & Tan, 2000).

Thus, there is a growing need to have Extension professionals who are capable of establishing trusting relationships and collaborating with diverse client groups, while providing relevant and practical research based information.
Important Measure of Emotional Intelligence

Administrative assignments in Extension involve completing tasks and developing interpersonal relationships. Among the core competencies Cochran (2009) identified as important to all Extension professionals, one core competency emphasized interpersonal relationships including the ability to connect with others on an emotional level. According to Goleman et al. (2004), “. . . great leadership works through the emotions” (p.3). The use of emotion constructs the domain of emotional intelligence (Nwokah & Ahiauze, 2010). Emotional intelligent leaders are suggested to be known and seen holding a positive work philosophy, as such practice develops the leaders’ emotional domains (Nwokah & Ahiauze, 2010). Goleman (1995) and Bar-On (2004) considered emotional intelligence as leadership capability that is concerned with managing interpersonal relationships. A growing body of research has substantiated the importance of emotional intelligence and its relation to effective leadership (George, 2000; Kerr et al., 2005; Rosete & Ciarrochi, 2005). Being aware of their own emotions is crucial for leaders to navigate situations they encounter, and to make decisions that are good for their organization. Therefore, understanding emotional intelligence is beneficial for the effective functioning of County Extension Directors.

Leadership Effectiveness Operationalized for Extension Professionals

Scholars have tried to define leadership. For example, Kouzes and Posner (2002) described leadership as a relationship. They identified five key practices that were relevant to effective leadership. These five practices were leader behaviors that exemplary leaders used to get extraordinary things done (Kouzes & Posner, 2002). The
five practices included: modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart. Correspondently, these five practices are also suggested by Seevers, Graham, and Conklin (2007) as an integral component of the daily operations of Extension professionals. County Extension Directors who engage in these practices were expected to demonstrate exemplary job performance and leader effectiveness.

Measures of Job Performance

How well County Extension Directors perform their assigned duties should be reflected in their annual job performance review. Northouse (2013) suggested that effective leaders receive good annual job performance reviews, get merit raises, and are recognized by supervisors and subordinates as competent leaders. Therefore, the annual job performance review may provide a measure of the degree to which leaders successfully perform their assigned duties (Northouse, 2013).

Definition of Terms

Terms used in the context of this study were defined as follows:

County Extension Director (CED)

County Extension Director (CED) refers to an administrative head of a county Extension office whose administrative leadership responsibilities include personnel support, fiscal support, and legislative support; strategic planning; and providing a positive work environment within the county office (OSU Extension, 2010). The administrative assignment of Ohio County Extension Directors ranged from 25% to 100% with the responsibilities of their assignment devoted to Extension Educator duties.
**Cultural Intelligence (CQ)**

Cultural intelligence (CQ) is the capacity to function effectively across national, ethnic, and organizational cultures (Earley & Ang, 2003). In this study, cultural intelligence of research subjects was measured using the score collected from Cultural Intelligence Scale (CQS, see Appendix A) that was developed by Van Dyne, Ang, & Koh (2004).

**Emotional Intelligence (EQ)**

Emotional intelligence (EQ) is defined as the capacity to understand one’s own emotions and the emotions of others, and to manage one’s own emotions and relationships with others (Goleman, 1995). The participants’ emotional intelligence was measured using the score resulting from the EQ-i 2.0 instrument (MHS, 2011a).

**Job Performance**

Job performance is defined as how well a person performs their job toward the accomplishment of organizational outcomes (Campbell, 1990). For the purpose of this study, job performance refers to the results achieved through completing administrative duties assigned to County Extension Directors. In this study, job performance was measured using the rating score provided by the supervisor on the Administrative Services score of the annual performance review completed in June 2012 for each individual County Extension Director.

**Leader Behavior**

Leader behavior refers to the observable set of skills and abilities of leaders (Kouzes & Posner, 2002). In this study, average scores produced on Leadership Practice
Inventory instrument (LPI-Observer, see Appendix B) that was developed by Kouzes and Posner (2013) were used as a measure of leader behavior. The measure of leader behavior used in this study is a ‘perceived’ measure. The LPI instrument was administered to selected subordinates and associates based upon their perception of the leader behavior for their respective County Extension Director.

**Leader Effectiveness**

Leader effectiveness refers to the degree of effectiveness achieved when a leader works with others to accomplish intended results by fulfilling job responsibilities within an organization. In this study, average scores on the Leader Effectiveness Scale developed by the researcher (see Appendix C) were used as a measure of leader effectiveness. The measure of leader effectiveness used in this study is a ‘perceived’ measure. The Leader Effectiveness Scale instrument was administered to selected subordinates and associates based upon their perception of leader effectiveness for their respective County Extension Director.

**Trusting Work Relationship**

Trusting work relationship refers to a dyadic trusting relationship between leader and subordinates, and leader and peers in an organizational setting (Lewicki & Bunker, 1995; Sue-Chan, Au, & Hackett, 2012). In this study, average scores on the Behavior Trust Inventory (BTI) instrument (Gillespie, 2003, see Appendix D) were used as a measure of trusting work relationship. The measure of trusting work relationship used in this study is a ‘perceived’ measure. The BTI instrument was administered to selected
subordinates and associates to assess their perceived willingness to engage in a trusting work relationship with their respective County Extension Director.

**Problem Statement**

Extension audiences are clearly becoming more diverse. Although the demographics of the Extension target audience are changing rapidly, the demographic profile of Extension educators has remained somewhat constant. Therefore, it is important to better understand the capacity of Extension administrators to serve as role models for their Extension colleagues for these colleges to recognize and serve the needs of increasingly diverse Extension clientele. The central problem for this research was to assess the emotional intelligence and cultural intelligence of County Extension Directors in Ohio and to explore how those measures relate to leader effectiveness and job performance.

Despite growing attention devoted to emotional intelligence and cultural intelligence in the scholarly literature, empirical studies that assess relationships among measures of emotional intelligence, cultural intelligence, leader effectiveness, and job performance are limited in general (Groves & Feyerherm, 2011) and specifically in Extension system. This research explored relationships among measures of emotional intelligence, cultural intelligence, job performance and leader effectiveness of County Extension Directors in Ohio, while also controlling for the potential effect of leader behavior and trusting work relationship as intervening variables.

The results of this study were expected to provide a better understanding of the relationships among job performance, leader effectiveness, emotional intelligence, and
cultural intelligence. Based upon the results of this research, OSU Extension may be able to improve hiring practices, select better leaders, and extend human resource development efforts to improve OSU Extension programs. Ultimately, better understanding of the relationships among these variables may lead to improved lives of Ohio residents as a result of OSU Extension programming.

**Purpose and Research Questions**

The purpose of this study was to explore relationships among measures of emotional intelligence, cultural intelligence, job performance, and leader effectiveness of the County Extension Directors in Ohio. Research questions developed to guide this study were:

1. What is the relationship between measures of emotional intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?
2. What is the relationship between measures of emotional intelligence and leader effectiveness of Ohio County Extension Directors, while controlling for the effect of intervening variables?
3. What is the relationship between measures of cultural intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?
4. What is the relationship between measures of cultural intelligence and leader effectiveness of Ohio County Extension Directors, while controlling for the effect of intervening variables?
5. What is the relationship between measures of job performance and leader effectiveness of Ohio County Extension Directors?

6. What is the relationship between measures of emotional intelligence and cultural intelligence of Ohio County Extension Directors?

7. What is the relationship between measures of leader behavior and trusting work relationship?

**Overview of Methods**

This study was descriptive in nature and utilized quantitative research methodology. According to Ary, Jacobs and Sorensen (2010), “Quantitative research deals with questions of relationship, cause and effect, or current status that researchers can answer by gathering and statistically analyzing numeric data” (p. 39). This study was also classified as a relationship study based on the purpose and research questions. Relationship studies including correlational, ex-post-facto, and survey research, in which the researcher identifies variables and examines relationships among them, but does not manipulate the variables (Ary et al., 2010). Correlational research involves gathering information from individuals on two or more variables and then determines if the variables are related without any attempt to discern cause and effect between the variables (Ary et al., 2010). Therefore, this research was also further classified as a correlational research.

Variables of interest in this research included two dependent variables, two independent variables, and two intervening variables. The dependent variables in this research were measures of job performance and leader effectiveness of Ohio County
Extension Directors. The independent variables were measures of emotional intelligence, and cultural intelligence of Ohio County Extension Directors. The intervening variables (used for control purposes) were measures of leader behavior and trusting work relationship. Data collection involved the use of survey instruments and historical data. Data analysis employed correlation and multiple regression statistical procedures.

The data were analyzed using Statistical Products and Service Solutions (SPSS) software version 2.0. Correlation coefficients were computed to explore relationships between variables of interest. Multiple regression analysis was used to determine the extent to which measures of emotional intelligence and cultural intelligence explained job performance and leader effectiveness of County Extension Directors, while controlling for the effect of the intervening variables of leader behavior and trusting work relationship.

**Conceptual Model**

Based upon the literature reviewed on emotional intelligence, cultural intelligence, leader behavior, trusting work relationships, job performance, and leader effectiveness; a conceptual model of the potential relationships among the six variables important to this study is illustrated in Figure 1.1. The directions of arrows indicate potential relationship among variables in the conceptual model.
Figure 1.1 Conceptual Model of Relationships Among Job Performance, Leader Effectiveness, Emotional Intelligence, and Cultural Intelligence

Basic Assumptions

Basic assumptions underlying this study include:

1. Ohio County Extension Directors function in environments that have become increasingly diverse. Interpersonal relationships in that context are likely to be related to ability of the County Extension Directors to provide effective leadership
and perform well in their job. Therefore, it was assumed that emotional intelligence and cultural intelligence may be related to the job performance and leader effectiveness of County Extension Directors in Ohio.

2. Leader behaviors demonstrate a set of skills and abilities of Ohio County Extension Directors in a working relationship with subordinates and associates. Trust as the foundation of interpersonal relationship in work settings may have potential interaction between leader behavior and the working relationship between Ohio County Extension Directors and their subordinates and associates. It was assumed that the variables of job performance and leader effectiveness of Ohio County Extension Directors may be mediated by the measures of leader behavior and trusting work relationship between County Extension Directors and their colleagues.

3. Ohio State University Extension employees who participated in this study understood the questions completely, and were willing to provide honest and thoughtful responses.

Limitations of the Study

The following limitations of the research are acknowledged:

1. This research was limited to the Ohio County Extension Director’s self-assessment of emotional intelligence and cultural intelligence. Self-reported responses are affected by participant biases, and no verification of responses was possible.

2. This research was limited to the perceptions of selected subordinates and associates regarding the leader behavior, trusting work relationship, and leader
effectiveness of their respective Ohio County Extension Director. Self-reported responses are affected by participant biases, and no verification of responses was possible.

3. Results of this study were also constrained by the measures used to identify the construct of each variable in the conceptual model, i.e., self-report data, probability construct, and validity of the measures.

4. Results of this study are generalized only to the Ohio State University Extension system at the time of data collection.

**Significance of the Study**

Results from this study contribute to the knowledge base of leadership, inform Ohio County Extension Director participants, give voice to subordinates and associates of Ohio County Extension Director participants, and support organizational development in OSU Extension.

As a contribution to the knowledge base of leadership, this study provided empirical evidence about the relationship among the variables of emotional intelligence, cultural intelligence, job performance, and leader effectiveness in the context of Ohio State University Extension. This study contributed to the knowledge base by explaining the relationship among measures of job performance, leader effectiveness, emotional intelligence, cultural intelligence, leader behavior, and trusting work relationship.

For Ohio County Extension Director participants, this study contributed a better understanding of emotional intelligence, and cultural intelligence, and the relevance of each to their job performance and leader effectiveness. This study will also help to
increase Ohio County Extension Directors’ awareness of their leader behavior that was perceived by their subordinates and associates, and the trusting working relationship perceived by their subordinate and associates.

For the subordinates and associates of the County Extension Director participants, this study provided opportunities to share their perception regarding leader behavior and leader effectiveness of their respective County Extension Directors. It will also enable them to reflect upon how they interact with their respective County Extension Directors, and furthermore, help them to determine whether they are willing to establish a trusting working relationship with their respective County Extension Director.

To OSU Extension from an organizational perspective, this study offers a better understanding of emotional intelligence and cultural intelligence, perceived leader behavior, perceived trusting work relationship, and perceived leader effectiveness of County Extension Directors as a group. Understanding those relationships will enable better practices in selecting and preparing better leaders, and expand staffing efforts aimed at improving OSU Extension programs that continue to serve the mission and improve the lives of Ohio residents.
Chapter 2  Literature Review

Chapter 1 explained the need for County Extension Directors to serve as role models in building trusting work relationships with colleagues and employees and collaborating with diverse clienteles. The background of changing environmental contexts and competencies needed in the Extension system were outlined and the research problem was described. The purpose of this study was to explore the relationships among job performance, leader effectiveness, emotional intelligence, and cultural intelligence of County Extension Directors in Ohio. This chapter provides an overview of Extension and a literature review of leadership theory. The theoretical foundation that guides this research is presented. A conceptual model that frames this study is provided through a review of literature on job performance, leader effectiveness, leader behavior, and the constructs of trusting work relationship, emotional intelligence, and cultural intelligence. Finally, a brief summary concludes this chapter.

Extension Overview

Cooperative Extension System (CES)

The Cooperative Extension System (CES), established by the Smith-Lever Act of 1914, is a public-funded, non-formal national educational system that connects education and research resources of the United States Department of Agriculture (USDA), land-
grant universities, and county administrative units in the United States (Seevers et al., 2007).

The mission of CES as set forth in the Smith-Lever Act was “... the development of practical demonstrations of research knowledge and giving of the instruction and practical demonstrations of existing or improved practices or technologies in agriculture, home economics, and rural energy. ...” (Smith-Lever Act, 1914). The Extension system resides in land-grant universities to disseminate the results of research and teach people how to apply knowledge to improve their lives by integrating different activities (Rasmussen, 1989; Seevers et al., 2007). Educational program goals and objectives are organized and delivered in four areas, including: Agriculture and Natural Resources, Family and Consumer sciences, 4-H Youth Development, and Community and Economic Development. Extension is approaching its centennial anniversary while it continues to fulfill its mission to help people improve their lives and communities.

The traditional organizational structure of the CES was set up as a three-way partnership in accordance with the Smith-Lever Act of 1914. Cooperative funding from the three levels of government included: federal, state, and county sources. The funding partnership was between the USDA (through the National Institute of Food and Agriculture (NIFA)) at the federal level; state governments and land-grant universities, and county governments at the local level. Each funding partner contributed different proportions to fund Extension programs. Over the years, the contributing proportion of funding from each funding partner has changed in a dramatic manner. For example, federal funding was the largest source in FY1972 (40%), but declined to 17% by FY2003.
State funding remained about the same over the past 30 years at 40% of the total Extension budget. Local funding has increased from 17% in FY1972 to 22% in FY2003. Other Extension funding sources that have contributed support for CES in recent years include grants, gifts, and increased user fees (Seevers et al., 2007).

Programming is another area of partnership in addition to funding partnership in CES. The respective roles for programing partnerships are designated at each level of government. NIFA is the federal partner that provides funding support as well as identifies national Extension priorities and addresses issues through program leadership (USDA, 2012; Seevers et al., 2007). State specialists and administrators at land-grant institutions serve as the state partners to facilitate identification of statewide issues and initiatives, provide training for county professionals, and conduct and distribute relevant research (Seevers et al., 2007). Local Extension offices operate at the county level of local government and serve as the basic operational units of the partnership (Seevers et al., 2007). County-level office staff is ultimately responsible for meeting local needs to help Extension carrying out its mission (Rasmussen, 1989).

The Association of Public Land-grant Universities (APLU) recently articulated strategic opportunities for CES. Partnerships between the various educational enterprises of a university, as well as historic links between colleges of agriculture and human sciences and the USDA have been expanded in correspondence with population change in the United States (APLU, 2010, p.5). APLU also reported that close relationships to local and county governments fostered deep connections to citizens at the grassroots level (APLU, 2010). Traditional partnerships among local, state, and federal levels continue to
evolve to create new relationships and to connect communities and neighborhoods through programmatic leadership.

Staffing models in CES vary across different states. Models include traditional single-county program models, multi-county program models, and the University Extension model. Seevers et al. (2007) provided detailed descriptions of each hypothetical CES staffing model (see Figure 2.1). According to Seevers et al. (2007), the multi-county program staffing model involves joint efforts from two types of Extension professionals; one is a program area of specialization and the other is a subject area of specialization intended to serve a multi-county area. The University Extension model refers to the structure that a university Extension system may consist of experts from different colleges of the university, such as engineering, business, education, and medicine. Specialists from each college serve clientele in their particular area of specialization. Traditionally, Extension professionals at the county level who are supported by the state specialists are the key personnel to help to implement most program efforts with assigned responsibilities in a county.
Figure 2.1 CES Hypothetical Organizational Chart

Leadership and Administration

Staff roles in Extension systems consist of administrators, program specialists, educators, and office support staff, and all are under one single leadership administration. The top administrator (usually titled as vice president, dean, associate dean, or director), is supported by an administrative team or “cabinet” within the organization. Each administrative cabinet is responsible for one of the statewide program areas or administrative function areas, such as personnel, evaluation, or business operations (Seevers et al., 2007). Program specialists are experts in a particular academic discipline and specialization, and they are trained to interpret, translate and disseminate research-based information (Seevers et al., 2007). Office support staff, including receptionists, administrative assistants, bookkeepers, and office managers, are also staff that Extension clientele may encounter.

County Extension Directors serve as administrative leaders and coordinators for formulating, developing, implementing, and evaluating Extension programs and coordinating personnel functions at the county level (Radhakrishna, Yoder, & Baggett, 1994). Job responsibilities include handling daily operations and administration of their designated county office. Their role provides an important link between field staff and upper levels of Extension administration (Radhakrisna et al., 1994). They may also have dual responsibilities in programming and administrative work to serve as the focal point of Extension in fulfilling needs of the local clientele. In sparsely populated areas, one Extension agent or educator may be designated to serve neighboring communities. For
larger offices in urban or metropolitan areas, the number of personnel on staff may be as high as thirty, with one individual designated as a full-time administrator (Seever et al., 2007). As a result of consolidation of some county offices into regional extension centers, the number of local extension offices has declined over the years, resulting in about 2,900 extension offices nationwide (USDA, 2012).

The top Extension administrator in Ohio is the Associate Vice President, who also currently holds the title of Associate Dean of the College of Food Agricultural and Environmental Sciences (CFAES) at The Ohio State University, as well as the Director of the OSU Extension (see Figure 2.1). Direct support to the Director of OSU Extension is provided by an Extension administrative cabinet. The administrative cabinet for OSU Extension consists of two Associate Directors (in programs and operations), one human resources leader, one business office manager, four program assistant directors (one each for 4-H, Family and Consumer Sciences, Community Development, and Agriculture and National Resources), and three Regional Directors (North East, South Central, and West). Regional Directors manage all of the County Extension Directors and County Educators in their respective regions. There are 83 County Extension Directors administering 88 counties in Ohio at the time data of this study were collected. County Extension Directors are responsible for county administration and providing the communication link between local offices, regional offices, and state offices; augmenting diversity through hiring efforts and program design and delivery; stimulating creative programming; and organizing and coordinating office conferences and advisory committees (OSUE, 2010).
In some small counties, due to funding constraints, County Extension Directors might be the only local staff to implement programmatic efforts.

Figure 2.2 The Ohio State University Extension Organizational Chart.

Adapted from Extension Faculty and Staff, The Ohio State University Extension. Retrieved from http://extensionstaff.osu.edu/node/257. Copyright 2013 by The Ohio State University Extension.
Program Areas

Extension systems consist of four major program areas: Family and Consumer Sciences (FCS), 4-H Youth Development (4-H), Community Development (CD), and Agriculture and National Resources (ANR), which are also the four major program areas in OSU Extension. The focus of each program area continued to evolve by addressing the changing needs of the target audience. Some of the changes in each program were as follows:

- Family and Consumer Sciences: the program focus changed from helping farmwives to maintaining families and households in good nutrition, furniture refinishing, and sewing skills (USDA, 2012).
- 4-H Youth Development: the program focus changed from only serving rural youth to include urban and suburban audiences in a broader scope.
- Community Development: the program focus changed from serving small communities in rural areas to an emphasis on issues related to sustainability, ensuring vibrant communities, and economic development.
- Agriculture and National Resources: the program focus changed from educating farmers about producing and marketing farm products, and helping farm groups organize buying and selling cooperatives (USDA, 2012) to a two-way extreme of supporting more large-scale commercial farms with full-time professional farmers and more smaller-scale private farms with part-time farmers.

Interdisciplinary programs, involving parts of two or more program areas, also emerged as a trend in programming (Seevers et al., 2007). The environment that
Extension professionals face has changed and will continue to evolve, contributing to different trends and changed focus for program areas. Extension has adapted to changing times and landscapes, and continues to address a wide range of human, plant, and animal needs in both urban and rural areas in six major areas: 4-H Youth Development, Agriculture, Leadership Development, Natural Resources, Family and Consumer Sciences, and Community and Economic Development (USDA, 2012).

**Audience/ Clientele**

Extension is a people-oriented institution with a mission to improve people’s lives and the communities in which they live. Addressing the needs of local clientele enables Extension to accomplish its mission. When Extension was first established in 1914, the primary clientele was farm families and rural people, at a time when the rural population was nearly one-half of the total population, and 30% of the workforce was engaged in farming (Rasmussen, 1989; USDA, 2012). In 2012, less than 2% of the US workforce was engaged in farming for a living, while only 17% lived in rural areas (King, 2010; USDA, 2012).

Growing urbanization is another driving force for change in delivering services to different clientele groups served by Extension. Extension audiences are no longer limited to those in rural areas and include suburban and urban residents through programs about horticulture, urban gardening, family economics, nutrition, and 4-H (Rasmussen, 1998). According to APLU (2010), about 80% of the U.S. population lives in urban areas. Increased urbanization has contributed to the shift in the service provided by Extension
from addressing only traditional rural issues for rural residents to also addressing issues for urban and suburban residents.

The demographics of the target audience served by Extension professionals, in terms of multiple generational workforce, racial and ethnic groups, aging population, is also changing. According to a 2012 population projections report from the U.S. census bureau, the U.S. will become more racially and ethnically diverse, with the aggregate minority population projected to become the majority by 2042. The population of Hispanic-origin will be expected to contribute the highest rate of increase among the ethnic groups by adding the largest number to the population, followed by the population of Asian and Pacific Islander origin. The continual increase in diversity will contribute to an annual growth rate of minority populations exceeding two percent through 2030. In comparison, at the peak of Baby Boom era, the overall U.S. population grew less than two percent each year. After 2010, as the Baby Boom generation (those born between 1946 and 1964) reaches retirement age, the percentage of the elderly population will increase rapidly in the South and Midwest regions of the U.S. (U.S. Census Bureau, 1996b). Changing demographics in the U.S. are a strong driving force for change in the audience served by Extension, and creates an opportunity for Extension to ensure program success through service to a broader audience.

Factors Affecting OSU Extension

The environmental context including economy, demography, society, and the clientele that Extension serves has all changed since Extension was established in the early 1900s, resulting in new challenges for Extension services (Cochran et al., 2012).
Cochran et al. (2012) completed a study that described factors affecting the OSU Extension system, and the trends identified were: (a) changing and complex conditions, (b) increased competition and limited resources, (c) changing complex organizational structures, (d) changing demographics, and (e) technology and life in the e-world. These factors suggest what can be done within OSU Extension in order for the system to thrive and be sustainable. Specifically, Cochran et al. (2012) articulated the following implications for Extension personnel.

1. be flexible, proactive, and embrace change;
2. be customer driven with a focus on quality and responsiveness;
3. demonstrate and communicate the value of Extension work;
4. demonstrate an entrepreneurial spirit;
5. become proficient in technology use and application;
6. effectively manage work and life issues; and
7. build relationships and collaborate in a diverse environment.

The factors affecting the OSU Extension system and the related implications to the new challenges indicate emerging needs for Ohio County Extension Directors to serve as role models to be flexible, adaptive, and capable of interpersonal relationship building and inter-disciplinary collaboration. Behaviors and skills needed for Extension professionals to overcome the new challenges for OSU Extension services, especially for County Extension Directors with administrative leadership responsibilities, appear to correspond to the constructs of emotional intelligence and cultural intelligence; therefore,
understanding emotional intelligence and cultural intelligence of Ohio County Extension Directors is beneficial for OSU Extension system.

**Core Competencies of Extension Professionals**

Based on the changing trends and the implications for Extension personnel, Cochran (2009) further developed a competency model for OSU Extension. According to Dubois (1993), competency is defined as “any underlying characteristic an individual possesses and uses which leads to successful performance in a life role” (p. 5). Workers use competencies as tools to complete units of work or job tasks (Dubois & Rothwell, 2000). In his competency model, Cochran (2009) identified fourteen core competencies needed for Extension professionals to successfully perform their duties in the OSU Extension. The fourteen core competencies included: communication, continuous learning, customer service, diversity, flexibility and change, interpersonal relationships, knowledge of Extension, professionalism, resource management, self-direction, teamwork and leadership, technology adoption and application, thinking and problem solving, and understanding stakeholders and communities.

Even after nearly 100 years, Extension continues to maintain a focus on accomplishing its mission to help people improve their lives and communities. However, the external and internal environments that Extension professionals face have changed, and will continue to change. Trends and implications facing OSU Extension influence how Extension professionals plan and conduct their programs in order to successfully serve their target audience. County Extension Directors whose administrative job responsibilities serve as role models need to demonstrate the skills needed to perform
their job in the context of changing environments. Core competencies identified for OSU Extension also reflect what Extension professionals and County Extension Directors need to carry out the mission of Extension, while embracing changes and continuing to establish trusting work relationships and collaboration with a more diverse clientele.

**Leadership Theory**

**Traits Approach**

Leadership is a topic that has attracted interest among scholars throughout the years. Scholars of leadership strive to understand what it takes to become an effective leader. The traits approach focused on understanding personal attributes that distinguish leaders from non-leaders (Bass, 1990; Northouse, 2013, 2012; Yukl, 2010; Zaccaro, Kemp & Bader, 2004), and was one of the earliest systematic attempts to study leadership in the early 20th century (Northouse, 2013; Yukl, 2010).

Traits were defined as distinguishing qualities of an individual, which were often perceived as inherited qualities (Northouse, 2012). A precursor to the traits theory was the “great man” theory which emphasized “… identifying the innate qualities and characteristics possessed by great social, political, and military leaders” (Northouse, 2013, p. 19). Some examples of such heroic leaders are Indira Gandhi, Abraham Lincoln, Joan of Arc, and Napoleon Bonaparte (Northouse, 2012). Scholars of the traits approach perceived that ‘great’ leaders were born with certain traits that can be identified and assessed (Northouse, 2013; Zaccaro et al., 2004).

According to Zaccaro et al. (2004), Galton (1869) was perhaps the first scholar who used scientific modeling to address the question of identifying qualities of effective
leaders. Galton’s study measured human talents across generations and professions in order to explore the degree of relation to their families. Galton found that extraordinary intelligence of eminent men is hereditary, not developed through nurturing or education.

Terman (1904) conducted the first empirical study of leadership in an effort to identify factors that differentiated leaders from non-leaders in schoolchildren. The finding showed that verbal fluency, intelligence, low emotionality, daring, congeniality, goodness, and liveliness were distinguishing attributes of youthful leaders. Other research studies that focused on identifying personal traits of leaders (e.g. Bowden, 1926; Cowley, 1931; Kohs & Irle, 1920) continued to emerge during the first half of the 20th century.

Leadership traits are defined as the integration of personal characteristics that bring forward a consistent pattern of leadership performance across a variety of group and organizational situations (Zaccaro et al., 2004). Zaccaro et al. (2004) suggested that these characteristics are relatively stable and coherent, and they reflect a range of differences, including personality, temperament, motives, cognitive abilities, skills, and expertise. Researchers (Judge, Bono, Ilies, & Gerhardt, 2002; Northouse, 2013) summarized the traits of effective leaders from research findings (see Table 2.1). Five traits - self-confidence, integrity, intelligence, sociability, and determination - appear somewhat consistently in studies across different eras. Therefore, it appears that these five traits may be considered to be key traits of effective leaders.
Table 2.1 The Traits of Effective Leaders

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<td>Dependability</td>
<td>Intelligence</td>
<td>Achievement</td>
<td>Adjustment</td>
<td>Drive (achievement, ambition, energy, tenacity, initiative)</td>
<td>Emotional maturity</td>
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<td>Sociability</td>
<td>Adjustment</td>
<td>Persistence</td>
<td>Adaptability</td>
<td>Integrity</td>
<td>High energy level</td>
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<td>Initiative</td>
<td>Extroversion</td>
<td>Insight</td>
<td>Aggressiveness</td>
<td>Self-confidence</td>
<td>Stress tolerance</td>
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<td>Persistence</td>
<td>Dominance</td>
<td>Initiative</td>
<td>Alertness</td>
<td>Honesty/integrity</td>
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<td>Alertness</td>
<td>Masculinity</td>
<td>Self-confidence</td>
<td>Ascendance, Dominance</td>
<td>Self-confidence</td>
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<td>Cooperativeness</td>
<td>Conservatism</td>
<td>Responsibility</td>
<td>Emotional balance, control</td>
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<td>Adaptability</td>
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<td>Cooperativeness</td>
<td>Independence, nonconformity</td>
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<td>Tolerance</td>
<td>Originality, creativity</td>
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<td>Influence</td>
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<td>Sociability</td>
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<td>Surgency</td>
<td>Intelligence</td>
<td>Achievement motivation</td>
<td>Energy level and stress</td>
<td>Alertness</td>
<td>Cognitive abilities</td>
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<td>Agreeableness</td>
<td>Self-confidence</td>
<td>Prosocial influence</td>
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<td>Originality creativity</td>
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<td>motivation</td>
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<td>Emotional stability</td>
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<td>Adjustment</td>
<td>Internal locus of control</td>
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<td>Achievement orientation</td>
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<td>Low need for affiliation</td>
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Similarly, from an array of important characteristics of leaders gleaned from research findings, Northouse (2012) identified six key traits exhibited by effective leaders, including: intelligence, confidence, charisma, determination, sociability, and integrity. Most of the key leadership traits identified through research are consistent with those reported in Table 2.1, except that Northouse (2012) also included charisma as one of the key traits of effective leaders.

Among the studies summarized in Table 2.1, key traits of effective leaders may be categorized in three domains: (a) emotional intelligence related, (b) goal-oriented, and (c) passion at work. Some traits such as openness, adaptability, tolerance, emotional balance and control, emotional stability, stress tolerance, energy level and stress tolerance, internal locus control, and emotional maturity, employ different terms, yet appear be related to the domain of emotional intelligence. Traits related to drive, achievement, and achievement motivation appear to fall within the goal-oriented domain. Traits of high energy level, initiative, and masculinity may represent a high degree of passion that effective leaders devote to their work. It can be concluded that similarity exists among the traits of effective leaders regardless of the specific terms used to represent those traits in different times and contexts.

**Traits and leadership effectiveness.** A number of studies have been reported that explore relationships between traits and leadership effectiveness, yet consistency in the findings is lacking (Andersen, 2006; Judge et al., 2002; Northouse, 2013; Stogdill, 1950). For example, Andersen (2006) reiterated the finding reported by Hogan, Curphy, and
Hogan (1994) that a leader’s personality can predict team performance. Stogdill (1950) and Blake & Mouton (1985) defined leadership as an influential process involved in achieving organizational goals with and through others. Stogdill (1948) stated that some leaders with certain traits are effective only in certain contexts. Howell, Bowen, Dorfman, Kerr and Podsakoff (1990) did not find leader traits that systematically improve organizational effectiveness. Research findings are inconsistent with regard to whether certain personality traits are associated with leader effectiveness (Andersen, 2006). Andersen (2006) further indicated that the inconsistency could be the result of different definitions of leadership, and researchers’ perspectives on leadership effectiveness. Thus, these inconsistent results created challenges for traits research and caused the results of traits-based research to be regarded with limited value when predicting an individual’s leadership potential.

Based on a review of research findings from leadership studies, researchers have summarized some of the strengths and criticisms associated with studies focused solely on traits (Andersen, 2006; Judge et al., 2002; Judge, Piccolo, & Kosallka, 2009; Northouse, 2013). The summarized strengths and criticisms of traits-based research are outlined below:

Strengths:

- Intuitively appealing: trait approach fulfills the need that people have to see their leaders as gifted people.
- Supported by a century of research.
- Highlights the leader component in the leadership process.
• Offers benchmarks to look for if we want to be leaders.

Criticisms:

• Fails to identify a definitive list of leadership traits.
• Lacks clear structure for organizing and classifying traits.
• Fails to take situational contexts into consideration.
• Results in highly subjective determination of leadership traits.
• Fails to relate traits to leadership outcomes.
• No scientific basis for a relationship between individual traits and their leadership effectiveness in a strong and consistent manner.
• Does not explain what can be done if a person does not have the “right stuff” (Judge et al, 2009).

According to Kirkpatrick and Locke (1991), traits do play a key role, but traits alone are insufficient for successful leadership as they endow only people with the potential for leadership. Farkas and Wetlaufer (1996) suggested that some very good leaders repress certain personality traits, or develop ones they were not born with, in order to lead their organization effectively. Andersen (2006) also concluded from his research that no traits were found universally related to leadership, traits of leaders were unable to explain organizational effectiveness, there is relationship between personality and behavior, and leadership appears to be a minor impact on organizational effectiveness. Thus, research on the traits approach suggests there is some value in understanding the traits of effective leaders, yet other influencing factors also need to be identified to facilitate a more thorough understanding of the relationship between traits
and leader effectiveness, and the impact of leadership on overall organizational effectiveness.

**Situational Approach**

In 1948, Stogdill offered an alternative point of view in his leadership study. He claimed that a person does not become a leader because he/she possesses a certain combination of traits as there is no consistent set of traits to differentiate leaders from non-leaders across a variety of situations (Stogdill, 1948). This perspective challenged the prevailing view of leadership scholars as Stogdill focused on the relationship between leaders and followers in social situations (Northouse, 2013). Therefore, Stogdill was among the first to suggest other dimensions to be considered in leadership study in addition to leaders’ traits. For instance, Ghiselli and Brown (1955) suggested that one’s leadership ability can be grouped together by a number of different abilities, that can be determined by the social situation. In other words, one can be a good leader under one set of circumstances while he/she will be a poor leader under others (Ghisellie & Brown, 1995). In essence, “situation-specific analyses” became the dominant view of the leadership field after Stogdill (1948). Since then, researchers began to perceive the traits approach as having limited utility for explaining leadership emergence and effectiveness (Zaccaro et al., 2004), and strived to identify other factors related to social situations (Northouse, 2013). The traits approach in leadership studies became less prevalent in the leadership literature.

Behavioral approaches started to emerge in the late 1930s when interest in the traits approach was waning. In the 1950s, behavioral leadership became the mainstream focus
of leadership studies. The behavioral approach focused on “what leaders do and how they act” (Northouse, 2012, p. 2). Two well-known studies were conducted at The Ohio State University (Stogdill & Coons, 1957) and University of Michigan (Katz, Maccoby, Gurin, & Floor, 1951). These two studies analyzed how leaders acted in small groups (Northouse, 2012). The Ohio State study identified consideration and initiating structure as the two major types of leader behavior, while the Michigan study identified two key dimensions of leadership as employee-oriented leadership and production-oriented leadership (Northouse, 2013; Zaccaro et al., 2004).

Blake and Mouton (1964) extended the research scope to an organizational level, and developed a Managerial Grid, which has since been renamed to Leadership Grid. The Leadership Grid was designed to explain how leaders help organizations attain their goals through two leadership orientations: concern for production and concern for people (Northouse, 2013). Concern for production (i.e., task behavior) refers to how a leader handles accomplishment of organizational tasks, which may involve activities like attention to policy decisions, new product development, and process issues (Blake & Mouton, 1964). Concern for people (i.e., relationship behavior) refers to how a leader deals with people who share common organizational goals, which may include building organizational commitment and trust, providing good working conditions, and promoting good social relations (Blake & Mouton, 1964). Derived from the behavioral approach, researchers in the 1950s and 1960s focused on seeking a universal theory of leadership to explain leadership effectiveness in different situations (Northouse, 2013), yet the results were contradictory and unclear (Yukl, 2010).
In the late 1960s, Hersey and Blanchard (1969) proposed the situational leadership approach that focused on applying different leadership styles in different situations. In their point of view, effective leaders were those who were able to assess situations and adapt appropriate leadership style to fulfill the needs of the particular situation. Therefore, the trend of expanding the theoretical foundation of leadership studies to consider situational contexts started to evolve.

The contingency approach, which focused on matching situations and leader’s style, emerged as another leadership approach. This approach suggested that leader effectiveness was based on how well the leader’s style accommodates the situational context (Northouse, 2013). Fiedler’s and Chemers’ (1974) leader-match theory proposed matching leadership styles to specific organizational contexts and is one of the most widely recognized theories in the realm of contingency theory. The situational approach continued to be of interest in leadership studies from 1970s through 1990s.

**Big Five**

Beginning in the 1980s, the ‘Big Five’ personality factors that include openness, conscientiousness, extraversion, agreeableness, and neuroticism, were linked to leadership. In a meta-analysis study, Judge et al. (2002) analyzed 78 leadership and personality studies published between 1967 and 1998, and concluded there was a strong relationship between the Big Five traits and leadership. Once again, the traits approach began to attract the attention of leadership researchers.

Meanwhile, Goleman (1995)’s construct of emotional intelligence began to emerge in the literature as a leadership trait and gained favor in the 1990s (Northouse, 2012).
A growing body of research highlighted the importance of emotional intelligence to effective and successful leaders (Goleman, 1998; Goleman, Boyatzis, & McKee, 2002; Zeidner, Matthews, & Roberts, 2009). Zaccaro et al. (2004) suggested that effective leaders possess qualities and attributes that non-leaders do not. According to Northouse (2012), “... effective leadership results when the leader engages the right traits in the right place at the right time.” (p. 4). Thus, the traits approach again started to generate researchers’ interest in leadership studies, and still remains an active area of research.

Beginning in 1985, Bass and his associates conducted studies that generated theories of visionary or charismatic leadership, and from this they developed transformational leadership theory (Northouse, 2012). According to Bass and Avolio (1997), transformational leadership is defined as the process by which leaders take actions to increase their associates’ awareness of what is right and important, and to raise the motivational maturity of their associates for them to go beyond their self-interest for the good of the group. These theories initiated another dimension in leadership studies called “new leadership” approaches that emphasized leadership as a process between leaders and followers. A growing body of empirical studies related to charismatic and transformational leadership (Bass & Yammarino, 1988; Conger, 1988, 1989; Kirkpatrick & Locke, 1996) has been conducted across a wide range of populations using a variety of methods (Conger, 1999). Lowe and Gardner (2001) analyzed articles published in Leadership Quarterly from 1990 to 2000, and the results showed 34% of the articles were about transformational or charismatic leadership. This implies that the traits approach once again drew researchers’ attention as a theoretical foundation for leadership studies.
Emerging Relational Approaches

In addition to the traits, situational and new leadership approaches; researchers in the 1990s began to include another dimension to examine the relationship between leaders and followers in leadership studies. One example of this dimension was the leader-member exchange (LMX) theory that was introduced by Graen and his colleagues (Dansereau, Graen, & Haga, 1975; Graen, & Cashman, 1975; Graen & Uhl-Bien, 1995; Uhl-Bien, Graen, & Scandura, 2000). LMX theory conceptualized leadership as a reciprocal process with a focus on the interactions between leaders and followers (Martin, Epitropaki, Thomas, & Topakas, 2010; Northouse, 2013). LMX theory predicted that high-quality exchanges between leaders and followers resulted from trust and mutual respect that may produce multiple positive outcomes, such as reduced employee turnover, greater organizational commitment, and more promotions (Antonakis, Cianciolo, & Sternberg, 2004; Martin et al., 2010; Northouse, 2013; 2012).

On the other hand, Meindl, Ehrilish, and Dukericch (1985) proposed to view leadership from a follower-centric perspective, called the Romance of Leadership theory (RoL). The RoL perspective argues for the tendency of researchers to attribute responsibility for company performance to leaders, thereby disregarding other factors that might be of influence (Bligh & Schyns, 2007). From the RoL perspective, leadership is viewed as a socially constructed reality among followers as it is affected by the context in which they are embedded. In other words, leadership occurs only when followers interpret it as a leadership. This theory offered an alternative point of view that strikes against the majority of leadership studies focusing on a more leader-centric perspective.
Another leadership theory that embraced a relational perspective was proposed by Hollander (1992), which presented “. . . a more active conception of the follower role in reacting to leader qualities (p. 43)”. He stated that leadership was an interdependent relationship between leaders and followers, and no leadership would exist without followership. Hollander (1995) further stated “. . . the way the leader and followers mutually perceive and respond to each other’s personal qualities and actions is a crucial factor in this relationship” (p. 69). Attributes of good followership such as dependability, competence and honesty are found in behaviors that represent effective leadership (Hollander & Webb, 1995; Kouzes & Posner, 2002). From Hollander’s perspective (1995), “. . . effective leadership is more likely to be achieved by a process in which there is reciprocity and the potential for two-way influence and power sharing, rather than by simply relying on authority and the exercise of power over others (p. 70).” The success of a team depends upon teamwork through shared responsibility by interdependent individuals in an organization (Hollander, 1995; Sunstrom, De Meuse, & Futrell, 1990). In other words, the involvement of followers is the key to effective leadership. In addition to the importance of leaders themselves and their qualities, Hollander (1995) examined how leaders engaged followers in productive and mutually satisfying teams. Hollander’s approach offers an alternative view of leader qualities not only as personal possessions but rather as interpersonal links with others involved in mutual pursuits.

During the 21st century, in addition to existing leadership theories mentioned earlier, various other perspectives emerged. For example, based on a developmental
perspective, the notion of authentic leadership views leadership as something that can be
nurtured, rather than as a fixed trait. In other words, leadership can be developed over a
lifetime (Northouse, 2013). Leadership potential can be triggered by personal ‘crucibles’
events (George, 2007). Authentic leadership focuses on leaders’ authenticity in terms of
transparent and ethical leader behaviors that encourage information sharing for decision-
making, while also taking followers’ inputs into consideration (Avolio, Walumbwa, &
included pursuing purpose with passion, practicing solid values, leading with heart,
establishing enduring relationships, and demonstrating self-discipline.

Servant leadership was another emerging perspective that balances the dimension
of leader-follower relationship, and which was built upon the work of Greenleaf (1991).
Servant leadership begins with a leader’s desire to want to serve their followers by
addressing followers’ needs to achieve their goals (Greenleaf, 2007). Servant leadership
was regarded as either a trait or a behavior (Northouse, 2013). Spears (2004)
summarized ten characteristics representing a servant leader, which included: listening,
empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship,
commitment, and building community (as cited in Avolio et al., 2009).

Global and culture-based studies, such as cross-cultural leadership, global
leadership, e-leadership with virtual teams (Avolio et al., 2009) have also begun to gain
momentum in leadership research. These types of studies have resulted from a fast-
changing environmental context and growing needs to prepare leaders with global
perspectives. Project GLOBE (Global Leadership and Organizational Behavioral
Effectiveness) led by House and other researchers (2004) was a study conducted by 160 researchers in 62 societies that “. . . developed an integrated and cross-level theory of the relationship between cultural values and practices and leadership, organizational, and societal effectiveness.” (p. 724).

A diverse array of leadership approaches has been examined since the 1990s, which enriches the entire knowledge base of leadership literature. Each leadership theory may not be mutually exclusive, as each new theory often builds upon others to create a more thorough and integrated perspective of leadership. The dimensions of leadership theories have evolved from purely focusing on leaders themselves to examining traits, to involving dimensions of followers and situations from multiple perspectives, resulting in a rich body of leadership literature. As a constant thread in this ever-growing body of work, research studies using the trait approach have evolved for more than a century, and will likely continue to evolve within the area of leadership studies.

Theoretical foundation

The theoretical foundation of this study is based on Hollander’s (1995) relational theory that emphasized the unity of leadership and followership in teamwork. According to Hollander (1995), leadership involves an interdependent relationship between the leader and followers, in which both leader and followers cooperate as a team to achieve a common shared goal. In leader-follower relations, the dynamic in terms of the way the leader and followers mutually perceive and respond to each other’s personal qualities and actions is an important factor to the success of the team (Hollander, 1992, 1995).
Leadership and followership are required throughout teams and organizations (Vanderslice, 1988). Follower perceptions were found to affect their responsiveness to the leader and their willingness to have the leader take initiatives and retain authority (Hollander, 1995). In leader-follower relations, perspectives of followers as well as those of leaders are both treated as critical elements in the relationship. Hollander (1978), who adopted the definition of effectiveness from Chester Barnard, characterized effectiveness as “. . . the accomplishment of the recognized objectives of cooperative action. . . ” (p.111). He further posited that effectiveness depends initially on influence, and then beyond the questions of value such as “. . . how things are done to achieve what ends” (p. 111). Leader behaviors that are found to represent effective leadership include attributes of good followership (Hollander & Webb, 1955; Kouzes & Posner, 2002) such as dependability, competence and honesty. Effective leadership is more likely to be achieved in the process where reciprocity and potential for two-way influence and power sharing are available, rather than simply relying on authority and the exercise of power over others (Hollander, 1995). Leadership effectiveness involves a group process with the leader being the main directive element (Hollander, 1978); it can be achieved by active involvement of responsive followership (Hollander, 1986). The present study was framed and developed by taking a balanced perspective in leader-follower relations into consideration.
Conceptual Model

Job Performance

A leader’s performance represents how well a leader accomplishes their job functions in the context of their position in the workplace. According to Campbell (1990), job performance is defined as how well a person performs their job toward the accomplishment of organizational outcomes. The term ‘managerial performance’ has been used exclusively in the research literature to represent a manager’s job performance (Blau, 1986; Campbell, Dunnette, Lawler, & Weick, 1970; Gentry, Weber, & Sadri, 2008; Lawler, & Porter, 1967). The variable of job performance in this study refers to the performance of leaders who serve in administrative and management positions within an organizational context, specifically, the job functions of administrative leadership responsibilities of Ohio County Extension Director. This definition differentiates the variable from general job performance that is commonly referred in the literature to describe employee job performance outcome.

A number of studies related to explore factors that affect job performance in the workplace, and the related literature can be organized in terms of three categories of studies. The first category is related to job performance in general. For example, a study by Borgogni and et al. (2010) was conducted to explore predictors of job satisfaction and job performance in a privatized organization. A study by Nel and De Villiers (2004) found a positive relationship between emotional intelligence and job performance in a call center environment. Another example is a study by Waldman and Spangler (1989), they reviewed the literature and posited three determinants of job performance: ability,
motivation, and opportunity. In their model, which focused on determinants of subordinates’ job performance, leader behavior within the opportunity determinant was viewed as potentially involving formal and informal processes in which leadership may be shown formally by one’s supervisor, and informally by co-workers and others. Despite the fact that how leadership is displayed, job performance was found indirectly affected by different leadership forms or styles in various ways.

The second category of the literature related to job performance studies focused on the impact of what leaders may have on the job performance of their subordinates. An example is the study by Peterson et al. (2012) that was conducted to explore relationship between authentic leadership styles and follower positivity and performance. A study by Carmeli et al. (2009) examined how leader relational behavior cultivate bonding social capital among organizational members and the way bonding social capital augments feelings of vigor at work. The findings of their study revealed that leader relational behaviors are positively associated with bonding social capital, and in turn, resulting in the feelings of vigor, which are found positively related with manager rating of employee job performance.

The third category of job performance studies focused on managerial job performance in an organizational context. However, empirical studies that have been conducted to discover factors influencing job performance of managers in leadership role in organizational contexts are limited. For example, a study by Campbell et al. (1970) proposed a model to portray determiners of managerial behavior, in their model, a manager’s behavior determines their job performance, and leads to further determine the
overall organizational outcomes to reflect managerial effectiveness. Lawler and Porter (1967) found a positive relationship between the degree to which effective job behavior is seen as leading to rewards, and measures of job performance. The results of their study also showed the perceptions of a manager’s roles are related to their job performance effectiveness. Blau (1986) found that management level has a moderating effect between direction of effort and managerial performance. In his research on the impact of influence and skill on managerial performance, Abdalla (1983) found that managerial performance was related to a manager’s skill use as well as influence, and the relationship strength between ‘skill use and performance’ is much stronger and more established than the relationship between ‘influence and performance’.

Gentry et al. (2008) conducted a study based upon a sample of 30,365 managers from 33 countries in over 4000 different companies headquartered around the world and found that subordinate ratings of their manager’s career related mentoring behaviors was positively related to supervisor ratings of the target manager’s performance. In their study, mentoring was defined as a relationship with a focus on collaboration, development, and feedback. In addition, their research findings also presented a positive relationship between mentoring and supervisor-rating managerial performance in societal cultures that viewed performance orientation as high values (Gentry et al., 2008). The societal cultural contexts appeared as an influencing factor to managerial job performance on mentoring in their study.

Researchers have made efforts to differentiate between the concepts of performance and effectiveness in leadership contexts. For example, Hollander (1978) stated that
performance does not necessarily represent leadership effectiveness, despite the fact that it may be used to benchmark organizational effectiveness in production terms. Leadership effectiveness implies a concern that goes beyond performance and profits, with a focus on the ‘how’ in addition to ‘what’ in the process (Hollander, 1978). Together, performance in terms of productivity, and how efficiently performance is accomplished, are the most useful measures of organizational effectiveness (Hollander, 1978).

Andersen (2006) also compared the definitions of performance and effectiveness, and clarified that performance is not equivalent to effectiveness. Performance is a single entity in terms of production volume, sales, numbers of operations, and it does not matter whether it refers to individual, team or organization, while “. . . the concept of effectiveness is a ratio implying that two entities are required when defining and measuring effectiveness (e.g., return of assets)” (Andersen, 2006, p. 1083). From Andersen’s (2006) perspective, in both private and public sectors, “. . . formal leadership is management.” (p.1080), and the formal leaders include the CEO, manager, chief officer, supervisor or whatever title used.

Research findings on the relationship between job performance and the construct of emotional intelligence are inconsistent. Some studies have found emotional intelligence to be able to predict job performance in the workplace (Bar-On, Handley, & Fund, 2006; Bradberry & Greaves, 2009; Emmerling & Boyatzis, 2012; Nel & De Villiers, 2004). However, another study found a very weak correlation between
emotional intelligence and the performance of the principals in a study conducted in schools in Kenya (Ayiro, 2009).

Research has found that cultural intelligence is another potential influencing factor related to job performance. For example, Van Woerkom and De Reuver (2009) studied managers in a multicultural company and reported a positive relationship between transformational leadership style and performance, although no direct effect on performance was found from a measure of the dimensions of multicultural personality. In addition, they also found that transformational leadership had a mediating effect in the relationship between cultural empathy, open-mindedness and social initiative on one hand and performance on the other. Livermore (2010) stated that cultural intelligence (CQ) was closely related to individual and organizational performance, as cultural intelligence is able to strongly predict a leader’s overall performance and ability to adjust when leaders are placed in multicultural situations. He further indicated “... in particular, CQ drive, CQ Strategy, and CQ action are found to have a positive relationship on an individual’s success in accomplishing a task” (Livemore, 2010, p. 165).

For the purpose of this study, the relationship among leaders’ job performance and measures of their emotional intelligence and cultural intelligence is being explored. According to Campell et al. (1970), different behaviors may potentially lead to ‘success’ or ‘failure’ in any given job, and using observational measures to learn how a manager’s job behavior contributes to the accomplishment of common organizational goals in terms of job performance was recommended. Thus, a leader’s job performance in this study
was based on the rating on the performance appraisal by the supervisor of the respective leaders who participated in this study.

**Leader Effectiveness**

**Leadership defined.** Scholars of leadership have offered various definitions of leadership. Bass (1990) summarized concepts about leadership as a focus of group processes, personality and its effects, the art of inducing compliance, the exercise of influence, an act or behavior, a form of persuasion, a power relation, an instrument of goal achievement, an emerging effect of interaction, a differentiated role, the initiation of structure, and a combination of the above elements. Similarly, Northouse (2013) summarized leadership definitions that reflect concepts about what it means to be a leader, which included leadership as a trait, ability, skill, behavior, and relationship. Kouzes and Posner (2002) stated that leadership is “. . . a relationship between those who aspire to lead and those who choose to follow. . . ” (p. 20), and success in leadership “. . . is and will continue to be a function of how well people work and play together. . . ” (p. 21). Relationship appears to be a critical element when leadership is being defined.

Leadership becomes more crucial when one has to develop and guide adaptive reasoning to new or changing situations (Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000). According to Antonakis et al. (2004), leadership is purpose driven, resulting in change derived from values ideas, vision, symbols, and emotional exchanges. Leadership can be framed not in terms of specific behaviors, but in terms of the capabilities, knowledge, and skills that make effective leadership possible (Mumford et al, 2000). A successful leadership experience results from the key elements comprised of
changing mindsets, a global focus, personnel development, and improved business and leadership skills (Amagoh, 2009).

Some researchers defined leadership as a reciprocal process involving interactions between leaders and followers (Hollander, 1995; Kouzes & Posner, 2002; Leader-Member Exchange theory). Some researchers recognized leadership as a process of influence aimed toward the accomplishment of objectives (Howell et al., 1990; Vardiman, Houghston, & Jinkerson, 2006). Leaders must not only exercise influence, they must decide when, where and how influence will be exercised to bring about the attainment of shared goals (House & Howell, 1992; Mumford et al., 2000; Mumford, 1986; Winter, 1991). The influential role as a leader was a highlight of social cognitive theory, in which a leader was referred to as an agent. Some researchers, from the standpoint of performance outcomes, defined leadership as a process of social interaction where the leader’s ability to influence the behavior of followers can strongly influence their followers’ performance outcomes (Kerr et al., 2005).

Leadership often involves building cohesive and goal-oriented teams, which contributes to the causal and definitional connection between leadership and team performance (Hogan et al., 1994). Hogan et al. (1994) defined the following definition: “. . . leadership involves persuading other people to set aside for a period of time their individual concerns and to pursue a common goal that is important for the responsibilities and welfare of a group. . . ” (p. 493). Hogan et al. (1994) further elaborated that leadership occurs only when others are willing to adapt for a period of time to focus on attainment of a common goal. For the purpose of this study, leadership was defined as a
social interactive process of influence involving leaders and followers in organizational contexts to establish a trusting work relationship in order to attain a shared goal.

Effectiveness, as defined by the online Oxford dictionary, is “. . . the degree to which something is successful in producing a desired result” (Oxford, 2013). Chester Barnard (as cited in Hollander, 1978, p. 111) defined effectiveness as “. . . the accomplishment of the recognized objectives of cooperative action.” Hollander (1978) went further to expand the meaning in the context of leadership by stating that effectiveness relies initially on influence; however, questions extend beyond influence, such as “. . . how things are done to achieve what ends” (p. 111). Leadership effectiveness involves group progress with the leader serving as the main directive element (Hollander, 1978), it cannot be achieved without the responsive involvement of followers (Hollander, 1986).

Correspondingly, Andersen (2006) proposed goal attainment as the fundamental issue and basic definition of effectiveness in management theory, and he conceptualized effectiveness as the degree of goal attainment. According to his review of leadership studies that explored definitions and measurements of effectiveness, “effectiveness is a problematic concept” (Andersen, 2006, p. 1087). He elaborated that many of the studies he reviewed lacked precise definitions of neither effectiveness nor perceived effectiveness as a ratio. For example, he pointed out the study of Judge and Bono (2000) which investigated the relationship between transformational leadership and outcomes that reflected leadership effectiveness. Factors examined in their study were those that may enhance effectiveness rather than serve as effectiveness criteria themselves.
Leadership can be framed not only with respect to specific behaviors, but also as capabilities, knowledge, and skills that facilitate effective leadership (Mumford et al., 2000). Researchers view effective leadership as the foundation for organizational performance and growth, as well as a source of competitive advantage for organizations (Amagosh, 2009; Kim, 2007). Amagosh (2009) summarized research on factors that may influence leadership effectiveness: individual leadership characteristics (e.g., intelligence, emotional intelligence, generalized self-efficacy), leadership skills and behaviors (e.g., self-regulatory, self-motivational, empowering), and a contextual factor (i.e., environment).

Scholars in leadership studies have tried to identify behaviors that leaders exhibit in order to be effective. For example, the essential roles of effective organizational leaders include establishing and reinforcing values and purpose, developing a vision and identifying strategies necessary to achieve the vision, building the community necessary to implement the strategies, and initiating and managing the changes necessary to assure growth and survival (Block & Manning, 2007; Bodinson, 2005). According to Howell et al. (1990), effective leaders are expected to be able to provide strong direction and support while encouraging the involvement of subordinates in decision-making. Effective leaders can correctly identify the behaviors required in each situation they face, and then be flexible in exhibiting these behaviors according to the situation (Howell et al., 1990). This is different from the traits perspective in which leaders were thought to be born as dynamic, intelligent, dependable, and high achieving individuals, thus, Howell et al. (1990) also suggested applying situational approaches as remedies of ineffective
leader. Applying situational approaches in leadership training helps to develop required leader behaviors to further avoid potential leadership problems resulting from a leaders’ traits that are difficult to change (Howell et al., 1990).

For some researchers, leadership effectiveness was defined as a leader’s success in influencing followers toward achieving organizational objectives (Amagoh, 2009; Bodinson, 2005; Vardiman et al., 2006;), and was associated with staff satisfaction (Trott & Windsor, 1999). Effective leadership depends on the leader’s ability to solve complex technical and social problems (Mumford et al., 2000). Intelligence, dominance, gender role, generalized self-efficacy, self-monitoring, emotional intelligence, conscientiousness, emotional stability, and extraversion are the leadership characteristics that have been identified with the potential to influence one’s leadership effectiveness (Kim, 2007). In a study with a sample of 4-H leaders, Denmark (1973) found the degree to which leaders accept themselves is highly related to their leader effectiveness. This research indicated key characteristics of effective leaders, but not how a leader’s effectiveness is achieved.

From the relational leadership perspective, “effective leadership is achieved by the active involvement of responsive followership” (Hollander, 1986, p. 40). According to Hollander (1995), effective leadership was more likely to be achieved in the process where the reciprocity and potential for two-way influence and power sharing is available, rather than simply relying on authority and exercising power over others. Responsive followership here refers to followers being responsive and willing to contribute to actions that have been seen accomplished by their leaders (Hollander, 1995). This echoes the definition of leadership as a process involving both leaders’ actions and the relationship
with followers, their expectations and commitments, and task demands (Hollander, 1986). The element of followers’ involvement needs to be recognized as a critical component of effective leadership (Hollander, 1993). Goal setting, implementation, evaluation, and feedback are required when leadership effectiveness is concerned (Hollander, 1978). Therefore, for the purpose of this study, followers’ perceptions of leader effectiveness, and their willingness to be involved in a trusting work relationship was therefore adopted as part of the conceptual framework.

**Leader effectiveness assessed.** Hogan et al. (1994) synthesized the literature and categorized five types of leadership studies based upon how leaders are evaluated in terms of their leadership effectiveness. Each of the five types of studies is summarized in this section.

In the first category, the actual performance of a team or organizational unit was used to evaluate leaders. For example, the study by House, Sprangler, and Woycke (1994) assessed leader effectiveness of 31 U.S. presidents through their international relations performance, economics, and social performance. Smith, Carson, and Alexander (1984) conducted a longitudinal study with a sample consisting of 50 ministers of the Northeast Ohio (NEO) conference of the United Methodist Church, and found effective leadership is related to improved organizational performance. In their study, the salary paid to a minister was used as an objective performance appraisal measure to identify effective leaders, in which leader effectiveness was used as proxy measure of organizational performance (Smith et al., 1984).
In the second category, ratings of subordinates, peers, or supervisors are used to evaluate leaders. The implication of this type of research is that “. . . subordinates are often in a unique position to evaluate leadership effectiveness. . .” (Hogan et al., 1994, p. 495). Hogan et al. (1994) referred to studies from Sweetland (1978), Murphy and Cleveland (1991) to indicate that subordinates rating of a leader performance depends closely upon the relationship the leader has established with the subordinates. They also referred to the study by McEvoy and Beatty (1989) that supported the notion that using subordinates ratings of a leader’s performance was a valid predictor and a relatively less expensive method of assessment compared to assessment center ratings. As stated by McEvoy and Beatty (1989), “. . . if an organization is looking for a prediction approach for up to seven years into the future, subordinate ratings may be as effective as assessment centers and certainly are less expensive.” (p. 50 - 51). As for the regard concerning differences between a supervisor ratings and those of subordinates, Hogan et al (1994) concluded that a leader’s credibility or trustworthiness could be the most important leadership characteristic related to a subordinate’s judgment of their leader’s effectiveness, because boss’ ratings of a manager’s overall effectiveness were largely driven by judgment of his or her technical competence, while subordinates’ ratings were largely influenced by judgments of integrity, and “. . . research shows that these ratings also reflect some knowledge of a person’s actual performance in a leadership role.” (p. 495)

In the third category, the leadership potential of strangers (i.e., no previous work relationship) on the basis of an individual’s performance during interviews, simulations,
assessment centers, or leaderless group discussions has been used to evaluate leaders. One disadvantage of this type of leadership evaluation is that assessment information is not directly related to effectiveness. For example, in the context of leaderless groups, assessment information provides information about what a person must do in order to be perceived as a leader. For assessment centers that use organizational advancement as a criteria, the assessment provides information about leadership characteristics necessary to get ahead in a large and complex (Hogan et al., 1994).

In the fourth category, self-ratings of leadership have also been used to evaluate leaders. Leadership effectiveness is determined by self-rating results from the leaders themselves, which provides little information (Hogan et al., 1994). The major reason shared by Hogan et al. (1994) based on findings from the literatures they reviewed, including studies by Atwater and Yammarino (1992), Nilsen and Campbell (1993), Van Velsor, Talor, and Leslie (1992), is that some managers, especially those who are poor leaders tend to routinely over-evaluate their own performance.

In the fifth category, the degree of leader effectiveness was assessed by people whose careers are either in jeopardy or have derailed. Research in this category, according to the conclusion of Hogan et al. (1994), revealed that in assessments of this type, managerial incompetence is related to perceived untrustworthiness, over control, exploitation, micro management, irritability, unwillingness to use discipline, and the inability to make good staffing or business decisions (or both) on the part of leaders.

As stated earlier, this study is derived from Hollander’s (1995) relational leadership theory that leadership is a reciprocal process involving how a leader and followers have
established an interdependent relationship to achieve a shared goal. Therefore, this study follows Hollander’s theory that the involvement of followers is especially important for effective leadership. Moreover, the quality of the relationship between the leader and the follower is considered to be related to effective leadership (Senior et al., 2012). Thus, for the purpose of this study, using the ratings of subordinates of their respective leader in their organizational unit was used to reflect followership involvement.

**Leader Behavior**

Leadership can be defined in terms of acts or behaviors (Bass, 1990), and therefore the construct implies a set of practices that are observable and learnable (Radhakrishna et al., 1994). Behaviors exhibited by leaders are the manifestation of how leaders adapt and utilize their leadership practices in order to provide a model for others that may ‘model the way’ and ‘enable followers to act’ (Kouzes & Posner, 2002). Kouzes and Posner (2002) identified five practices that exemplary leaders engage in to achieve extraordinary leadership. The five practices are: modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart. Ford (1981) suggested that for leaders to be effective, they must be able to interpret and diagnose their environments and use appropriate behaviors. The important relationship between leader behavior and leader effectiveness is therefore presented as part of this literature review.

Fielder (1967) proposed the following definition of leadership behavior:

“By leadership behavior we generally mean the particular acts in which a leader engages in the course of directing and coordinating the work of his group members. This may involve such acts as structuring the work relations,
praising or criticizing group members, and showing consideration for their welfare and feelings.” (as cited in Bass, 1990, p. 14).

The work relationship in which leaders use their behaviors with followers appears to be a critical contextual element when leader behavior is being discussed. Research has also found that leader behaviors and practices, leadership effectiveness, and teamwork are associated with each other (Radhakrishna et al., 1994; Senior et al., 2012). Yukl (2008) suggested that one form of influence leaders should utilize for effective strategic leadership is the use of specific leadership behaviors while interacting with subordinates, peers, and outsiders. Correspondingly, leader behaviors that are found to represent effective leadership include attributes of good followership such as dependability, competence, and honesty (Hollander & Webb, 1955; Kouzes & Posner, 2002).

According to Senior et al. (2012), the transformational/transactional leadership approach proposed by Bass (1985) is a widely accepted method to understand leadership behaviors. In this approach, effective leadership is thought to require leaders to engage in certain behaviors that bring in contingent rewards with followers (p. 285). In his integrated conceptual framework of leadership effectiveness, Yukl (1989) suggested that leader behavior is influenced by leader traits and values, role expectations, and interpretation of feedback about the state of intervening (e.g., follower effort, ability and role clarity, cooperation) and outcome variables (e.g., unit performance, goal attainment, survival and growth). Yukl (1989) also suggested that if transformational leadership is to be compared with more traditional types of managerial behaviors, it is important to include in the latter category a full range of managerial behaviors, which include
planning, problem solving, clarifying, monitoring, consultation and delegation, networking, recognizing, rewarding, team building, and information (p. 273).

Leader behaviors can be summarized in three categories: task-oriented, relations-oriented, and change-oriented (Bass, 1990; Yukl, 2008). Task-oriented behaviors reflect concern for organizational goals as well as how those goals can be attained, such as short-term planning and scheduling of work activities, and staffing requirements. Task-oriented behaviors are most beneficial for improving efficiency in terms of subordinates’ performance. Relation-oriented behaviors demonstrate how relationships are built and sustained with followers, such as providing recognition and showing support and positive regard. Relation-oriented behaviors involve mutual trust between leaders and followers, and are considered related to higher job satisfaction and lower turnover rates. Relation-oriented behaviors are useful for improving human resources and relations. Change-oriented behaviors are the most recently identified category by researchers, and are considered useful for improving adaptation. Examples of change-oriented behaviors include monitoring the environment to identify threats and opportunities, articulating an inspiring vision, and taking risks to promote change.

According to Bass (1990), Blake and Mouton’s (1964) model integrates both task- and relation-oriented leader behaviors to attain effective leadership. Their model derived from the charismatic and transformational leadership approach. Chemers and Ayman (1993) also described the behaviors of effective leaders as motive-arousal, role-modeling, visionary, image-building, empowering, risk taking and self-sacrificial, fostering intellectual stimulation, supportive, and adaptive.
Leader behaviors found to contribute to effective leadership also include attributes of good followership (Hollander & Webb, 1955; Kouzes & Posner, 2002) such as dependability, competence, and honesty. Reciprocal processes involving two-way influence and power sharing (Hollander, 1995), and quality of relationship between the leader and followers (Senior et al., 2012) were also identified as important elements that contribute to effective leadership. Recent research also suggested consideration of follower characteristics and behaviors in order to gain a complete understanding of leader behavior (Liden & Antonakis, 2009). Research continues to evolve to better understand leader behavior and its relation with effective leadership in diverse perspectives. Therefore, for the purpose of this study, leader behavior was proposed as a potential mediating factor that may influence how followers perceive effectiveness of their leaders, while based upon their willingness to take risks and establish a trusting work relationship.

**Trusting Work Relationship**

**Trust defined.** Trust, as an important element between parties in cooperative relationships (Brower, Lester, Korsgaard, & Dineen, 2009; McAllister, 1995; Lewicki & Bunker, 1995; Shapiro, Sheppard, & Cheraskin, 1992), as well as a critical contributor to effective leadership (Dirks & Skarlicki, 2004), has been drawing increased attention with respect to leadership in organizational contexts (Brower et al., 2000; Currall & Judge, 1995; Mayer, Davis, & Schoorman, 1995; McAllister, 1995; Sitkin & Roth, 1993). Many studies on trust have been conducted that define and discuss trust from various dimensions, yet for the purpose of this research, the literature review for this section of trusting work relationship will be limited to trust within a leadership context.
According to Weber and Carter (2003), trust is derived from a social construct perspective. “... trust is an orientation between self and other whose object is the relationship” (p. vii), and trust is also a form of interaction because it “... emerges from the interactions of two or more people and influences these actions” (p. 12). Trust is constructed simultaneously while a relationship is being established, in which interactive dynamics occur among those in “status-role” positions in a social structure (Weber & Carter, 2003, p. 26). The ultimate benefits resulting from a trusting work relationship established in the right conditions should include quality of output, greater efficiency of process, more flexibility, and an enhanced strategic focus (Shapiro et al., 1992). Being able to develop trust, and maintain a trusting work relationship is especially critical to leaders in organizational contexts as leaders rely on subordinates and associates to accomplish tasks that meet their individual and organizational goals (Fisher & Brown, 1988), which may result in sustaining individual and organizational effectiveness (McAllister, 1995, p. 24).

Scholars have offered multiple definitions of trust from various perspectives. Rotter (1967) was an early trust theorist who provided a definition of interpersonal trust. He defined interpersonal trust as “… an expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon...” (Rotter, 1967, p. 651). According to Rotter (1967), the efficiency of complex social contexts depends on the willingness of one or more individuals within the social unit to trust others. The most commonly accepted definition in trust research was defined by Mayer, Davis, and Schoorman (1995). They defined trust as “… the
willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party.” (p. 712). In other words, trust is "a willingness to take risk” (Mayer et al., 1995, p. 712).

Similarly, the definition from Boon and Holmes (1991) included elements of reciprocal expectations and risk during relationship development at work. They defined trust as “. . . a state involving confident positive expectations about another’s motives with respect to oneself in situations entailing risk. . . ” (p. 194), in which the process of evaluation and information exchange is continuously evolving (Lewicki & Bunker, 1995). McAllister (1995) combined ideas from various definitions and defined interpersonal trust as “. . . the extent to which a person is confident in, and willing to act on the basis of, the words, actions, and decisions of another” (p. 25). Trust is relational and is constructed through reciprocal interactions, including the processes of self-disclosure and response, perspective taking and enactment (Weber & Carter, 2003). Trust in a relational context is formed and maintained by the dynamic conditions that construct context-specific relationships with respect to the nature of dependency and expectation (Choudhury, 2008).

Correspondingly, Six and Skinner (2010) defined trust “. . . as a psychological state comprising the expectation that another will perform a particular action which is important to you, coupled with a willingness to accept vulnerability which may arise from the actions of that other party. . . ”(p. 110). Based on the theories in the literatures they reviewed, Six and Skinner (2010) proposed a framework of trust building process in
Figure 2.3. According to their framework, the trust building process is interactive and evolving as a circle. In the trust building process, B acts according to how B perceives A’s pattern of expectations and draw conclusions about whether trust is built. If A concludes that B’s acts are trustworthy, A will act to make himself vulnerable to B’s actions; and in turn, B will perceive A’s action as indications of whether A is trustworthy or not, and likely to act in accordance with A’s expectations, which will be perceived as the confirmation of A’s initial trust (Six & Skinner, 2010).

![Figure 2.3 Trust Building Process.](image)

The state of trust is built and gradually evolves through progress over time. According to the trust development model proposed by Lewicki and Bunker (1995), “...achievement of trust at one level enables the development of trust at the next level.” (Lewicki & Bunker, 1995, p. 119). The process of exchanging information among those involved in interactive dynamics is in work relationships (Boon & Holmes, 1991). Development of trust between individuals is an accumulative process. Iterations of the trust building process help to establish trust at higher levels.

Furthermore, Lewicki, McAllister, and Bies (1998) elaborated that trust and distrust are separate and distinct constructs in contemporary relationships, which are multifaceted and multiplex in nature. Trust and distrust are not the opposite side of qualities in a relationship. Low distrust is not equal to high trust, and high distrust does not mean the same thing as low trust (Lewicki et al., 1998). They also stated that simultaneous trust and distrust may emerge as ongoing relationships that mature over time and in organizational settings where complexity, uncertainty, and role conflict are commonplace. This statement was later supported by empirical testing from the study of Gillespie (2003) who developed a trust measure in interpersonal work relationship based on two types of trusting behavior (i.e., reliance and disclosure). Meanwhile, Wiethoff and Lewicki (2005) also proposed “… while trust building is generally construed as being slow and systematic, distrust-building may be quick, episodic but yet enduring once created.” (p. 5).

Similarly, in their model of Holistic Leadership Framework with Customer Leadership as the centerpiece, Weiss and Molinaro (2005) stated that trust is established in three stages in order: (a) trust in your competence; (b) trust in your honesty; and (c) trust that if I am
vulnerable you will not hurt me. Each stage is built upon the assumption that the previous stage has been achieved. They also highlighted “… trust takes forever to build and a moment to destroy. Mistrust takes a moment to build and forever to destroy.” (Weiss & Molinaro, 2005, p. 70).

Based on the review and analysis of theories in the literature, Lewicki et al. (1998) concluded that important opportunities for managing ambivalence in peer relations and leader-member interaction are emerging at interpersonal level. “Organization members must know not only when to trust others, and in what respects, but also when to monitor others closely.” (Lewicki et al., 1998, p. 453) They further suggested that organization members to develop the capacity to manage the ways in which they are trusted as well as distrusted by others. The exploration of trust in relationships continues to evolve in depth and breadth. More empirical studies are needed to verify the construct of the framework in the trust building process as also suggested by Six and Skinner (2010). For the purpose of this study, the definition of trust as a fundamental orientation that structures relational interactions was adopted as an integrated component of the theoretical foundation and conceptual model.

**Trusting work relationship.** Trust has been identified as especially crucial and one of the most important elements within supervisor-subordinate dyads in any good working relationship (Lewicki & Bunker, 1995; Sue-Chan, Au, & Hackett, 2012). Trust has also been recognized as a critical element of effective leadership that can influence followers (Dirks & Skarlicki, 2004). Kramer (2011) stated that in order to be effective at employing influence over others, it appears helpful if leaders are trusted. He further
elaborated that trust in a leader can be viewed as a function comprised of at least two components: (a) the motives and intentions attributed to the leader, and (b) the leaders’ perceived competence.

Similarly, Kouzes and Posner (2002) stated that followers would take risks, make changes, and keep organizations and movements alive if “. . . leadership is a relationship founded on trust. . . ” (p.19). However, Dirks and Skarlicki (2004) noted that little research was focused on “. . . illuminating how trust in leaders contributes to the effective functioning of groups and organizations and how it can be leveraged to meet this objective. . . ” (p. 21). Despite that theories about trust and leadership constructs have developed independently, with a significant overlap in the concerns and effect of respective constructs, very limited research has systematically investigated the similarity and differences between trust and leadership constructs (Brower, Schoorman & Tan, 2000).

Some researchers stated that in transformational and charismatic leadership, leaders establish trust in their followers in order for that the followers perform beyond the leaders’ expectation (Kirkpatrick & Locke, 1996; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). In discussing the implications of the concept of trust in interpersonal relationships, Boon and Holmes (1991) stated that individuals who are in trusting relationships “. . . tend to process their partner’s behavior in a rather automatic and positive way. . . “(p. 208), although the discussion focused on romantic or love relationships, it could also be applied to work relationship in organizational contexts. Dirks and Ferrin (2002) also indicated that the exact cause-effect relationship is unclear.
even when the evidence suggests that the relationship between trust and transformational leadership is of considerable importance.

From the perspective of leader-member-exchange (LMX) theory, leadership is a reciprocal relationship in which each individual interacts (Martin et al., 2010). The role of trust between leader and subordinates has been acknowledged as an important dimension in the quality of a LMX relationship (Gomez & Rosen, 2001; Scandura & Pellegrini, 2008). As a result, the higher the quality of a LMX relationship, the more trust appears to be embedded in the relationship (Martin et al., 2010). High quality LMX relationships result from trust and mutual respect and will produce multiple positive outcomes, such as less employee turnover, greater organizational commitment, and more promotions (Antonakis et al., 2004; Martin et al., 2010; Northouse, 2013; 2012).

In their meta-analysis study on trust in leadership, Dirks and Ferrin (2002) categorized leadership in two perspectives, relationship-based and character-based. The relationship-based perspective focused on how followers understand the nature of relationship. Trust in leadership from relationship-based perspective was described as operating in a social-exchange process that deals with employees’ willingness to reciprocate care and consideration expressed by a leader in a relationship (Dirks & Skarlicki, 2004). The character-based perspective focused on the perception of the leader’s character and how it influences a follower’s sense of vulnerability in a hierarchical relationship (e.g., Mayer et al., 1995). In other words, follower perceptions on leader trustworthiness are important to followers due to the fact that leaders have the decision-making authorities by virtue of the organization positions (Dirks & Skarlicki,
In both relationship- and character-based leadership perspectives, trust is a belief or perception held and measured by the follower, and trust affects the vulnerability of followers in a hierarchical relationship, and in turn affects performance and organizational citizenship behaviors (Dirks & Ferrin, 2002). Trust in leadership allows team members to suspend their individual doubts and personal motives, and to direct their efforts toward achieving a common team goal (Dirks & Skarlicki, 2004). Thus, Dirks and Skarlicki (2004) concluded that trust in leaders produces two beneficial and complementary effects: maximized individual efforts and performance, and utilized shared efforts made toward a common team goal.

Trust has been found to be associated with facilitating teamwork, effective leadership, job performance and enabling collaboration (Dirks & Ferrin, 2002; Dirks & Skarlicki, 2004; Fleishman & Harris, 1962; Six & Skinner, 2010). In an early study by Fleishman and Harris (1962), effective leaders were found to be able to establish a climate of mutual trust with their work groups and, conversely, a lack of mutual trust between leaders and their work groups led to turnover that pushed followers away from a problem situation. Similarly, Webber (2002) suggested that in changing organizational contexts where there was a need for cross-functional and/or cross-cultural teams to exist, leaders must establish an organizational climate for trust in order to facilitate team effectiveness. Thus, trust seems to be a prerequisite to the accomplishment of multi-dimensional tasks in organizational contexts.

According to Choudhury (2008), trust is established and maintained through
dynamic conditions that construct context-specific relationships with respect to the nature of dependency and expectation. Trust is expected to affect two important variables for effective leadership, one is the decision-making commitment on the goals set by the leader, and the other is belief in the accuracy of information provided by the leader (Dirks & Ferrin, 2002). Dirks and Ferrin (2002) also found that trust in a direct leader had an equal or greater effect on subordinates workplace outcomes (including job performance, altruism, intent to quit, and job satisfaction) than did trust in organizational leadership (Dirks & Ferrin, 2002). In leader-member and peer relationships, trust operates differently (Gillespie, 2003). Based upon the belief that trust is a complex psychological construct, it can not be directly measures. However, researchers have developed instruments to measure underlying factors that when examined collectively, can provide an indirect measure of trust in a work relationship (Gillespie, 2003). As a result, for the purpose of this study, a trusting work relationship between a leader and their subordinates and associates was examined as a potential mediating factor that may influence the perception of subordinates and associates regarding their respective leaders.

Emotional Intelligence

Emotional intelligence defined. Emotional intelligence is the name of a field of inquiry that explores how human beings apply their subjective, non-cognitive behavioral skills to successfully manage and improve their relationships and life conditions (Hughes & Terrell, 2008). Three major models of emotional intelligence have been proposed in the construct of emotional intelligence. Goleman (2006) differentiated the three models of the construct of emotional intelligence: (a) Salovey and Mayer were the first to
propose the first emotional intelligence model in 1990, and their model was framed in the model of intelligence; (b) Bar-On’s model was framed in the context of his research on well-being; and (c) Goleman’s model focused on performance at work and organizational leadership. Salovey and Mayer note their model’s need to reflect only mental abilities, while Goleman’s and Bar-On’s models affiliate both mental abilities and personality disposition (Earley & Ang, 2003).

Emotional intelligence is a complex psycho-social construct that may be related to leader effectiveness. The definition of emotional intelligence slightly varies among the three models. According to Salovey and Mayer, emotional intelligence refers to a complex set of characteristics, and is defined as “… the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth…” (as cited in Earley & Ang, 2003). Salovey incorporated Gardner’s personal intelligence to provide a basic definition of emotional intelligence and expanded it in five main domains, which include knowing one’s emotions, managing emotions, motivating oneself, recognizing emotions in others, and handling relationships (Goleman, 1995). Goleman (1995) defined emotional intelligence as the ability to recognize and understand emotions and the skills to use this awareness to manage self and the relationships with others. Emotional intelligence consists of four unique skills, including self-awareness, self-management, social-awareness, and relationship management. He further stated that lack of those emotional skills can be remedied and developed with the right efforts (Goleman, 1995). As for Bar-on (2004), emotional
intelligence is defined as “… an array of noncognitive capabilities, competencies, and skills that influence one’s ability to succeed in coping with environmental demands and pressures.” (Bar-On, 2004, p. 14).

Earley and Ang (2003) indicated that as both Goleman’s and Bar-On’s models are concerned with managing interpersonal relationships, the conceptualization of emotional intelligence as defined by the two models overlap in how one’s emotional intelligence is exhibited in terms of social skills. The overlapping conceptualization supports the purpose of this study. Similarly, Bradberry and Greaves (2009) presented the four social skills embodying emotional intelligence as reflected in Figure 2.4. In their diagram, the two social skills: self-awareness and self-management were about oneself, representing personal competence. The other two social skills: social awareness and relationship management were about how one deals with emotions of others, representing social competence (Bradberry & Greaves, 2009; Ingram & Cangemi, 2012).
Regardless of the various definitions of emotional intelligence, the process of building relationships and working together with people in groups is an important and shared concept (Nafukho, 2009). Therefore, this study adopted the concept of emotional intelligence as the capability to understand one’s own and others’ emotions, to manage one’s own emotions, and to develop and manage relationships with others.

**Emotional intelligence and leadership.** Emotional intelligence is a complex psycho-social construct that may be related to leader effectiveness. The construct of emotional intelligence has been identified as a key factor in an individual’s ability to be socially effective (Kerr et al., 2005), because it reflects how a person applies knowledge
to the immediate situation (Bar-On, 2004). Some benefits of being skilled with emotional competencies include being aware of feelings of those we work with, being able to handle disagreement, and having the ability to collaborate with others, all which might lead to higher job satisfaction (Goleman, 1995).

Leadership functions through the use of emotions (Nwokah & Ahiauzu, 2010). Researchers have identified emotional intelligence as a crucial determinant of effective leadership (Bradberry & Greaves, 2009; Kerr et al., 2005; Rosete & Ciarrochi, 2005; George, 2000). According to Goleman (1995), “… leadership is not domination, but the art of persuading people to work toward a common goal.” (p. 149). Truly effective leaders are distinguished by a high degree of emotional intelligence that includes self-awareness, self-regulation, motivation, empathy, and social skill (Goleman, 2006, 2000). The best leaders can be set apart from the rest by their understanding the role of emotions in the workplace, including tangibles such as better business results and talent retention, as well as all-important intangibles such as morale, motivation, and commitment (Goleman et al., 2002). Weinberger (2009) also found a positive relationship between a manager’s emotional intelligence and the leader’s perceived effectiveness. Thus, more empirical research is needed to provide a more thorough understanding of emotional intelligence and its relationship with leader effectiveness.

Emotional intelligence is considered to help leaders navigate the changing landscape and provide what is needed in many organizational transactions. Emotional intelligence is also believed to help enhance a focus on global business, as well as shifts in management style and service. All of these elements may help to distinguish a
successful organization from others (Greenockle, 2010). Nadler (2011) also stated that for people in higher leadership positions in an organization, greater emotional intelligence was related to leadership success. George (2000) identified the concern that there was limited leadership research conducted to improve an understanding of how leaders’ moods and emotions may influence their effectiveness as leaders. Although the concept of emotional intelligence is relatively new, the relationship between emotional intelligence and its critical role in leadership and organizational success has been discussed and studied in a variety of contexts in recent years.

The growing body of research reveals that emotional intelligence is a leadership capacity that can be learned and developed (Goleman, 2006, 1995; Goleman et al., 2002; Merkowitz & Earnest, 2006; Nwokah, & Ahiauzu, 2010; Stein, 2008). Emotional intelligence has become an important construct in the field of human resource development (Nafukho, 2009). A recent study by Roy and Kan (2011) suggested that leaders who are leading change and who have higher emotional intelligence have a positive impact on supporting their followers and managing the challenges associated with change. This suggests the potential need for leaders to be selected and trained in developing and enhancing their emotional intelligence. Thus, some research has recommended training programs to develop emotional intelligence of managers in organizations (Merkowitz & Earnest, 2006; Riggio & Lee, 2007). Emmerling and Boytzis (2012) pointed out that while the results of emotional intelligence research are generally positive, populations studied have tended to represent western cultures in the United Kingdom, the United States, and Australia. Therefore, a key question remains for
further field study to examine questions about the potential applications in other culture and contexts.

On the other hand, Nafukho (2009) indicated that critics of the construct of emotional intelligence contend that the concept of emotional intelligence is invalid due to its broad and changing definition. He argued that emotional intelligence may be more of a theory about personality, or a combination of both intelligence and personality. Therefore, more empirical evidence about the construct of emotional intelligence is needed. Emotional intelligence as a leadership capability that can be developed and learned continues to draw researchers’ attention. According to George (2000), even though research has been conducted to help understand theories of leadership, the study of how and why leaders have a positive influence on followers and organizations remains imperative and there has been limited research to improve an understanding of how leaders’ emotions influence their effectiveness.

Emotional intelligence appears to contribute as a critical leader capability to create and offer potential reciprocal involvement of followership, which also corresponds to what makes effective leadership in Hollander’s (1995) relational theory. Therefore, the construct of emotional intelligence as a leadership capability is treated as a potential variable that might be associated with job performance and leader effectiveness, is being studied in this study.

Cultural Intelligence

Emergence of cultural intelligence. The term cultural intelligence is relatively new in the field of academic research. The first publication on cultural intelligence was
from Earley and Ang’s book, *Cultural Intelligence: Individual Interactions Across Cultures in 2003*, which was driven by their intention to close the research gap by addressing the lack of focus on intelligence and the ability to solve cross-cultural problems. Earley and Ang drew upon Sternberg and Detterman’s (1986) integrative theoretical framework of the multiple loci of intelligence, and proposed a set of capabilities consisting of cognitive, motivational, and behavioral components that focus specifically on resolving cross-cultural problems (Ng, Van Dyne, & Ang, 2011).

Later in 2004, Earley and Mosakowski’s empirical study in cultural intelligence was published in the Best Practice session in *Harvard Business Review*. In that article, Earley and Mosakowski shared their findings from a survey of more than 2000 managers, and addressed cultural intelligence as an essential element for successful business in the 21st century by referring to empirical cases in business. Since that study first appeared, cultural intelligence as an essential leadership competence has started to draw growing attention in research.

According to Ng et al. (2011), exponential growth in empirical studies on cultural intelligence across diverse disciplines was triggered after a 2006 special issue devoted to the conceptualization and empirical investigation of cultural intelligence in *Group and Organization Management*. The first paper on the measurement and predictive validity of cultural intelligence in *Management and Organization Review* was published in 2007 (Ang et al., 2007). Empirical studies that have been reported on cultural intelligence across multiple disciplines include studies of cross-cultural applied linguistics, military operations, United Nations peacekeeping operations, immigrants, international
missionary work, and mental health counseling (Ang et al., 2007). These reports and studies were followed by publication of the *Handbook of Cultural Intelligence: Theory, Measurement, and Applications* (Ang & Van Dyne, 2008), *Leading with Cultural Intelligence* (Livermore, 2010), and the most recent book *The Cultural Intelligence Difference: Master the one skill you can’t do without in today’s global economy* (Livermore, 2011). It is clear that cultural intelligence in the leadership context has become an evolving field that continues to attract in-depth study on both theory construction and empirical testing.

**Definition of cultural intelligence.** Several researchers have offered definitions of cultural intelligence (CQ). One of the most well-known is from Earley and Ang (2003) referring to cultural intelligence as a “. . . a person’s capability for successful adaptation to new cultural settings, that is, for unfamiliar settings attributable to cultural context. . .” (p. 9), in other words, it is “. . . a person’s capability to adapt effectively to new cultural context. . .” (p. 59). Thomas and Inkson (2004) defined cultural intelligence as a “…multifaceted competency consisting of cultural knowledge, the practice of mindfulness, and the repertoire of behavioral skills” (pp. 182 - 183, italics in the original). Furthermore, Thomas (2006) later defines cultural intelligence as a capability that allows individuals to understand and act appropriately across a wide range of cultures. Individuals with a high level of cultural intelligence are thought to have “… a strong mastery and sense of emotional display and physical presence…” (Earley, Ang, & Tan, 2006, p.34).
Different from the definition of Earley and Ang (2003), Peterson (2004) focused on international culture rather than domestic cultural diversity issues relating to skin color, sexual orientation, gender, age, and other personal traits. He suggested using the term cultural intelligence rather than the initials CQ. Using the term cultural intelligence helped to avoid falling into the oversimplification trap that can be a risk any time one labels a complicated concept (Peterson, 2004). According to Peterson (2004), “. . . cultural intelligence is the ability to engage in a set of behaviors that uses skills (i.e., language or interpersonal skills) and qualities (e.g. tolerance for ambiguity, flexibility) that are tuned appropriately to the culture-based values and attitudes of the people with whom one interacts. . . ” (Peterson, 2004, p. 89). This definition is built upon Gardner’s multiple intelligence theory that consists of four categories: linguistic intelligence, spatial intelligence, intrapersonal intelligence, and interpersonal intelligence; which are also skill areas that are needed for cultural intelligence (Peterson, 2004). To simplify, Peterson’s cultural intelligence is the summation of knowledge about cultures (facts and cultural traits), awareness (of yourself and others), and specific skills (behaviors).

In addition to current cultural intelligence studies focused on an individual perspective, Moon (2010b) examined cultural intelligence from an organizational perspective. Moon defined organizational cultural intelligence as an organization’s capability to function and manage effectively in culturally diverse environments, which may help firms adjust effectively in different cultural settings and to improve sustainability of their competitive advantages (p. 458).
Based on the various definitions of cultural intelligence, regardless of focus on cross-cultural / multi-national culture or domestic cultural perspectives in terms of diversity in organization; research suggests that cultural intelligence can be learned and developed through education, interaction, and experience (Earley & Ang, 2003; Livermore, 2010; Peterson, 2004; Thomas & Inkson, 2004). In addition, research findings also indicated that higher levels of cultural intelligence may be achieved through exposure to other cultures (Crowne, 2008; Torelli, Chiu, Tam, Au, & Keh, 2011). Therefore, the definition of cultural intelligence adopted in this study was the capability to effectively interact and work with people across different cultures.

**Cultural intelligence models.** Culture, to Early and Ang (2003), was best viewed from a holistic perspective that is reflected by metaphors and ethnographic description rather than a fragmentary appearance that employs cultural values and syndromes. Thus, they proposed a cultural intelligence model that consists of three general facets: cognitive, motivational, and behavioral. In their model, the cognitive facet refers to special knowledge about a new culture that one can acquire and assimilate according to various types of cues being provided. This facet is most closely aligned with what the traditional literature is known as intelligence; but with an emphasis on the capabilities concerning a new cultural environment that is unfamiliar to a person. Those capabilities include gathering and manipulating information, drawing inferences, and enacting actions in response. The role of cognition in cultural intelligence features types of knowledge, and one’s capability for reasoning and decision-making. Cultural intelligence reflects cognitive processing by capturing one’s self-concept and its degree of differentiation and
flexibility. Individuals with greater cultural intelligence would be expected to inductively establish an adequate mapping of a new cultural setting in order to function effectively within that context.

The motivational facet refers to one’s tendency and commitment to act on the cognitive facet, along with continuing to proceed with gaining knowledge and understanding of a new culture and overcome barriers. The role of motivation in cultural intelligence involves personal and cultural values, efficacy expectations, and goal setting that contributes to how one would make choices of actions in different social contexts. Personal and cultural values provide a general benchmark for individuals to assess their perceived desirability of various potential actions and outcomes. Efficacy expectations provide individuals with the impetus to set and pursue personal goals, and become greater despite potential failure. Goals provide guidance and an intrinsic challenge that individuals need in order to search in the cultural environmental contexts. Therefore, the motivational facet serves as the key drive for an individual to adapt to a new culture in addition to their knowledge of domain, procedure, or outcome. The motivational and cognitive facets are intertwined, as they are both needed in cultural intelligence.

The behavioral facet refers to one’s capability to execute their intended actions in a specific cultural situation. This facet of cultural intelligence places emphasis on the intentional behaviors one exhibits in order to present their intended actions in cross-cultural encounters and to minimize misperception and misattribution. Self-presentation and impression management theory explain the role of the behavioral facet of cultural intelligence, in which “. . . a basic motive of individuals in social situation is to present
themselves to others in a favorable manner.” (Earley & Ang, 2003, p. 181) Thus, being able to manage the right impressions across cultures is important to culturally intelligent individuals. These three facets: cognitive, motivational, and behavioral facets, comprise cultural intelligence, which makes cultural intelligence “. . . more than a cognitive framing of intelligence” (Earley & Ang, 2003, p. 91). One who is lacking any of the three facets may be considered as lacking cultural intelligence (Earley & Ang, 2003).

Similarly, derived from Earley and Ang’s model (2003), Livermore (2010) proposed a cultural intelligence model which is presented in Figure 2.5. In his cultural intelligence model, Livermore (2010) identified a four-step process that includes four facets of cultural intelligence: drive, knowledge, strategy, and action. CQ drive is the first facet in the model, and it refers to one’s motivation in terms of showing interest, confidence, and drive to adapt cross-culturally. Perseverance is the key in this facet for one to enjoy the potential benefits to be gained from cross-cultural interactions. CQ knowledge is the second facet in the model, and it refers to one being able to understand cross-cultural issues and differences. This facet distinguishes what cultural situations are attributable to universal, individual, or specific social contexts. CQ strategy is the third facet in the model, and it refers to how one plans in terms of strategizing and making sense of culturally diverse experiences. CQ strategy reflects cultural intelligence through what one does according to what they acquire from CQ knowledge. The last facet is CQ action. CQ action refers to how one appropriately changes his/her verbal and nonverbal actions when interacting with people with various cultural backgrounds. This is a behavioral facet of cultural intelligence that involves learning from one’s motivation,
cultural knowledge, and strategies to appropriately adapt one’s communication and negotiation practices. The goal for CQ action is for one to be oneself while discovering which of one’s behaviors need to change to successfully reach one’s objectives. In brief, building on perseverance, understanding, and interpretation in a cross-cultural context enables leaders to behave in ways that may contribute to more effective leadership (Livermore, 2010). Therefore, Livermore (2010) suggested that leaders deploy cultural intelligence in order to be effective according to this cultural intelligence model (Livermore, 2010).

Figure 2.5 Four-Step Cycle of Cultural Intelligence
Both cultural intelligence models offer similar foundations through respective facets. The CQ knowledge and CQ strategy correspond to the cognitive facet in Earley and Ang (2003)’s model, and CQ drive is similar to the motivational facet while CQ action is similar to the behavioral facet, except that Livermore (2010) explicitly presented his model as a four-step process with the four facets blended into a single cultural intelligence construct.

Correspondingly, Earley and Peterson, (2004) stated that cultural intelligence has three facets and resides in head (i.e., cognitive facet), body (i.e., physical facet), and heart (i.e., emotional and motivational facet). According to Crowne (2008), cultural intelligence was exhibited through an individual’s use of all facets in unison (Ang et al, 2006; Earley & Peterson, 2004; Ng & Earley, 2006). A model of cultural intelligence that involves utilizing these four facets simultaneously and interchangeably was adopted for this study.

**Cultural intelligence and leadership.** According to Livermore (2010), leaders across different professions are faced with culturally rich and diverse challenges. Feedback shared from some executives demonstrates that leading without cultural intelligence results in increased time to get the job done, greater travel time and cost, growing frustration and confusion, poor job performance, decreased revenue, poor working relationships at home and abroad, and loss of opportunities. Several reasons identified by executives regarding the need for increased cultural intelligence include: understanding a more diverse customer base, managing diverse and cross-broader teams, developing cross-cultural talent, adapting one’s leadership style, and demonstrating
genuine respect for all kinds of people (Livermore, 2010). Cultural intelligence is not only defined as an individual’s capability to adjust to a new cultural context, but also his or her ability to manage people with dissimilar cultural backgrounds and understanding (Ang et al., 2007; Earley, 2006; Earley & Ang, 2003; Moon, 2010a). Cultural intelligence helps leaders develop “. . . an overall repertoire and perspective. . . ” (Livermore, 2010, p. 4) resulting in more effective leadership in globalized environments (Thomas & Inkson, 2004). Lacking cultural intelligence may lead to stereotyping, unnecessary conflict, delays, and leadership failure (Alon & Higgins, 2005).

Livermore (2010) also identified the primary reasons that make cultural intelligence different from other leading approaches, including: (a) cultural intelligence is a meta-framework established from academic research; (b) cultural intelligence is grounded in multiple intelligences research; (c) cultural intelligence is not only limited to just knowledge; (d) cultural intelligence emphasizes learned capabilities more than personality traits; and (e) cultural intelligence is not culturally specific, i.e. it does not belong to any specific culture. Cultural intelligence has some similarities with various approaches to cultural competence, but it differs in its specific connections to intelligence research as cultural intelligence emphasizes not only understanding different cultures in terms of ones’ cognitive, motivational, and behavioral facets, but also on problem solving and effective adaptations for various cultural settings (Earley & Ang, 2003; Livermore, 2011). Cultural intelligence is a “. . . a concept that spans internal and external views. . . ” (Earley & Ang, 2003, p. 58).
Researchers also identified benefits of cultural intelligence based on individual, organizational, and leadership perspectives, with regard to the applications of cultural intelligence, which are summarized below:

- **Individual**: the construct of cultural intelligence provides negotiators with psychological characteristics that are beneficial for engaging in effective integrative negotiation processes, which lead to joint profit at the intercultural negotiation table (Imai & Gelfan, 2010). Employees who possess higher cultural intelligence tend to have superior cross-cultural adjustment, improved job performance, better decision making, flexibility, international expansion, employer of choice, prevention of burnout, creation of personal satisfaction / enhanced personal well-being, and greater profitability (Livermore, 2011, 2010; Tan, 2004).

- **Organizational**: Organizations and individuals who recognize the strategic value of cultural intelligence are able to effectively leverage cultural differences for competitive advantages and attain competitive predominance in the global marketplace (Earley & Mosakowski, 2004; Tan, 2004).

- **Leadership**: Culturally intelligent leaders can improve cooperation among employees from different countries and cultures (Tan, 2004). Understanding cultural intelligence will also provide insightful references for organizational leaders to select employees for international assignments; such as expatriate positions, which take place when an individual lives and works outside his or her country of citizenship (Carpenter, Sanders, & Gregersen, 2001; Crowne, 2008;
For the purpose of the study, in view of its relevance to the importance for and benefits to effective leaders based on theoretical research and empirical evidence, cultural intelligence was adopted as a potential influencing factor to job performance and leader effectiveness in order for leaders to engage in diverse cultural contexts.

**Relationship between emotional intelligence and cultural intelligence.**

*Emotional intelligence and cultural intelligence are distinct constructs.* The constructs of cultural intelligence and emotional intelligence may seem quite similar, however they are distinct from one another. Earley and Mosakowski (2004) stated that cultural intelligence and emotional intelligence were related. They adopted psychologist Daniel Goleman’s words to present one important element that cultural intelligence and emotional intelligence share in common, “. . . a propensity to suspend judgment- to think before acting. . . ” (p. 140). According to Livermore (2010), “. . . cultural intelligence picks up where emotional intelligence leaves off.” (p. 32), which clearly distinguishes the difference between the two constructs. Emotional intelligence explains how one evaluates in terms of being able to perceive and assess the emotions of others and ourselves, and manage the relationship with others (Bar-On, 2004; Goleman, 1995; Livermore, 2010). Cultural intelligence explains how one learns to work together with people across different cultural backgrounds (Livermore, 2010).
Effective leaders inspire others through the careful regulation of emotions (Earley & Ang, 2003; Thomas & Inkson, 2004). Despite the fact that researchers have stated that leaders with strong emotional intelligence are more effective (Goleman, 2006, 2000; Kerr, et al., 2005; Nadler, 2011; Rosete, & Ciarrochi, 2005), some researchers also articulated that emotional intelligence is not a reliable indicator of whether that effectiveness is sustained outside one’s own cultural context (Earley & Ang, 2003; Livermore, 2010).

For example, Earley and Ang (2003) referred to findings from anecdotal cases of individuals exhibiting great empathy within their own culture in terms of those who may seemingly have high emotional intelligence and social intelligence, yet those same individuals fail to adjust to new cultures. On the other hand, some managers who seem to lack social skills are able to adjust effectively to new cultures.

Earley and Ang (2003) further elaborated to clarify differences between emotional intelligence and cultural intelligence. From their point of view, emotional intelligence comprises a variety of facets related to a person’s ability to perceive and respond to the emotions of others, and cultural intelligence emphasizes a component of intelligence that is essential for accommodating and interacting with cultures other than one’s own.

Nevertheless, Moon (2010a) indicated that no studies attempted to define the relationship between the elements of emotional intelligence and the four facets of cultural intelligence even though emotional intelligence and cultural intelligence do share many similarities. She also found that some elements of emotional intelligence were closely associated to facets of cultural intelligence. In particular, interpersonal competencies of
emotional intelligence were more closely related to cultural intelligence than intrapersonal competencies of emotional intelligence.

_Emotional intelligence and cultural intelligence can be complementary._

As discussed in the previous section, emotional intelligence and cultural intelligence are distinctive, yet they can be complementary to each other. One critical distinguishing dimension for the differentiation proposed by Earley and Ang (2003) was that emotional intelligence assumes familiarity with a cultural context, but such familiarity may not actually exist. Cultural intelligence prepares leaders with the capability to translate changing emotional intelligence behaviors of different cultures, and to then appropriately select a more adequate action for a specific cultural context than the leader might otherwise have chosen (Along & Higgins, 2005). According to Livermore (2011), emotional intelligence can be a strong factor for predicting one’s success when working with people from one’s own culture. Cultural intelligence is a better predictor of how a person will be successful when working with people from different cultural backgrounds in more globalized and culturally diverse workplaces.

Cultural intelligence enables leaders to translate various emotional intelligence behaviors in the context of different cultures and to then choose an appropriate emotional intelligence action for a specific culture. Successful global leadership, therefore, is a function not only of leadership behaviors, but also of multiple intelligences: analytical intelligence (IQ), emotional intelligence, and cultural intelligence (Alon & Higgins, 2005). Similarities between emotional intelligence and cultural intelligence exist in that they both enable thinking before acting (cited in Earley & Mosakowski, 2004), and
moreover, emotional intelligence and cultural intelligence can both be learned and developed (Goleman, 1995; Livermore, 2010). Finally, research suggests that emotional intelligence and cultural intelligence are complementary because emotional intelligence predicts general but not cross-border leadership, while cultural intelligence predicts cross-border but not general leadership effectiveness (Livermore, 2011; Rockstuhl, Seiler, Ang, Van Dyne, & Annen, 2011). Therefore, this study adopted cultural intelligence as a potential key leadership capability that might contribute to job performance and leader effectiveness.

**Conceptual Model**

Leaders with administrative responsibilities in organizational contexts are expected to demonstrate high job performance and leader effectiveness. Leaders who demonstrate high job performance are expected to possess high degrees of both emotional intelligence and cultural intelligence. Leaders with a higher degree of perceived leader effectiveness are expected to possess greater emotional intelligence and greater cultural intelligence. Perceived leader behaviors and the degree of trusting work relationships between leaders and subordinates and associates may potentially mediate the relationship between a leaders’ emotional intelligence and cultural intelligence and their job performance and perceived leader effectiveness.

Leaders’ emotional intelligence might also be related to their cultural intelligence, and vice versa, which may contribute to leaders’ job performance and perceived leader effectiveness. Leader behaviors exhibited while performing their job duties may be related to their subordinates’ and associates’ willingness to establish a trusting work
relationship during the process of attaining a shared goal in an organizational context. Finally, a leader’s job performance may be related to his or her perceived leader effectiveness.

The conceptual model presented in Figure 1.1 illustrated potential elements that may contribute to a leader’s job performance and perceived leader effectiveness. This study explored the relationship among leaders’ job performance, perceived leader effectiveness, emotional intelligence, and cultural intelligence, while controlling for potential effects of the intervening variables of perceived leader behaviors and trusting work relationship in an organizational context.

Summary

This chapter provided an overview of Extension and a literature review of leadership theory. The theoretical foundation that guides this research was presented. A conceptual model that framed this study was provided with a review of literature on job performance, leader effectiveness, leader behavior, trusting work relationship, emotional intelligence, and cultural intelligence. Based on the literature review, research gaps appear to exist with inconsistent results on the relationships among measures of job performance, leader effectiveness, leader behavior, trusting work relationship, emotional intelligence, and cultural intelligence, and more empirical evidence is needed. This study was conducted to explore the relationships among measures of job performance, perceived leader effectiveness, emotional intelligence and cultural intelligence in the context of OSU Extension system. The detailed methods and procedures of this study will be presented in Chapter 3.
Chapter 3 Methods

Chapter 1 explained the need for County Extension Directors to serve as role models in building trusting work relationships with colleagues and employees and collaborating with diverse clienteles. Background of changing environmental contexts and competencies needed in Extension system and the research problem was presented. The purpose of this study was to explore the relationships among measures of job performance, leader effectiveness, emotional intelligence, and cultural intelligence of County Extension Directors in Ohio. Chapter 2 provided an overview of Extension system and leadership theory, and the theoretical foundation. Literature review on job performance, leader effectiveness, leader behavior, trusting work relationship, emotional intelligence, and cultural intelligence that framed the conceptual model of this study was summarized. Chapter 3 includes the purpose of the study, research design, and research questions that guided this study. This descriptive study employed quantitative methodology and a correlational research design, using survey instrumentation and historical data. The research subjects included County Extension Directors in Ohio. Detailed description about the population, instrumentation, data collection procedures, and data analysis are also presented in this chapter.
Purpose

The purpose of this study was to explore relationships among measures of emotional intelligence, cultural intelligence, job performance, and leader effectiveness of County Extension Directors in Ohio, while controlling for the effects of the intervening variables of leader behavior and trusting work relationship. Ohio State University Extension (OSU Extension) has embraced the mission of: “… engaging people to strengthen their lives and communities through research-based educational programming.” (OSU Extension Strategic Plan 2008, p. 3) The changing environment faced by Extension was a driving force that presented challenges as well as opportunities for Extension professionals. OSU Extension needed leaders with the capacity to serve internal and external clientele. Most Ohio County Extension Directors serve with dual roles: administrative leadership role, and existing role as an Extension Educator. The administrative leadership role of County Extension Directors included administrative functions, personnel support, fiscal support, and legislative support; conducting strategic planning and providing a positive work environment within the county Extension office (OSU Extension, 2010). The ability to effectively communicate, establish trusting relationships, and collaborate in teams was especially important for County Extension Directors.

Emotional intelligence and cultural intelligence were two leadership capacities that were thought to be related to job performance and leadership effectiveness. Leaders with higher emotional intelligence were thought to perform better and lead more effectively (Goleman, 1995). Leaders with higher cultural intelligence were also assumed to
perform well and lead more effectively, especially in culturally diverse contexts (Livermore, 2011). Researchers have suggested that the construct of emotional intelligence was a strong predictor of general leadership effectiveness, while cultural intelligence predicted cross-border leadership effectiveness (Livermore, 2011, 2010; Rockstuhl et al., 2011). Empirical evidence to document connections among measures of emotional intelligence and cultural intelligence, and ultimately job performance and leader effectiveness was lacking. This study was conducted to describe relationships among measures of emotional intelligence, cultural intelligence, job performance, and leader effectiveness of County Extension Directors in Ohio, while controlling for the potential effects of intervening variables of leader behaviors and trusting work relationship between County Extension Directors and their subordinates and associates.

**Research Design**

This descriptive study involved quantitative research methodology utilizing a correlational research design. The purpose of the study was to describe relationships among measures of emotional intelligence, cultural intelligence, job performance, and leader effectiveness of County Extension Directors in Ohio. Job performance and leader effectiveness were the two dependent variables of interest in this study. Emotional intelligence and cultural intelligence were the two independent variables examined in this study. Leader behavior and trusting work relationship, were the two intervening variables that were measured and controlled via data analysis.

Potential threats to the validity of this study included measurement error and non-response error. Measurement error was controlled through the use of valid and reliable
data collection instruments, which will be described later in this chapter. Non-response error was addressed by comparing the data from early respondents with that of late respondents (Miller & Smith, 1983), which will be described later in this chapter.

Conclusions and recommendations based upon data that were not representative of the entire population pose a potential threat to external validity of the study due to non-response error (Dillman, Symth, & Christian, 2009; Dooley & Lindner, 2003; Miller & Smith, 1983). Research findings have suggested that non-response error occurs when data collected from respondents differed from subjects who did not respond (Dillman et al., 2009; Miller & Smith, 1983). Therefore, non-response error was addressed through the use of utilizing statistical analysis to determine if there was any difference in the responses between the early respondents group and the late respondents group.

**Research Questions**

The purpose of this study was to explore relationships among measures of emotional intelligence, cultural intelligence, job performance, and leader effectiveness of County Extension Directors in Ohio. Research questions developed to guide this study included:

1. What is the relationship between measures of emotional intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?

2. What is the relationship between measures of emotional intelligence and leader effectiveness of Ohio County Extension Directors, while controlling for the effect of intervening variables?
3. What is the relationship between measures of cultural intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?

4. What is the relationship between measures of cultural intelligence and leader effectiveness of Ohio County Extension Directors, while controlling for the effect of intervening variables?

5. What is the relationship between measures of job performance and leader effectiveness of Ohio County Extension Directors?

6. What is the relationship between measures of emotional intelligence and cultural intelligence of Ohio County Extension Directors?

7. What is the relationship between measures of leader behavior and trusting work relationship?

**Population**

The target population for this study included all County Extension Directors in Ohio. A census of full-time County Extension Directors employed during the 2012-13 fiscal year by Ohio State University Extension was used in this study. According to the Extension Supervisory Chart (The Ohio State University Extension, 2012), there were 83 County Extension Directors in Ohio at the time of this study (N = 83). Each County Extension Director had administrative leadership roles that included responsibilities for personnel supervision and office management. The size of the staff supervised by each County Extension Director in Ohio ranged from one to thirty, with an average staff size of five (G.W. Earnest, personal communication, April 30, 2012).
Phase I of the data collection procedure involved recruiting voluntary participants by contacting each County Extension Director to request measures of cultural intelligence and emotional intelligence. Phase II of the data collection procedure involved contacting selected subordinates and associates of the County Extension Directors who provided data in Phase I of this study. Selected subordinates and associates were recruited as voluntary participants to provide measures of leader behavior, trusting work relationship, and leader effectiveness for their respective County Extension Director.

Steps involved in the recruitment process were as follows:

Step 1. The researcher contacted OSU Extension Human Resources personnel to obtain a list of all OSU Extension employees associated with each county office. Information for each employee included name, position title, office location, and email address.

Step 2. The researcher sent an email invitation describing the purpose of the study to each County Extension Director (N = 83) to request their voluntary participation in the study.

Step 3. Based on the return responses from County Extension Directors on measures of cultural intelligence and emotional intelligence, the researcher selected additional participants (i.e. subordinates and associates) from the list of employees in the same county Extension office for each respective County Extension Director. The number of subordinates and associates invited to participate was determined by the total number of employees in each county office. For county Extension offices staffed with fewer than seven employees, the researcher invited all
subordinates and associates in that county office to participate in the study. For county offices with seven or more employees, the researcher randomly selected seven employees and invited them to participate in the study.

Step. 4. The researcher sent an email invitation describing the purpose of the study to the selected subordinates and associates to invite their voluntary participation in this study. Participants were asked to provide ratings on three measures regarding their respective County Extension Director: (a) their perception of their County Extension Director’s leader behavior; (b) their perception of their County Extension Director’s leader effectiveness; and (c) their willingness to engage in a dyadic trusting work relationship with their respective County Extension Director.

Instrumentation

This study used six instruments, including the: (a) Cultural Intelligence Scale (CQS) developed by Van Dyne et al.(2004), (b) Emotional Intelligence Inventory (EQ-i, 2.0) developed by MHS (2011a), (c) Leadership Practice Inventory (LPI-Observer) developed by Kouzes and Posner (2013), (d) Behavior Trust Inventory (BTI) developed by Gillespie (2003), (e) Leader Effectiveness Scale developed by the researcher for this study, and (f) Annual performance review data for County Extension Directors as provided by the supervisor on the Administrative Services score of the annual performance review completed in June 2012 for each individual County Extension Director. This section describes the purpose for each instrument in this study and the details of each instrument. The instruments included:
• The CQS (aka CQ) was used as a measure of cultural intelligence of County Extension Directors. CQ data were provided by each Ohio County Extension Director who responded to the invitation to participate in this study.

• The EQ-i 2.0 (aka EQ) was used to measure the level of emotional intelligence of County Extension Directors. EQ data were provided by each respective Ohio County Extension Director who responded to the invitation to participate in this study.

• LPI-Observer was used as a measure of perceived leadership behavior of Ohio County Extension Directors. Selected subordinates and associates were asked to report their perception of the leader behaviors of their respective County Extension Director.

• BTI was used as a measure of perceived trusting work relationship between County Extension Director and their subordinates and associates. Selected subordinates and associates were asked to report their willingness of engaging in a trusting work relationship with their respective County Extension Director.

• Leader Effectiveness Scale was used as a measure of perceived leader effectiveness in fulfilling the administrative leadership job responsibilities as a County Extension Director in Ohio. Selected subordinates and associates were asked to report their perception of the leader effectiveness of their respective County Extension Director.

• The OSU Extension Annual Job Performance review for County Extension Directors was used as a measure of job performance of Ohio County Extension
Directors. Data for job performance of each County Extension Director, specifically the Administrative Service score, were provided by OSU Extension Human Resource personnel based on the rating score provided by their respective supervisor for the most recent annual performance review (i.e. the annual performance review for the fiscal year of 2011-12).

The instrumentation procedure started with an initial invitation email sent to all full-time County Extension Directors in Ohio inviting their voluntary participation to this study. The SurveyMonkey® online survey administration service was used for data collection with CQS. A customized URL link to access CQS through SurveyMonkey® was embedded in this invitation letter for County Extension Directors to provide CQ data as the first step to participate in this study.

The Multi Health System Corporation (MHS) online assessment portal service was used for data collection with EQ-i 2.0. An invitation email with embedded URL link to access the EQ-i 2.0 instrument was sent as the second step inviting the County Extension Directors who have participated in providing CQ data in the first step to provide EQ data as the final step to participate in this study.

The SurveyMonkey® online survey administration service was used for data collection with another three instruments, LPI-Observer, BTI, and Leader Effectiveness Scale. An invitation email with embedded URL link to assess a combination of LPI-Observer, BTI, and Leader Effectiveness Scale instruments was sent to the subordinates and associates of County Extension Directors who responded in EQ-i 2.0 and CQS. Data
collected through SurveyMonkey® were then downloaded in SPSS format for data analysis.

Historical data were used for data collection with the measure of job performance. An email with a request to OSU Human Resource personnel was sent to obtain the rating score from the annual performance review of the County Extension Directors who provided both CQ and EQ data. Data collection of County Extension Director’s job performance score proceeded in parallel with the data collection for the subordinates and associates.

**Cultural Intelligence Scale (CQS)**

Cultural intelligence (CQ) was measured using the Cultural Intelligence Scale (CQS) developed by Van Dyne et al. (2004). The permission for use was granted by Dr. Van Dyne (see Appendix A). The CQS instrument (see Appendix A) consisted of 20-items based on a four-factor model including: (a) metacognitive CQ, (b) cognitive CQ, (c) motivational CQ, and (d) behavioral CQ. The CQS instrument produced an overall reliability coefficient exceeding the threshold alpha value of .70, ranging from metacognitive CQ= .71, cognitive CQ= .85, motivational CQ= .75, and behavioral CQ= .83 (Van Dyne et al., 2008). The CQS produced acceptable test-retest reliability ($\alpha= .90$), and its stability was also reflected across samples, time, and countries (Ang et al., 2007; Moon, 2010a). According to Van Dyne et al. (2008), the CQS was reported to have a clear, robust, and meaningful four-factor structure with a sound validity and reliability based upon a literature review, eight interviews with executives, and six studies involving more than 1500 respondents. Evidence showed that the CQS had
discriminating validity and incremental validity in predicting cultural judgment and
decision-making, adjustment, and mental well-being (Van Dyne et al., 2008).

The CQS instrument utilized a seven-point Likert-type scale, with responses
ranging from a response of 1 = “strongly disagree” to 7 = “strongly agree.” Higher
scores reflected higher levels of cultural intelligence. Total scores were summed for all
items as a measure of respondent’s cultural intelligence. Data were collected from Ohio
County Extension Director participants via the Internet and downloaded by the researcher
for data analysis. For each respondent, a total composite CQ score was computed by
summing item responses for all items as a measure of cultural intelligence in this study.

**Emotional Intelligence Inventory (EQ-i)**

Emotional Intelligence (EQ) was measured using the Emotional Intelligence
Inventory (EQ-i). The EQ instrument was developed by Bar-On (2004) to assess
emotional intelligence, and has been widely used in research and commercial settings
based upon the instrument’s validity and reliability. The EQ instrument contains 133
items designed to the respondent’s emotional intelligence. The EQ instrument is multi-
factorial, and includes five composite scales that were comprised of 15 conceptual
components of emotional intelligence in the assessment. The total EQ score is composed
of scores from five composite scales that contain 15 subscales. According to Bar-On
(2004), the EQ instrument is related to the individual’s “… potential for performance
rather than performance itself.” (p. 14). He further elaborated that the EQ instrument is
process-oriented, rather than outcome-oriented as it is associated with “… the potential to
EQ-i 2.0 (MHS, 2011a) was developed as an updated and revised version of the original EQ instrument, reflecting major shifts in society and use of assessment (MHS, 2011b). The total EQ score was used as a measure of emotional intelligence of County Extension Director respondents in this study.

Validity involves professional judgment concerning the extent to which an instrument measures what it purports to measure. The EQ-i 2.0 was judged to possess content and face validity (MHS, 2011b). Content validity of the EQ-i 2.0 items was analyzed by mapping their relevance to the emotional intelligence construct by content experts (MHS, 2011b). The EQ-i 2.0 instrument (MHS, 2011a) captured all relevant facets of Bar-On’s conceptualization of emotional intelligence, and the conceptual framework was judged highly similar to that of its predecessor, the EQ-i (Bar-On, 2004). Content validity of the original EQ-i was established through a systematic method of item generation and selection (Bar-On, 2004; MHS, 2011b). Face validity was established by direct feedback from 39 subjects who were interviewed at an early stage of the EQ-i development, and more indirect feedback from thousands of people who completed the EQ-i throughout the years as additional information (Bar-On, 2004). Therefore, the EQ-i 2.0 has been judged to be a valid measure of emotional intelligence (MHS, 2011b).

Reliability measures the extent to which an instrument is internally cohesive, and consistently measures the same construct on different occasions and/or at different times. Reliability coefficients of .60 to .70 were considered satisfactory (Aiken, 1997). The EQ-i 2.0 had an acceptable reliability in terms of internal consistency, test-retest reliability, and stability (MHS, 2011b). A high level of internal consistency was documented by a
coefficient alpha value: 0.97 for the Total EQ score, .88 to .93 for the five composite scales, and .77 and above for all fifteen subscales (MHS, 2011b). The high test-retest reliability and stability values at 2- to 4-week (r = .92), and 8-week intervals (r = .81), also reflected a level of temporal stability for EQ (MHS, 2011b).

EQ-i 2.0 consisted of 133 items and solicits responses using a five-point scale, ranging from 1= “Not True of Me” to 5= “True of Me”. Responses were collected from Ohio County Extension Director participants via the Internet and automatically forwarded to certified professionals in the Multi Health System Corporation (MHS) for scoring. The standardized total EQ scores were downloaded from MHS as the measure of emotional intelligence in this study. The standardized total EQ scores were converted from EQ-i raw scores into standard scores based on a mean of “100” and a standard deviation of 15 (Bar-On, 2004). The total EQ scores consisted of five composite scores, and 15 subscale component scores. The total EQ score indicates how emotionally intelligent a respondent is in terms of how well the respondent is at perceiving and expressing oneself, developing and maintaining social relationships, coping with challenges, and using emotional information in an effective and meaningful way (MHS, 2011b).

Leadership Practices Inventory (LPI)

The leader behavior variable in this study was measured using the Leadership Practices Inventory (LPI) developed by Kouzes and Posner (2013). The LPI was developed through a triangulation of qualitative and quantitative research methods in studies involving over 1,100 cases and 38 in-depth interviews (Kouzes & Posner, 2012;
Mills, 2009). The LPI consists of 30 behavioral statements measuring five leadership practices including (a) challenging the process, (b) inspiring a shared vision, (c) enabling others to act, (d) modeling the way, and (e) encouraging the heart (Posner & Kouzes, 2002). The LPI was selected for use in this study because the five leadership practices were judged to be closely aligned with leader behaviors needed in Extension (Seevers et al., 2007).

According to Kouzes and Posner (2012), the LPI has been administered to over 350,000 managers and non-managers across a variety of organizations, disciplines, and demographic backgrounds, and was reported to have content and face validity. Reliability coefficients for the LPI, ranged between .75 and .87 the LPI-self, and .88 to .92 on the LPI-Observer (Kouzes, & Posner, 2012, p. 5). Specifically, reliability of the five leadership practices reported by Posner and Kouzes (1988) were: challenging the process ($\alpha = .81$), inspiring a shared vision ($\alpha = .90$), enabling others to act ($\alpha = .89$), modeling the way ($\alpha = .86$), and encouraging the heart ($\alpha = .94$). LPI also possessed stable test-retest reliability at the .90 level and above (Kouzes & Posner, 2012). The LPI has been used extensively, applied in many organizational settings, and is highly regarded in both the academic and practitioner’s world because of its high validity and reliability (Kouzes & Posner, 2012).

The latest version of the LPI used a ten-point Likert-type response scale that was reformulated in 1999 from the five-point Likert-type scale used in the original version of the LPI (Kouzes & Posner, 2012). The ten-point Likert-type scale ranged from 1SP. = “Almost never” to 10 SP. = “Almost always”. Respondents were asked to rate the
extent to which their respective County Extension Director exhibited the behavior described in each statement (Kouzes & Posner, 2012). A higher value represented a more frequent use of each leader behavior (Posner & Kouzes, 2002).

According to Posner and Kouzes (2002), the LPI was available in two forms that differed only in whether the behavior described was focused on the respondents (themself) or another specific person (observer). LPI-Self is a self-report assessment for individuals to measure the frequency of their own specific leadership behaviors on a ten-point Likert-type scale. LPI-Observer included the same leadership behavior statements and response scale as the in LPI-Self, however, the LPI-Observer is for use by subordinates and associates to report their perception of the frequency of leadership behaviors exhibited by their respective leaders (i.e. their respective County Extension Director). For the purpose of this study, the term “my CED” (i.e. my County Extension Director) replaced the term “this person” in each statement in the original instrument to focus each item on the respective County Extension Director. The LPI-Observer instrument used in this study (see Appendix B) was assumed to provide a more reliable assessment of County Extension Director leader behavior when compared with LPI-Self (Posner & Kouzes, 1988). This study used the LPI-Observer to provide a measure of leader behavior exhibited by Ohio County Extension Directors as perceived by their subordinates and associates.

**Behavior Trust Inventory (BTI)**

Trusting work relationship was measured using the Behavior Trust Inventory
The BTI instrument was designed to measure a person’s willingness to engage in a leader-member or peer relationship with a specified person in a team setting, across multiple domains of trusting behavior (Gillespie, 2003). Dietz, Deanne, and Hartgo (2006) stated that the ten items comprising the BTI reflect an “intention to act” (p. 573) which Gillespie (2003) indicated as “...a stronger predictor of future behavior than an assessment of another’s trustworthiness...” (Dietz & Den Hartog, 2006, p. 571). Behavior estimation items were also found to be strongly predictive of actual behavior (Armitage & Connor, 2001).
The BTI utilized a seven-point Likert-type scale, ranging from a response of 1 = “not at all willing” to 7 = “completely willing.” Each respondent was asked to use the response scale to rate each trusting behavior with regard to their willingness to engage in a trusting work relationship with their respective County Extension Director. Higher scores represented a more trusting work relationship. For each respondent, a total score was computed by summing responses for each respective item for use as a composite measure of the level of trust that respondents perceived in regard to their relationship with their respective County Extension Director. For the purpose of this study, the term ‘County Extension Director’ replaced the term ‘leader’ in each statement in the original instrument, and the word ‘work’ was inserted into each statement to limit the focus of each item to a work relationship context (Ford, personal communication, November 2, 2012).

**Leader Effectiveness Scale**

The leader effectiveness variable was measured using the Leader Effectiveness Scale (see Appendix C) developed by the researcher specifically for the job context related to administrative leadership of Ohio County Extension Directors in this study. The Leader Effectiveness Scale consisted 15 items based upon Ohio County Extension Directors’ job responsibilities in administrative leadership. Each item was a leadership achievement-related statement that was used to assess the perceptions of subordinates and associates regarding effectiveness of their respective County Extension Director in fulfilling their administrative responsibilities.

Validity of the Leader Effectiveness Scale was established through feedback
generated from a panel of experts consisting of two OSU Regional Extension Directors, one Program Director in OSU Extension administration, two OSU Extension Human Resource personnel, and two OSU professors who were familiar with the OSU Extension system. An initial draft of 12-item Leader Effectiveness Scale was sent to the panel of experts for review. The panel of experts reviewed each statement to assess the appropriateness and clarity of each item. A final version of the 15-item Leader Effectiveness Scale was revised based upon the comments and feedback from the panel of experts to establish its content and face validity.

Reliability was assessed through a pilot test utilizing subjects similar to the target population in this study. According to Ary et al. (2010), one measure of instrument reliability is its internal consistency. A Cronbach’s alpha value was computed to measure internal consistency of the Leader Effectiveness Scale, which assessed the extent to which instrument items are able to evaluate a single construct. A sample of 35 full-time Extension agents and staff employed by the Arkansas Cooperative Extension system was used to assess the reliability of the Leader Effectiveness Scale. A Cronbach’s alpha value of .96 was computed as a measure of the reliability of the Leader Effectiveness Scale instrument. Cronbach’s alpha values of .60 to .70 or higher for data collection instruments were generally considered reliable (Aiken, 1997). The Leader Effectiveness Scale appeared to possess validity and reliability as a measure of leader effectiveness.

The Leader Effectiveness Scale used a six-point Likert-type scale, ranging from 1 = “Extremely ineffective” to 6 = “Extremely effective.” Participants were asked to rate
their perception of leader achievement regarding their respective County Extension Director. Higher scores represented a higher level of perceived leader effectiveness.

Annual Performance Review for County Extension Directors

The job performance variable for each County Extension Director was based upon the most recent annual job performance review data. Viswesvaran, Ones, and Schmidt (1996) suggested that using supervisory ratings of job performance as a measure is more reliable than using peer ratings. County Extension Directors in Ohio received an annual performance reviews near the end of each fiscal year (i.e., June). Annual performance reviews of County Extension Directors include two major dimensions: (a) performance results, and (b) core competencies and areas of expertise. County Extension Directors were evaluated by their respective OSU Regional Extension Director based upon five performance categories involving different weightings: progress on goals (10%), teaching (25%), creative / scholarly work (15%), service (10%), and administrative service as County Extension Director (20%).

County Extension Directors were also evaluated by Regional Directors in four categories of core competencies and areas of expertise including: professionalism, teamwork and leadership, skills in program development, and teaching, which comprised 20% of their annual Overall Performance Rating score. The performance rating scale includes five point values ranging from 1= “well below”, to 5 = “well above”. Table 3.1 shows each respective point value and its corresponding rating and performance definition.
Table 3.1. Overall Performance Rating Scale in OSU Extension

<table>
<thead>
<tr>
<th>Point Values</th>
<th>Rating</th>
<th>Performance Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Well Above</td>
<td>Performance is repeatedly above expectations</td>
</tr>
<tr>
<td>4</td>
<td>Above</td>
<td>Performance is sometimes above expectations</td>
</tr>
<tr>
<td>3</td>
<td>Meets</td>
<td>Performance meets expectations</td>
</tr>
<tr>
<td>2</td>
<td>Below</td>
<td>Performance is sometimes below expectations</td>
</tr>
<tr>
<td>1</td>
<td>Well Below</td>
<td>Performance is repeatedly below expectations</td>
</tr>
</tbody>
</table>


In this study, the Administrative Service score as a County Extension Director was used as a measure of job performance. Data from annual performance reviews completed in June, 2012 for each County Extension Director’s job performance during the fiscal year 2011 to 2012 provided the data used in this study. The protocol employed for the annual performance review of County Extension Directors in Ohio was developed by OSU Extension professionals and was therefore assumed to have face validity. Reliability of the annual performance review data was not assessed as part of this study.
Variables

The two independent variables in this study were measures of cultural intelligence and emotional intelligence. Cultural intelligence was the total CQ score collected from each County Extension Director respondent. Emotional intelligence was the total EQ score collected using self-reported data from each County Extension Director respondent.

The two intervening variables utilized as control measures included leader behavior and trusting work relationship. The leader behavior variable was computed as the mean of the LPI-Observer score collected from subordinates and associates based upon their perception of their respective County Extension Director’s leader behavior. The trusting work relationship variable was computed as the mean of the BTI score collected from subordinates and associates on their willingness to engage in a trusting work relationship with their respective County Extension Director.

The two dependent variables examined in this study included measures of job performance and perceived leader effectiveness of County Extension Directors. Job performance was the supervisor-rating score for the Administrative Service category in their role as a County Extension Director as recorded on their annual performance review summary report. Regional Extension Director provided the Administrative Services score for each County Extension Director based upon a five-point scale. The leader effectiveness variable was computed as the mean of the Leader Effectiveness Scale score collected from subordinates and associates regarding the effectiveness of their respective County Extension Director as a leader.
Independent Variables

**Cultural intelligence.** The cultural intelligence variable was measured using self-reported data collected from each County Extension Director. The measure of cultural intelligence was assessed using the 20-item Cultural Intelligence Scale (CQS) developed by Van Dyne, Ang, and Koh (2004). Each County Extension Director who completed the CQS was asked to self-report their response to each item using a seven-point Likert-type scale. A total CQ score was computed by summing item responses to measure the cultural intelligence of each County Extension Director respondent.

**Emotional intelligence.** The emotional intelligence variable was generated using self-reported data collected from County Extension Directors. The emotional intelligence variable was assessed using the 133-item Emotional Intelligence Inventory version 2.0 (EQ-i 2.0) developed by MHS (2011a). Each County Extension Director who completed the EQ-i 2.0 was asked to self-report their response to each item using a five-point Likert-type scale. The EQ score was downloaded from the EQ-i 2.0 score dataset provided by the Multi Health System (MHS) as a measure of the emotional intelligence of each County Extension Director respondent.

Intervening Variables

**Leader behavior.** The leader behavior variable was a measure of perceived leader behavior that was computed from data collected from selected subordinates and associates linked to each respective Ohio County Extension Director. The measure of leader behavior was assessed using the 30-item Leadership Practices Inventory (LPI-Observer) developed by Kouzes and Posner (2013). Selected subordinates and associates
were asked to report their perception of leadership behaviors exhibited by their respective County Extension Director.

A total score of the measure of leader behavior was computed by summing item responses for each respective respondent to indicate the level of leader behavior of their respective County Extension Director. Composite leader behavior scores were created by computing a mean of the LPI-Observer scores collected from the selected subordinates and associates linked to each respective County Extension Director respondent.

**Trusting work relationship.** The trusting work relationship variable was computed from data collected from selected subordinates and associates linked to each respective Ohio County Extension Director. The measure of trusting work relationship was assessed using the 10-item Behavior Trust Inventory (BTI) developed by Gillespie (2003). Each selected subordinate or associate was asked to rate each item regarding to their willingness to engage in a trusting work relationship with their respective County Extension Director.

The score of each respondent’s trusting work relationship was computed by summing item responses indicating the level of trusting work relationship established with their respective County Extension Director. Composite trusting work relationship scores were created by computing a mean of the BTI scores collected from the selected subordinates and associates respondents linked to each respective County Extension Director respondent.
**Dependent Variables**

**Leader effectiveness.** The leader effectiveness variable was a measure of perceived leader effectiveness that was computed using data collected from subordinates and associates for each respective County Extension Director respondent. Conway (2000) suggested that subordinate ratings better reflect the appropriateness of the manager’s behavior in the situational context in which the manager’s behavior occurred, especially for leadership and development-related behaviors. The leader effectiveness variable was measured using a 15-item Leader Effectiveness Scale developed by the researcher for this study. Selected subordinates and associates who completed the Leader Effectiveness Scale were asked to report their perception of the effectiveness of leader achievement regarding their respective Ohio County Extension Director.

A total score of the measure of leader effectiveness was computed by summing individual item responses for each respondent to indicate the level of leader effectiveness of their respective County Extension Director. Composite leader effectiveness scores were created by computing a mean of the Leader Effectiveness Scale scores collected from selected subordinates and associates linked to each County Extension Director respondent.

**Job performance.** The job performance variable was collected through OSU Human Resources personnel using supervisor-rating data provided by County Extension Director’s respective supervisor for each County Extension Director respondent. The measure of job performance used a rating scale ranging from a point value of 1 to 5. The Administrative Services score as a County Extension Director was used as the measure of
job performance in this study. The score of each County Extension Director respondent was collected from the annual performance reviews completed in June 2012 for each County Extension Director’s job performance during the fiscal year 2011 to 2012.

**Demographic Characteristics**

Demographic characteristics of County Extension Directors were examined, summarized and reported in this study to provide a profile of the respondents. Specific demographic characteristics examined included age, gender, race/ethnicity, education level, and years of employment with Extension.

Age was collected using self-reported data from County Extension Director respondents. The level of measurement for this demographic characteristic was assumed to be ratio in scale of measurement.

Gender was collected using self-reported data from County Extension Directors, as either: (a) male or (b) female. These data were nominal in scale of measurement.

Race / ethnicity was collected using self-reported data from County Extension Directors, as either: (a) American Indian or Alaskan native; (b) Asian or Pacific Islander; (c) Black, not of Hispanic origin; (d) Hispanic; (d) Mixed; or (e) White, not of Hispanic origin. These data were nominal in scale of measurement.

The minimum educational level required to serve in the position of County Extension Directors in Ohio was a Master’s degree. Education level in this study was collected using self-reported data from County Extension Directors, as either: (a) Master degree or (b) Doctoral degree. The data were considered to be ordinal in scale of measurement.
The years of employment characteristic was assessed using self-reported data from County Extension Directors based on their years of service as an employee of OSU Extension system. The data were considered to be ratio in scale of measurement.

**Data Collection**

The target population of this census study consisted of County Extension Directors in all 88 counties in Ohio. A total of 83 full-time County Extension Directors were identified as the population frame (N = 83). Data collection was initiated after receiving approval for the use of human subjects in this research project from the OSU Institutional Review Board on February 14, 2013 (IRB protocol number 2013B0009).

Data collection was completed in three phases with two subject groups and two survey administration platforms. Data collection began with the collection of measures of CQ and EQ data from County Extension Directors. Thereafter, selected subordinates and associates of County Extension Director participants were asked to provide data for measures of perceived leader behavior, trusting work relationship, and perceived leader effectiveness. Finally, OSU Human Resources personnel provided data for County Extension Director job performance. Two survey administration platforms were utilized for five instruments in data collection, including the online portal provided by the Multi-Health Systems (MHS) for EQ-i 2.0 instrument, and SurveyMonkey® (an online survey administrative service) for the four instruments: Cultural Intelligences Scale (CQS), Leader Practices Inventory (LPI-Observer), Behavior Trust Inventory (BTI), and Leader Effectiveness Scale.
Phase I. Data collection with County Extension Directors

In Phase I, five steps were included as part of the data collection process. Detailed procedures of each step are described below.

**Step 1.** Staff from the OSU Extension Human Resources Office provided the researcher with contact information (name, position title, county office location, and email address) for all employees assigned to County Extension offices in all 88 counties in Ohio. The list included 84 full-time County Extension Directors. Two County Extension Directors were administering two or more counties, and one had vacated the position as a County Extension Director. Therefore, a total number of 83 County Extension Directors were then identified as the population frame (N = 83) in this study.

**Step 2.** A pre-notification letter was prepared by the researcher, and sent to request assistance from the Director of OSU Extension to distribute an email message on February 28, 2013 to all Ohio County Extension Directors. The pre-notification email message included a brief description of the study, an estimated of the time needed to complete the instruments, contact information for the researcher, and notification about the forthcoming email invitation from the researcher (see Appendix E).

**Step 3.** The list of 83 County Extension Directors was entered into the secure online survey administration service, SurveyMonkey®. This step was to create customized links for each County Extension Director and to prepare for data collection.

**Step 4.** An email invitation was sent to all County Extension Directors (N = 83) on March 5, 2013 through a secure online survey administration service, SurveyMonkey® to collect data about the measure of cultural intelligence as the first part of County
Extension Directors’ participation to this study. The email invitation (see Appendix E) included the needs for and importance of involving County Extension Directors in the study, contact information of the researcher, a suggested deadline of survey completion, and a secure customized link that would direct each County Extension Director to the CQS instrument (Van Dyne et al., 2004). The secure customized link was connected to the SurveyMonkey® online survey portal with a cover letter (see Appendix E) describing the research, human subject review requirements, notification about the opportunity to obtain a personalized report of cultural intelligence and emotional intelligence upon completion of the data collection process, and the 20-item CQ instrument. Subjects were invited to voluntarily complete the CQ instrument within one week of their receipt of the invitation.

The first follow-up email was sent via SurveyMonkey® on March 12, 2013 to remind County Extension Directors who had yet to complete the instrument (see Appendix E). A second follow-up email message was sent to County Extension Directors who had not yet responded by March 15, 2013 through SurveyMonkey® (see Appendix E). A reminder email message containing a secure link to the CQ instrument was sent by an Executive Assistant on behalf of the Director of OSU Extension on March 19, 2013 (see Appendix E). A follow-up note was sent on March 25, 2013 before the statewide County Extension Director workshop which was held on March 26, as well as on-site announcement made by the Executive Assistant to the Director of OSU Extension on March 26, 2013 (see Appendix E).
A final email message that was customized as the last invitation to each County Extension Director who had not responded was sent on April 2, 2013 (see Appendix E). A link to the data collection instrument (CQ) was included in each follow-up and reminder message. Data collection ceased on April 22, 2013. Seventy-one County Extension Directors participated in the data collection by providing a measure of cultural intelligence for the use in this study.

**Step 5.** The first part of the data collection process in Step 5 overlapped with the later part of Step 4. An initial personalized email invitation was sent to County Extension Directors who had participated in CQ survey in Step 4 through the secure online portal provided by Multi-Health Systems (MHS). This was the first attempt to recruit voluntary participation of County Extension Directors to complete the EQ-i 2.0 instrument (MHS, 2011a). The initial personalized invitation was sent to 51 County Extension Directors on March 24, and subsequently to 19 additional County Extension Directors between March 27 and April 22, 2013. The personalized email invitation was sent to collect data of the measure of emotional intelligence of County Extension Directors while follow-up actions continued to recruit voluntary participation of County Extension Directors. The email invitation included a thank-you note to acknowledge submission of CQ data from County Extension Directors and to remind them of the invitation to complete the EQ instrument, and provide contact information of the researcher, a suggested deadline for survey completion, and a secure customized link that would direct each County Extension Director to complete the EQ-i 2.0 instrument (see Appendix E). Subjects were invited to
complete the EQ instrument within one week as their final step as a participant in this study.

The first follow-up email was sent through the MHS on March 28, 2013 to remind County Extension Directors who had yet to complete the EQ-i instrument (see Appendix E). A second follow-up email was sent to County Extension Directors who had not yet responded on April 2, 2013 through MHS (see Appendix E). One final email message customized as the last opportunity extended to each County Extension Director who had not yet responded, was sent on April 5, 2013 through MHS (see Appendix E).

The final message sent on April 9th via email asking County Extension Directors to complete their EQ instrument through the customized link in a forthcoming email from MHS. The link to the EQ data collection instrument was included in all follow-up and reminder messages. The online survey was closed on April 23, 2013. Sixty-three County Extension Directors participated in the data collection process by providing measures of cultural intelligence (CQ) and emotional intelligence (EQ) for the use in this study.

**Phase II. Data collection involving selected subordinates and associates for each respective Ohio County Extension Directors respondent**

In Phase II, three instruments including LPI- Observer, BTI, and Leader Effectiveness Scale were administrated to selected subordinates and associates linked to County Extension Director respondents who provided data for the measures of cultural intelligence and emotional intelligence in Phase I.

**Step 1.** A list of 62 County Extension Directors who had participated in Phase I data collection for the measures of emotional intelligence and cultural intelligence was
completed. Three of the 62 County Extension Director respondents were excluded, due to not being a County Extension Director (but a unit head), or the only person employed in the county office (i.e., they had no associates or subordinates working in their physical location). The final list of 59 County Extension Director respondents was therefore used to select the list of selected subordinates and associates for each respective County Extension Director.

**Step 2.** A pre-notification letter was prepared by the researcher, and forwarded for distribution on behalf of the Director of OSU Extension on April 12, 2013 to the selected subordinates and associates. The pre-notification email included a brief description of the study, an estimate of the time needed to complete the instruments, contact information for the researcher, and notification about the forthcoming email invitation from the researcher (see Appendix E). A bounced email was forwarded by the Director of OSU Extension after the pre-notification message went out. The researcher searched the master list for any replacement in the same county office yet did not find any more to be replaced, therefore the name was then removed from the master list. As a result, the total number of subordinates and associates was reduced to 259.

**Step 3.** The master list of 259 subordinates and associates linked to the 59 County Extension Director collector groups was entered in the online survey administration service, SurveyMonkey® to create customized links for each County Extension Director collector group and prepare for data collection. Each County Extension Director collector group was assigned a three-digit collector number to link each selected subordinates and associates with their respective county office and County Extension
Director. The number of subordinates and associates in the collector groups ranged from 1 to 7. Two of the selected subordinates and associates opted out from SurveyMonkey®, and no replacements were identified from their respective county office. Therefore, the total number subordinates and associates under the 59 County Extension Directors reduced to 257.

**Step 4.** An email invitation was sent to 257 selected subordinates and associates of the 59 County Extension Directors on the master list via SurveyMonkey® to collect data on measures of perceived leader behavior, trusting work relationship, and perceived leader effectiveness. The email invitation included a cover letter describing the research, human subject review requirements, notification of a drawing for one of the four $25-dollar gift cards as a token of appreciation upon completion of survey, and a URL link to connect to the LPI-Observer (Kouzes & Posner, 2013), BTI (Gillespie, 2003), and Leader Effectiveness Scale instruments (see Appendix F). Subjects were invited to voluntarily complete the online survey within one week of their receipt of the invitation.

The first follow-up email was sent through SurveyMonkey® on April 18, 2013 to remind subordinates and associates who had yet to complete the online survey (see Appendix E). On April 22, the researcher found that an additional County Extension Director had completed the CQS survey, increasing the total number of County Extension Director respondents that provided CQ data to 71. The researcher sent the additional County Extension Director an email including a brief explanation about their stage in the data collection process (i.e., already in Phase II collecting data with subordinates and associates), and invited them to participate by completing the EQ instrument. An email
invitation was sent through the MHS portal on April 23, 2013 to the County Extension Director respondent who had completed the EQ instrument on the same day. The researcher then identified selected subordinates and associates of the County Extension Director respondent, and created an additional County Extension Director collector group with six subordinates and associates via SurveyMonkey®. The first invitation letter was sent to the respective subordinates and associates on April 23, 2013 through SurveyMonkey®. One subordinate/ or associate from the last collector group was removed in response to an email message indicating that the person no longer worked for OSU Extension. Ultimately, the total number of County Extension Director collector groups increased to 60, while the total number of invited subordinates and associates increased to 262.

A second follow-up email was sent to subordinates and associates who had not yet responded on April 23, 2013 through SurveyMonkey® (see Appendix F). A final email message as the last opportunity notice to the subordinates and/ or associates who had not yet responded was sent on April 25, 2013 (see Appendix F). A link to the data collection instruments including the LPI-Observer (Kouzes & Posner, 2013), BTI (Gillespie, 2003), and Leader Effectiveness Scale was included in all follow-up messages. The online survey was closed on April 30, 2013 with a final number of 159 subordinates and associates respondents for 54 County Extension Director respondents in this study.

Phase III. Data collection with OSU Extension Human Resource personnel

Data collection in Phase III was timed to coincide with data collection Phase II. In Phase III, the job performance score for County Extension Directors who had responded
by providing data in Phase I was obtained from OSU Extension Human Resources personnel. A list of 62 County Extension Directors who participated in this study was sent to OSU Extension Human Resource personnel to obtain the performance score in the Administrative Service category as a County Extension Director from their respective supervisors. No performance scores were available for three County Extension Directors who were new in their position as a County Extension Director with less than one year of experience.

Data Analysis

Data collected via SurveyMonkey® for the cultural intelligence, leader effectiveness, leader behavior and trusting work relationship variables were downloaded to a Microsoft Excel file. Data collected for the emotional intelligence variable were obtained from the MHS portal in a Microsoft Excel file. The data collected in this study were analyzed using Statistical Product and Service Solutions (SPSS) software version 20. Descriptive statistics included computing means and standard deviations for each variable and each demographic characteristic measured on an interval scale. Demographic characteristics that were nominal or ordinal scale data were summarized using frequencies and percentages.

Ary et al. (2010) recommended that if the response rate in a study fell below 75 percent after all follow-up attempts, efforts should be made to determine if non-respondents differ from respondents. Comparing early and late respondents was the method used to assess non-response error (Miller & Smith, 1983). The response rate of County Extension Director respondents was 84% for CQ instrument, and 90% for EQ
No need for assessing non-response error was found for County Extension Director respondents in this study. Because of a lower response rate for subordinates and associates of County Extension Director (61%), non-response error was assessed. To assess non-response error, the subordinate and associate respondents who provided data for leader behavior, trusting work relationship, and leader effectiveness measures were divided into quadrants based on the order in which their responses were received. Early respondents included 40 subordinates and associates in the first quadrant (i.e., 25 percent) to respond by providing data for the three measures. Late respondents included 40 subordinates and associates in the last quadrant (i.e., 25 percent) to respond by providing data for the three measures. A t-test was performed to determine if group means for total scores of the three measures differed between the early and late respondent groups. No statistically significant difference was found in the means between early and late subordinate and associate respondents who provided data for measures of leader behavior, trusting work relationship, and leader effectiveness. The finding was interpreted as a justification to conclude that data collected from subordinate and associate respondents were representative of the target population.

The first step in data analysis was to summarize and describe the demographic characteristics of County Extension Director respondents. Means and standard deviations of the respondents’ age, and years of employment, were computed and reported. Frequency distributions were also reported for the respondents’ gender, race/ethnicity, and education level. Means and standard deviations were computed and reported on the measures of: (a) cultural intelligence; (b) emotional intelligence; (d) perceived trusting
work relationship; (e) perceived leader effectiveness; and (f) job performance, of Ohio County Extension Director respondents in this study.

Ary et al. (2010) suggested using correlational research methods to assess relationships and patterns of relationships among variables within a single group of subjects, which was the purpose of this study. Pearson product-moment correlation coefficients (r) describe the magnitude of the linear relationship between observed values for the variables of interest in this study (aka, job performance, leader effectiveness, leader behavior, trusting work relationship, emotional intelligence, and cultural intelligence). The Pearson r coefficient assumes linearity which was examined using scatter plots to confirm that computation of Pearson r was appropriate for the data collected in this study. Relationships examined included: (a) emotional intelligence and cultural intelligence of County Extension Directors; and (b) perceived leader behavior of County Extension Directors and a trusting work relationship between County Extension Directors and selected subordinates and associates, and (c) job performance and perceived leader effectiveness of County Extension Directors.

Multiple linear regression was used to identify the extent to which each independent variable or combination of independent variables explained the variance associated with a dependent variable (Ary et al., 2010). Partial correlation analysis was used to statistically control for the effect of intervening variables including leader behavior and trusting work relationship. Kerlinger and Pedhazur (1973) suggested that "...statistical control means that one uses statistical methods to identify, isolate, or nullify variance in a dependent variable that is presumably 'caused' by one or more
independent variables that are extraneous to the particular relation or relations under study . . " (p. 82-83). Hierarchical regression was performed in two sequential steps for data analysis in order to explain the relationship in the research question (Mohammed, 2000). In step 1, the two intervening variables of interest in this study: leader behavior and trusting work relationship were entered as independent variables to regress the dependent variable. This step was performed to extract the proportion of variance explained by those two intervening variables for each dependent variable. In step 2, the independent variable of interest was then entered to regress the dependent variable. For all statistical analysis conducted in this study, the a priori alpha level of 0.05 was selected as the probability threshold for determining statistical significance. Davis’ (1971) conventions were used to interpret the relationships based upon the computed correlation coefficients $r$ (see Table 3.2).

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Perfect</td>
</tr>
<tr>
<td>0.70 or higher</td>
<td>Very Strong Association</td>
</tr>
<tr>
<td>0.50 to 0.69</td>
<td>Substantial Association</td>
</tr>
<tr>
<td>0.30 to 0.49</td>
<td>Moderate Association</td>
</tr>
<tr>
<td>0.10 to 0.29</td>
<td>Low Association</td>
</tr>
<tr>
<td>0.01 to 0.09</td>
<td>Negligible Association</td>
</tr>
</tbody>
</table>

*Note. Adapted from “Elementary Survey Analysis” by Davis, J. A. Copyright 1971 by Prentice Hall.*

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The coefficient of determination ($R^2$) is the proportion of variance in a dependent variable that can be explained by a linear combination of independent variables. $R^2$ indicates how well the linear regression model fits the data. Independent variables that were entered into the regression model in this study were emotional intelligence scores, cultural intelligence scores, leader behavior scores and trusting work relationship scores.

Based upon the research questions developed to guide this study, the following research questions were explored with the respective statistical analysis:

1. What is the relationship between measures of emotional intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?

Multiple linear regression with hierarchical entry was used as analysis strategies to this research question. $R^2$ change was computed to determine if emotional intelligence scores explained a significant proportion at the variance associated with the job performance measure; while controlling for the effect of intervening variables of leader behavior and trusting work relationship. Independent variables including leader behavior, trusting work relationship, and emotional intelligence were entered into the regression equation model in two hierarchical steps (Gliem, 2011). In step 1, leader behavior and trusting work relationship scores were simultaneously entered as independent variables to regress the dependent variable of job performance. This step was to determine how much variance in job performance can be accounted for by differences in perceived leader
behavior and trusting work relationship (Tabachnick & Fidell, 2001). Step 2 is the entry
of emotional intelligence as an independent variable to regress on the dependent variable
of job performance. This step is to determine if there is a significant increase in $R^2$ when
differences in emotional intelligence are added to the equation. $R^2$ was computed and
reported to indicate how well the data fits the linear regression model. $R^2$ change was
computed and reported to indicate the variance in job performance can be accounted for
by differences in emotional intelligence.

2. What is the relationship between measures of emotional intelligence and leader
effectiveness of County Extension Directors, while controlling for the effect of
intervening variables?

Multiple linear regression with hierarchical entry was used as analysis strategies
to this research question. $R^2$ change was computed to determine if emotional intelligence
scores explained a significant proportion at the variance associated with measure of
perceived leader effectiveness; while controlling for the effect of intervening variables of
perceived leader behavior and trusting work relationship. Independent variables
including measures of perceived leader behavior, trusting work relationship, and
emotional intelligence were entered into the regression equation model in two
hierarchical steps (Gliem, 2011). In step 1, perceived leader behavior and trusting work
relationship scores were simultaneously entered as independent variables to regress the
dependent variable of job performance. This step was to determine how much variance
in perceived leader effectiveness can be accounted for by differences in perceived leader
behavior and trusting work relationship (Tabachnick & Fidell, 2001). Step 2 is the entry

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of emotional intelligence as an independent variable to regress on the dependent variable of leader effectiveness (i.e., perceived leader effectiveness). This step is to determine if there is a significant increase in $R^2$ when differences in emotional intelligence are added to the equation. $R^2$ was computed and reported to indicate how well the data fits the linear regression model. $R^2$ change was computed and reported to indicate the variance in leader effectiveness can be accounted for by differences in emotional intelligence.

3. What is the relationship between measures of cultural intelligence and job performance of County Extension Directors, while controlling for the effect of intervening variables?

Multiple linear regression with hierarchical entry was used as analysis strategies to this research question. $R^2$ change was computed to determine if cultural intelligence scores explained a significant proportion at the variance associated with the job performance measure; while controlling for the effect of intervening variables of leader behavior and trusting work relationship. Independent variables including measures of perceived leader behavior, trusting work relationship, and cultural intelligence were entered into the regression equation model in two hierarchical steps (Gliem, 2011). In step 1, perceived leader behavior and trusting work relationship scores were simultaneously entered as independent variables to regress the dependent variable of job performance. This step was to determine how much variance in job performance can be accounted for by differences in perceived leader behavior and trusting work relationship (Tabachnick & Fidell, 2001). Step 2 is the entry of cultural intelligence as an independent variable to regress the dependent variable of job performance. This step is
to determine if there is a significant increase in $R^2$ when differences in cultural intelligence are added to the equation. $R^2$ was computed and reported to indicate how well the data fits the linear regression model. $R^2$ change was computed and reported to indicate the variance in job performance can be accounted for by differences in cultural intelligence.

4. What is the relationship between measures of cultural intelligence and leader effectiveness of County Extension Directors, while controlling for the effect of intervening variables?

Multiple linear regression with hierarchical entry was used as analysis strategies to this research question. $R^2$ change was computed to determine if cultural intelligence scores explained a significant proportion at the variance associated with the measure of perceived leader effectiveness; while controlling for the effect of intervening variables of perceived leader behavior and trusting work relationship. Independent variables including measures of perceived leader behavior, trusting work relationship, and cultural intelligence were entered into the regression equation model in two hierarchical steps (Gliem, 2011). In step 1, perceived leader behavior and trusting work relationship scores were simultaneously entered as independent variables to regress the dependent variable of perceived leader effectiveness. This step was to determine how much variance in perceived leader effectiveness can be accounted for by differences in perceived leader behavior and trusting work relationship (Tabachnick & Fidell, 2001). Step 2 is the entry of cultural intelligence as an independent variable to regress on the dependent variable of perceived leader effectiveness. This step is to determine if there is a significant increase
in $r^2$ when differences in cultural intelligence are added to the equation. $R^2$ was computed and reported to indicate how well the data fits the linear regression model. $R^2$ change was computed and reported to indicate the variance in perceived leader effectiveness can be accounted for by differences in cultural intelligence.

5. What is the relationship between measures of job performance and leader effectiveness of County Extension Directors?

   A Pearson product-moment correlation coefficient ($r$) was computed and reported to describe the magnitude of the linear relationship between measures of job performance and perceived leader effectiveness of County Extension Directors.

6. What is the relationship between measures of emotional intelligence and cultural intelligence of County Extension Directors?

   A Pearson product-moment correlation coefficient ($r$) was computed and reported to describe the magnitude of the linear relationship between measures of emotional intelligence and cultural intelligence of County Extension Directors.

7. What is the relationship between measures of leader behavior and trusting work relationship?

   A Pearson product-moment correlation coefficient ($r$) was computed and reported to describe the magnitude of the linear relationship between measures of perceived leader behavior and trusting work relationship.

Summary

This chapter explained the methods and procedures used in this correlational study to describe relationships among measures of emotional intelligence, cultural
intelligence, job performance, and perceived leader effectiveness. Chapter 4 presents the results obtained with methods described in this chapter.
Chapter 4 Results

Chapter 1 explained the need for County Extension Directors to serve as role models for colleagues and employees to in order to serve on diverse clienteles. Information about the changing environmental context and professional competencies needed by Extension system employees was presented and the research problem was stated. The purpose of this study was to explore the relationships among measures of job performance, leader effectiveness, emotional intelligence, and cultural intelligence of County Extension Directors in Ohio. Chapter 2 provided an overview of Extension system and leadership theory, and the theoretical foundation. The literature review was organized under headings of job performance, leader effectiveness, leader behavior, trusting work relationship, emotional intelligence, and cultural intelligence, which framed the conceptual model of this study were summarized. Chapter 3 presented the purpose of the study, research design, and research questions that guided this study. Information about the population, instrumentation, data collection procedures, and data analysis were also described. Chapter 4 presents the findings based upon the research questions that guided this study.

County Extension Directors in Ohio are responsible for providing administrative leadership for Extension personnel in addition to their existing role as an Extension
Educator. Administrative assignments in Extension include completing tasks and developing interpersonal relationships. Fast-changing environmental contexts, factors affecting OSU Extension, and challenges from working with diverse audiences, all create the need for County Extension Directors to serve as role models in building trusting work relationships to serve the needs and interests of diverse clientele. Emotional intelligence and cultural intelligence are capabilities that are thought to be associated with leaders’ job performance and leader effectiveness. Behaviors exhibited by leaders demonstrate how leaders adapt appropriate strategies based on various situations to interact with followers and engender trust in work relationships. Derived from Hollander’s relational theory, this study was conducted to explore the relationships among measures of job performance, leader effectiveness, emotional intelligence, and cultural intelligence of County Extension Directors in Ohio, while controlling for the effects in measures of leader behavior and trusting work relationship.

This chapter first presents a summary of descriptive statistics for each major variable, demographic characteristics of respondents, and non-response error; and then presents findings by research question:

1. What is the relationship between measures of emotional intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?

2. What is the relationship between measures of emotional intelligence and leader effectiveness of Ohio County Extension Directors, while controlling for the effect of intervening variables?
3. What is the relationship between measures of cultural intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?

4. What is the relationship between measures of cultural intelligence and leader effectiveness of Ohio County Extension Directors, while controlling for the effect of intervening variables?

5. What is the relationship between measures of job performance and leader effectiveness of Ohio County Extension Directors?

6. What is the relationship between measures of emotional intelligence and cultural intelligence of Ohio County Extension Directors?

7. What is the relationship between measures of leader behavior and trusting work relationship?

**Descriptive Statistics for Variables**

Data collection involving three phases utilizing an online survey and historical data started on March 5, and concluded on April 31, 2013. Data collected for variables (demographic characteristics excluded) in this study included measures of cultural intelligence, emotional intelligence, perceived leader behavior, trusting work relationship, perceived leader effectiveness, and job performance.

**Cultural Intelligence**

Data for the cultural intelligence measure of Ohio County Extension Directors were collected by a 20-item CQS instrument (Van Dyne et al., 2004) that utilized a seven-point Likert-type scale. Seventy-five responses were generated using the electronic CQS
instrument through SurveyMonkey® yielding a response rate of 90.36% (n = 75). Upon review of the responses, four subjects were found to have provided duplicate data, and were therefore excluded from the data set, leaving 71 subjects yielding a usable response rate of 85.54% (n = 71). Eight responses were missing one item (i.e. 5%) on the 20-item CQS instrument, and one was missing two items (i.e. 10%). As a result, mean replacement was used with subjects that were missing less than 10 percent of the data (George & Mallery, 2006). A mean of the CQ scores collected from Ohio County Extension Director respondents was computed as the measure of cultural intelligence in this study. These data were ratio in scale of measurement. The mean score of Ohio County Extension Directors’ (n = 71) cultural intelligence was 4.80 (M = 4.80, SD = .89), ranging from 3.05 to 6.70 (Table 4.1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>M</th>
<th>Median</th>
<th>SD</th>
<th>Skew</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural Intelligence</td>
<td>71</td>
<td>4.8</td>
<td>4.75</td>
<td>0.89</td>
<td>0.13</td>
<td>3.05</td>
<td>6.7</td>
</tr>
<tr>
<td>Emotional Intelligence</td>
<td>63</td>
<td>101</td>
<td>102</td>
<td>13.95</td>
<td>-0.45</td>
<td>63</td>
<td>127</td>
</tr>
<tr>
<td>Perceived Leader Behavior</td>
<td>54</td>
<td>7.5</td>
<td>7.48</td>
<td>1.44</td>
<td>-0.59</td>
<td>3.48</td>
<td>10</td>
</tr>
<tr>
<td>Trusting Work Relationship</td>
<td>54</td>
<td>5.85</td>
<td>5.94</td>
<td>0.81</td>
<td>-0.6</td>
<td>3.77</td>
<td>7</td>
</tr>
<tr>
<td>Perceived Leader Effectiveness</td>
<td>54</td>
<td>4.88</td>
<td>5.04</td>
<td>0.83</td>
<td>-1.06</td>
<td>2.3</td>
<td>6</td>
</tr>
<tr>
<td>Job Performance</td>
<td>59</td>
<td>3.83</td>
<td>4</td>
<td>0.67</td>
<td>-0.14</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Note. Demographic characteristics data were excluded.
Emotional Intelligence

Data for the emotional intelligence measure of Ohio County Extension Directors were collected using the 133-item EQ-i 2.0 instrument (MHS, 2011a) that utilized a five-point Likert-type scale. Responses was summated as raw EQ scores which were converted into standard scores based on a mean of “100” and a standard deviation of 15 (Bar-On, 2004) by MHS. Total EQ scores were comprised of five composite scores that contains fifteen subscales component scores was used a measure of emotional intelligence of each County Extension Director in this study.

Sixty-three responses were generated through the MHS online assessment portal yielding a response rate of 90% (n = 63). No responses were missing from the data downloaded from MHS. These data were ratio in scale of measurement. The average total EQ score of Ohio County Extension Directors (n = 63) was 101 ($M = 101$, $SD = 13.95$), ranging from 63 to 127 (Table 4.1). Total EQ score indicates how emotionally intelligent a respondent is in terms of how well the respondent is at perceiving and expressing oneself, developing and maintaining social relationships, coping with challenges, and using emotional information in an effective and meaningful way (MHS, 2011b). According to the interpretive guidelines for EQ scores (Bar-On, 2004) as shown in Table 4.2, any EQ score above 90 is considered with average or high emotional intelligence. More specifically, higher EQ-i scores (above 100) indicates they are “emotional intelligent” people, while those with lower scores denote a need to improve “emotional skills” in specific areas (Bar-On, 2004, p. 4). Based on the findings of this study, it can be interpreted that Ohio County Extension Directors possess emotional
capacity from where improvement can be required to extremely well developed, and on average, Ohio County Extension Directors appear to be emotional intelligent.

Table 4.2 Interpretive Guidelines for EQ-i Scale Scores

<table>
<thead>
<tr>
<th>Standard Score</th>
<th>Interpretive Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>130</td>
<td>Markedly High- atypically well developed emotional capacity</td>
</tr>
<tr>
<td>120- 129</td>
<td>Very High- extremely well developed emotional capacity</td>
</tr>
<tr>
<td>110- 119</td>
<td>High- well developed emotional capacity</td>
</tr>
<tr>
<td>90- 109</td>
<td>Average- adequate emotional capacity</td>
</tr>
<tr>
<td>80- 89</td>
<td>Low- under-developed emotional capacity, requiring improvement</td>
</tr>
<tr>
<td>70- 79</td>
<td>Very Low- extremely under-developed emotional capacity, requiring improvement</td>
</tr>
<tr>
<td>Under 70</td>
<td>Markedly Low- atypically impaired emotional capacity, requiring improvement</td>
</tr>
</tbody>
</table>


**Leader Behavior**

Data for the perceived leader behavior measure of Ohio County Extension Directors were collected using the 30-item Leadership Practice Inventory (LPI-Observer) developed by Kouze and Posner (2013) based on a ten-point Likert-type scale. Selected subordinates and associates linked to each respective Ohio County Extension Director respondent in this study were asked to report their perception of leadership behaviors exhibited by their respective County Extension Director. One hundred and fifty-nine responses were generated using the electronic LPI-Observer through SurveyMonkey®, yielding a response rate of 61.87% (n = 159). A mean of the LPI-Observer scores
collected from each subordinate and associate was computed as the measure of leader behavior in this study. These data were ratio in scale of measurement. The average perceived leader behavior score of Ohio County Extension Directors (n = 54) was 7.50 ($M = 7.50, SD = 1.44$), ranging from 3.48 to 10.00 (Table 4.1).

**Trusting Work Relationship**

Data for the measure of trusting work relationship were collected using the 10-item Behavioral Trust Inventory (BTI) developed by Gillespie (2003). The BTI utilized a seven-point Likert-type scale. Selected subordinates and associates linked to each respective Ohio County Extension Director respondent in this study were asked to rate each item regarding their willingness to engage in a trusting work relationship with their respective County Extension Director. One hundred and fifty-nine responses were generated using the electronic BTI that was administered using SurveyMonkey® yielding a response rate of 61.87% (n = 159). A mean of the BTI scores was computed for each subordinate and associate as the measure of trusting work relationship in this study. These data were ratio in scale of measurement. The average trusting work relationship score of Ohio County Extension Directors (n = 54) was 5.85 ($M = 5.85, SD = .81$), ranging from 3.77 to 7.00 (Table 4.1).

**Leader Effectiveness**

Data for the perceived leader effectiveness measure of Ohio County Extension Directors used the 15-item Leader Effectiveness Scale utilizing a six-point Likert-type scale. Selected subordinates and associates linked to each respective Ohio County Extension Director respondent in this study were asked to report their perception of
leader effectiveness regarding their respective County Extension Director. One hundred
and fifty-nine responses were generated from the Leader Effectiveness Scale
administered through SurveyMonkey® yielding a response rate of 61.87% (n = 159). A
mean of the Leader Effectiveness Scale scores collected was computed for each
subordinate and associate as the measure of perceived leader effectiveness in this study.
These data were ratio in scale of measurement. The average perceived leader
effectiveness score of Ohio County Extension Directors (n = 54) was 4.88 (M = 4.88, SD
= .83), ranging from 2.3 to 6.0 (Table 4.1).

**Job Performance**

Data for the job performance measure was obtained from OSU Human Resources
personnel based upon the supervisor-rating provided by the respective Regional
Extension Director for each County Extension Director respondent. The Administrative
Service score for each County Extension Director was used as the job performance
measure in this study. The Administrative Service score comprised 20% of the annual
Overall Performance Review score of Ohio County Extension Directors. The
Administrative Service score used a five-point rating scale ranging from “1 = Well Below”
to “5 = Well Above”. A frequency distribution and P-P plot were performed to analyze
the data collected for the measure of job performance of County Extension Director
respondents in this study. A normal distribution of job performance was assumed, based
on a relatively small skewness value of -.137, and the linear relationship displayed on the
P-P plot. Therefore, the data collected for the job performance measure in this study
were treated as interval scale of measurement. The average job performance score of
Ohio County Extension Director respondent (n = 59) was 3.83 ($M = 3.83$, $SD = .67$), ranging from 2.0 to 5.0 (Table 4.1).

**Demographic Characteristics of County Extension Directors**

Data based upon the demographic characteristics of County Extension Directors were collected in this study. County Extension Director respondents provided responses on five demographic items: age (n = 66), gender (n = 71), race/ethnicity (n = 70), educational level (n = 71), and years of employment with OSU Extension (n = 71). The average age of Ohio County Extension Director respondents was 49.89 ($M = 49.89$, $SD = 9.20$). The gender ratio among the Ohio County Extension Director respondents was 69% female vs. 31% male. The majority of County Extension Director respondents reported their race/ethnicity as White, not of Hispanic origin (92.9%), while the remaining respondents reported 1.4% Black, not of Hispanic origin, 1.4% Mixed, and 4.3% Other. The highest Education level attained by Ohio County Extension Director respondents in this study included 94.4% with a Master degree, and 5.6% with a Doctoral degree. Years of employment with OSU Extension among County Extension Director respondents ranged from 1 to 39 years, with an average of 17.44 years ($M = 17.44$, $SD = 9.18$).

**Non-response Error Assessment**

According to Ary, et al. (2010), if the response rate in a study fell below 75 percent after all follow-up attempts, efforts should be made to determine if non-respondents differ from respondents. Comparing early and late respondents was used to assess non-response error (Miller & Smith, 1983). Response rate of subordinates and associates of
County Extension Director respondents was 61%, thus, non-response error was assessed. Subordinates and associate respondents who provided data for measures of perceived leader behavior, trusting work relationship, and perceived leader effectiveness were divided into quadrants based on the order in which their responses were received. Early respondents included 40 subordinates and associates in the first quadrant (i.e., 25 percent) who responded by providing data on the three measures. Late respondents included 40 subordinates and associates in the last quadrant (i.e., 25 percent) who responded by providing data on the three measures. T-tests were performed to determine if group means for total scores on the three measures differed between the early and late respondent groups. Significant mean differences would be assumed to reflect a difference between the groups. However, no statistically significance differences were found in the means between early and late subordinates and associates respondents who provided data for the measures of perceived leader behavior, trusting work relationship, and perceived leader effectiveness. This finding was interpreted as a justification to conclude that data collected from subordinates and associates respondents were representative of the target population.

Findings for Research Questions

The following paragraphs provided an overview and summary of the data collected in this study, based upon the research questions used to guide the research.

Findings for Research Question 1

Research question one, asked “What is the relationship between measures of emotional intelligence and job performance of Ohio County Extension Directors, while
controlling for the effect of intervening variables?” Multiple linear regression with hierarchical entry was employed to determine if emotional intelligence explained a significant proportion at the variance associated with job performance of Ohio County Extension Directors; while controlling for the effect of intervening variables of perceived leader behavior and trusting work relationship. Data analysis was performed using SPSS version 20 for regression diagnostics of assumptions.

In Step 1 entered measures of perceived leader behavior and trusting work relationship as independent variables to test if measures of perceived leader behavior and trusting work relationship significantly predicted the measures of job performance. The results of the regression indicated perceived leader behavior and trusting work relationship explained 6% of the proportion of variance in job performance ($R^2$ Change = .060, $F$ Change = 1.54, $p > .05$) (Table 4.3).

In Step 2 entered the additional measure of emotional intelligence to the regression equation to test if adding the measure of emotional intelligence can significantly predict the measure of job performance while holding the measure of perceived leader behavior and trusting work relationship constant. The results of the regression indicated emotional intelligence explained additional 5.5% of variance in job performance while perceived leader behavior and trusting work relationship are controlled ($R^2$ Change = .055, $F$ Change = 2.93, $p > .05$).
Table 4.3 Multiple Linear Regression Analysis of Emotional Intelligence and Job Performance of Ohio County Extension Directors While Holding Perceived Leader Behavior and Trusting Work Relationship Constant

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable(s) Entered</th>
<th>r</th>
<th>R² Change</th>
<th>F Change</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perceived Leader Behavior, Trusting Work Relationship</td>
<td>.245</td>
<td>.060</td>
<td>1.54</td>
<td>.225</td>
</tr>
<tr>
<td>2</td>
<td>Emotional Intelligence</td>
<td>.340</td>
<td>.055</td>
<td>2.93</td>
<td>.093</td>
</tr>
</tbody>
</table>

*Note.* n = 51.

R is a Pearson product-moment correlation coefficient assessing the magnitude of the linear relationship between measure of job performance and a linear combination of measures of emotional intelligence, perceived leader behavior, and trusting work relationship \( r = .34 \). \( R^2 \) indicates the ‘goodness of fit’ of the linear regression model, in this research question, \( R^2 = .115 \). One minus \( R^2 = .885 \) represents residual variance, indicating proportion of variance in job performance not explained by the linear combination of emotional intelligence, perceived leader behavior, and trusting work relationship (Gliem, 2011).

Statistical significance of all independent variables (emotional intelligence, perceived leader behavior, and trusting work relationship) for the full model of equation of regression was computed and assessed. No statistical significance was found in the full model. Standardized residuals were computed to detect outliers and influential points, and result is found that residuals are independent when judged with a criterion value of
absolute values is less than 2. Multicolinearity was assessed by examining two
diagnostic statistics: Tolerance and VIF. Tolerance statistic for emotional intelligence
was .754, and the value for VIF was 1.326, indicating multicolinearity was not a problem
in the analysis (Gliem, 2011).

The adequacy of the sample size for regression analysis was assessed by
computing the ratio of k (number of independent variables = 3) to n (sample size n = 51),
which is 1:17. Sample size is considered adequate when judged against the criterion of at
least 15 cases for each independent variable in the analysis (Gliem, 2011). Therefore, it
was concluded that emotional intelligence of Ohio County Extension Directors does not
explain variance in job performance while controlling intervening variables of leader
behavior and trusting work relationship.

**Findings for Research Question 2**

Research question two, asked “What is the relationship between measures of
emotional intelligence and leader effectiveness of Ohio County Extension Directors,
while controlling for the effect of intervening variables?” Multiple linear regression with
hierarchical entry was employed to determine if the measure of emotional intelligence
explained a significant proportion of the variance associated with measures of perceived
leader effectiveness of Ohio County Extension Directors; while controlling for the effect
of intervening variables of perceived leader behavior and trusting work relationship.
Data analysis was performed using SPSS version 20 for regression diagnostics of
assumptions.
In Step 1 entered measures of perceived leader behavior and trusting work relationship as intervening variables in the regression equation to test if measures of perceived leader behavior and trusting work relationship significantly predicted the measures of perceived leader effectiveness. The results of the regression indicated measures of perceived leader behavior and trusting work relationship explained 76% of the proportion of variance in perceived leader effectiveness ($R^2_{\text{Change}} = .76$, $F_{\text{Change}} = 82.65$, $p < .05$ (see Table 4.4). In Step 2 entered the measure of emotional intelligence as dependent variable in the regression equation, the results of the regression indicated additional entry of emotional intelligence measure did not significantly improve $R^2$ ($R^2_{\text{Change}} = .000$, $F_{\text{Change}} = .056$, $p > .05$).

Table 4.4 Multiple Linear Regression Analysis of Emotional Intelligence and Perceived Leader Effectiveness of Ohio County Extension Directors While Holding Perceived Leader Behavior and Trusting Work Relationship Constant

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable(s) Entered</th>
<th>$r$</th>
<th>$R^2_{\text{Change}}$</th>
<th>$F_{\text{Change}}$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perceived Leader Behavior,</td>
<td>.874</td>
<td>.764</td>
<td>82.648</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Trusting Work Relationship</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Emotional Intelligence</td>
<td>.874</td>
<td>.000</td>
<td>.056</td>
<td>.001</td>
</tr>
</tbody>
</table>

*Note.* $n= 54$.  

154
R is a Pearson product-moment correlation coefficient assessing the magnitude of the linear relationship between the measures of job performance and a linear combination of measures of emotional intelligence, perceived leader behavior, and trusting work relationship \( (r = .874) \). \( R^2 \) indicates the ‘goodness of fit’ of the linear regression model, in this research question, \( R^2 = .764 \). One minus \( R^2 = .236 \) represents residual variance, indicating the proportion of variance in the measure of perceived leader effectiveness not explained by the linear combination of measures of emotional intelligence, perceived leader behavior, and trusting work relationship (Gliem, 2011).

Statistical significance of all independent variables (emotional intelligence, leader behavior, and trusting work relationship) for the full model of equation of regression was computed and assessed. Statistical significance was found for the full model \( (p< .01) \). Standardized residuals were computed to detect outliers and influential points, and results was found that residuals are independent when judged with a criterion value of absolute values is less than 2. Multicollinearity was assessed by examining two diagnostic statistics: Tolerance and VIF. Tolerance statistic for emotional intelligence was .754, and the value for VIF was 1.326, indicating multicollinearity was not a problem in the analysis (Gliem, 2011).

The adequacy of the sample size for regression analysis was assessed by computing the ratio of \( k \) (number of independent variables = 3) to \( n \) (sample size = 54), which is 1:18. Sample size is considered adequate when judged against the criterion of at least 15 cases for each independent variable in the analysis (Gliem, 2011). Therefore, it was concluded that emotional intelligence of Ohio County Extension Directors does not
explain variance in leader effectiveness while controlling for intervening variables of leader behavior and trusting work relationship.

**Findings for Research Question 3**

Research question three, asked “What is the relationship between measures of cultural intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?” Multiple linear regression with hierarchical entry was employed to determine if cultural intelligence explained a significant proportion of the variance associated with job performance of Ohio County Extension Directors; while controlling for the effect of intervening variables of perceived leader behavior and trusting work relationship. Data analysis was performed using SPSS version 20 for regression diagnostics of assumptions.

In Step 1 entered measures of perceived leader behavior and trusting work relationship as intervening variables in the regression equation to test if measures of perceived leader behavior and trusting work relationship significantly predicted the measure of job performance. The results of regression indicated measures of perceived leader behavior and trusting work relationship explained 6% of the proportion of variance in job performance ($R^2$ Change = .060, $F$ Change = 1.54, $p > .05$) (see Table 4.5). In Step 2, entered the cultural intelligence variable to the equation. The result of the regression indicated cultural intelligence explained additional 2.2% of variance in job performance while perceived leader behavior and trusting work relationship are controlled ($R^2$ Change = .022, $F$ Change = 1.102, $p > .05$).
Table 4.5 Multiple Linear Regression Analysis of Cultural Intelligence and Job Performance of Ohio County Extension Directors While Holding Perceived Leader Behavior and Trusting Work Relationship Constant

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable(s) Entered</th>
<th>r</th>
<th>$R^2$ Change</th>
<th>F Change</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perceived Leader Behavior,</td>
<td>.245</td>
<td>.060</td>
<td>1.538</td>
<td>.225</td>
</tr>
<tr>
<td></td>
<td>Trusting Work Relationship</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Cultural Intelligence</td>
<td>.286</td>
<td>.022</td>
<td>1.102</td>
<td>.256</td>
</tr>
</tbody>
</table>

*Note.* n= 51.

R is a Pearson product-moment correlation coefficient describing the magnitude of the relationship between job performance and a linear combination of measures of cultural intelligence, perceived leader behavior, and trusting work relationship ($r = .286$). $R^2$ indicates the ‘goodness of fit’ of the linear regression model, in this research question, $R^2 = .082$. One minus $R^2 = .918$ represents residual variance, indicating the proportion of variance in the job performance variable that was not explained by the linear combination of cultural intelligence, leader behavior, and trusting work relationship (Gliem, 2011).

Statistical significance of all independent variables (cultural intelligence, perceived leader behavior, and trusting work relationship) for the full regression equation was computed and assessed. No statistically significance is found to the full model. Standardized residuals were computed to detect outliers and influential points, and result is found that residuals are independent when judged with a criterion value of absolute
values is less than 2. Multicolinearity was assessed by examining two diagnostics statistics: Tolerance and VIF. The tolerance statistic for emotional intelligence was .968, and the value for VIF was 1.033, indicating multicolinearity was not a problem in the analysis (Gliem, 2011).

The adequacy of the sample size was assessed by computing the ratio of k (number of independent variables = 3) to n (sample size n = 51), which was 1:17. Sample size is considered adequate when judged against the criterion of at least 15 cases for each independent variable in the analysis (Gliem, 2011). Therefore, it was concluded that cultural intelligence of Ohio County Extension Directors does not explain a significant proportion of the variance associated with job performance while controlling for intervening variable of leader behavior and trusting work relationship.

**Findings for Research Question 4**

Research question four, asked “What is the relationship between measures of cultural intelligence and leader effectiveness of Ohio County Extension Directors, while controlling for the effect of intervening variables?” Multiple linear regression with hierarchical entry was employed to determine if the measure of cultural intelligence explained a significant proportion of the variance associated with the measure of perceived leader effectiveness of Ohio County Extension Directors; while controlling for the effect of intervening variables of perceived leader behavior and trusting work relationship. Data analysis was performed using SPSS version 20 for regression diagnostics of assumptions.
In Step 1 entered measures of perceived leader behavior and trusting work relationship as intervening variables in the regression equation to test if measures of perceived leader behavior and trusting work relationship significantly predicted the measures of perceived leader effectiveness. The results of the regression indicated measures of perceived leader behavior and trusting work relationship explained 76% of the proportion of variance in the measure of perceived leader effectiveness ($R^2$ Change = .76, $F$ Change = 82.65, $p < .05$ (see Table 4.6). In Step 2, entered the measure of cultural intelligence as dependent variable in the regression equation, the results of the regression indicated additional entry of cultural intelligence measure explained additional 1.6% of the proportion of variance in perceived leader effectiveness measure ($R^2$ Change = .016, $F$ Change = 3.711, $p > .05$).

Table 4.6 Multiple Linear Regression Analysis of Cultural Intelligence and Perceived Leader Effectiveness of Ohio County Extension Directors While Holding Perceived Leader Behavior and Trusting Work Relationship Constant

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable(s) Entered</th>
<th>r</th>
<th>$R^2$ Change</th>
<th>$F$ Change</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perceived Leader Behavior,</td>
<td>.874</td>
<td>.764</td>
<td>82.65</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Trusting Work Relationship</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Cultural Intelligence</td>
<td>.883</td>
<td>.016</td>
<td>3.71</td>
<td>.001</td>
</tr>
</tbody>
</table>

Note. n = 54.
R is a Pearson product-moment correlation coefficient assessing the magnitude of the relationship between measure of job performance and a linear combination of cultural intelligence, perceived leader behavior, and trusting work relationship measures (r = .883). \( R^2 \) indicates the ‘goodness of fit’ of the linear regression model, in this research question, \( R^2 = .781 \). One minus \( R^2 = .219 \) represents residual variance, indicating proportion of variance in leader effectiveness not explained by the linear combination of emotional intelligence, perceived leader behavior, and trusting work relationship (Gliem, 2011).

Statistical significance of all independent variables (cultural intelligence, leader behavior, and trusting work relationship) for the full model of equation of regression was computed and assessed. Statistical significance was found for the full model (p< .01). Standardized residuals were computed to detect outliers and influential points, and based upon the result that residuals were independent when judged with a criterion value of absolute values is less than 2. Multicolinearity was assessed by examining two diagnostic statistics: Tolerance and VIF. The tolerance statistic for emotional intelligence was .968, and the value for VIF was 1.033, indicating that multicolinearity was not a problem in the analysis (Gliem, 2011).

The adequacy of the sample size for the regression analysis was assessed by computing the ratio of \( k \) (number of independent variables = 3) to \( n \) (sample size = 54), which is 1:18. Sample size is considered adequate when judged against the criterion of at least 15 cases for each independent variable in the analysis (Gliem, 2011). Therefore, it was concluded that cultural intelligence of Ohio County Extension Directors does not
explain a significant proportion of the leader effectiveness variable while controlling for intervening variables of leader behavior and trusting work relationship.

**Findings for Research Question 5**

Research question five, asked “What is the relationship between measures of job performance and leader effectiveness of Ohio County Extension Directors?” A Pearson product-moment correlation coefficient was computed to describe the magnitude of the linear relationship between measures of job performance and perceived leader effectiveness ($r = .253$). A correlation matrix assessing the relationship among the dependent, independent, and intervening variables is presented in Table 4.7. According to Davis’ (1971) conventions, a Pearson product-moment correlation coefficient value ($r$) between .10 and .29 is considered as low association. The results revealed no statistically significant relationship between measures of job performance and perceived leader effectiveness of Ohio County Extension Directors.
Table 4.7 Bivariate Correlation Matrix Among Variables of Interest

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Emotional Intelligence</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2  Cultural Intelligence</td>
<td>.417**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3  Leader Behavior</td>
<td>.482**</td>
<td>.155</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4  Trusting Work Relationship</td>
<td>.243</td>
<td>.038</td>
<td>.674**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5  Leader Effectiveness</td>
<td>.419**</td>
<td>-.001</td>
<td>.867**</td>
<td>.668**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6  Job Performance</td>
<td>.219</td>
<td>.143</td>
<td>.233</td>
<td>.214</td>
<td>.253</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note.* **. Correlation is significant at the 0.01 level (2-tailed).

**Findings for Research Question 6**

Research question six, asked “What is the relationship between measures of emotional intelligence and cultural intelligence of Ohio County Extension Directors?” A Pearson product-moment correlation coefficient was computed to describe the magnitude of the linear relationship between emotional intelligence and cultural intelligence (r = .417, see Table 4.7). According to Davis’ (1971) conventions, a Pearson product-moment correlation coefficient value (r) between .30 and .49 is considered as moderate association. The result revealed a moderate positive relationship between emotional intelligence and cultural intelligence (see Table 4.8).

**Findings for Research Question 7**

Research question seven, asked “What is the relationship between measures of
leader behavior and trusting work relationship?” A Pearson product-moment correlation coefficient was computed to describe the magnitude of the linear relationship between perceived leader behavior and trusting work relationship (r = .674, see Table 4.7). According to Davis (1971) conventions, a Pearson product-moment correlation coefficient value (r) between .50 and .69 is considered as substantial association. The result revealed a statistically significant positive relationship between measures of perceived leader behavior and trusting work relationship.

In addition to the correlations sought in the research questions that guided this study, several bivariate correlations were found to be statistically significant between variables of interest, including measures of emotional intelligence and perceived leader behavior, emotional intelligence and perceived leader effectiveness, perceived leader behavior and perceived leader effectiveness, and finally, trusting work relationship and perceived leader effectiveness. The implications of these additional bivariate relationships found in this study will be discussed further in next chapter.

**Major Findings**

The following major findings were revealed based on the results of this study:

1. Neither emotional intelligence, nor cultural intelligence explains a significant proportion of the variance associated with the job performance of Ohio County Extension Directors after controlling for the effect of intervening variables of perceived leader behavior and perceived trusting work relationship.

2. Neither emotional intelligence, nor cultural intelligence explains a significant proportion of the variance associated with perceived leader effectiveness of Ohio
County Extension Directors after controlling for the effect of intervening variables of perceived leader behavior and perceived trusting work relationship.

3. A high proportion of the variance associated with perceived leader effectiveness of Ohio County Extension Directors can be explained by perceived leader behavior and perceived trusting work relationship.

4. Emotional intelligence of Ohio County Extension Directors is positively related to their cultural intelligence, perceived leader behavior, and perceived leader effectiveness, respectively.

5. Perceived leader effectiveness was positively related to trusting work relationship and perceived leader behavior.

6. Ohio County Extension Director’s measure of job performance was not related to emotional intelligence, cultural intelligence, perceived leader behavior, perceived trusting work relationship, or perceived leader effectiveness.

7. Ohio County Extension Director’s measure of cultural intelligence was not related to measures of perceived leader behavior, perceived trusting work relationship, or perceived leader effectiveness.

**Summary**

This chapter presented and summarized the findings of this study. Results of descriptive statistics of variables of interest in this study, demographic characteristics, non-response error assessment were described. Findings for each of the seven research questions that framed this study were presented.

Multiple regression analysis was performed to assess relationships among the...
variables of interest in this study. Neither emotional intelligence, nor cultural intelligence explained a significant proportion of the variance associated with the job performance of Ohio County Extension Directors after controlling for the effect of intervening variables of perceived leader behavior and perceived trusting work relationship. Neither emotional intelligence, nor cultural intelligence explained a significant proportion of the variance associated with perceived leader effectiveness of Ohio County Extension Directors after controlling for the effect of intervening variables of perceived leader behavior and perceived trusting work relationship.

A correlation matrix was presented to report bivariate relationships between variables of interest to address research questions five through seven. Ohio County Extension Director’s measure of job performance was not related to perceived leader effectiveness. Emotional intelligence of Ohio County Extension Directors was positively related to their cultural intelligence. Finally, perceived leader behavior exhibited a positive relationship with perceived trusting work relationship, and perceived leader effectiveness. A more detailed summary and discussion of the findings are presented in Chapter 5.
Chapter 5 Summary and Discussion

This chapter restates the research problem and reviews the methods used in this study. Other sections of this chapter include: summary of the findings, discussion of the results consisting of interpretation of findings and relation to previous literature, recommendations for practice, and suggestions for future research.

Problem Statement and Review of Methods

Leader effectiveness and job performance are measures of organizational effectiveness which may be influenced by organizational leadership. Personal capacities related to effective leadership and job performance such as emotional intelligence and cultural intelligence are drawing increasing attention among researchers (Goleman, 2000; Kerr et al., 2005; Livermore, 2010; Norhouse, 2013; Nwokah & Ahiauzu, 2010; Rosete, & Ciarrochi, 2005; Thomas & Inkson, 2004;). However, empirical studies that assess relationships among measures of leader effectiveness, job performance, emotional intelligence and cultural intelligence are limited (Groves & Feyerherm, 2011) in general and specifically in the Extension system.

County Extension Directors employed by Ohio State University Extension are responsible for providing administrative leadership for Extension personnel at the county level in addition to their role as an Extension Educator. The changing environment,
trends affecting OSU Extension (Cochran et al., 2012), and challenges associated with working with diverse audiences, together create the need for County Extension Directors to serve as role models for building trusting work relationships and collaborating with diverse clientele.

The purpose of this study was to explore relationships among measures of job performance, leader effectiveness, emotional intelligence, and cultural intelligence of County Extension Directors in Ohio, while controlling for potential effects of measures of leader behavior and trusting work relationship. Research questions that guided this study were:

1. What is the relationship between measures of emotional intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?

2. What is the relationship between measures of emotional intelligence and leader effectiveness of Ohio County Extension Directors, while controlling for the effect of intervening variables?

3. What is the relationship between measures of cultural intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?

4. What is the relationship between measures of cultural intelligence and leader effectiveness of Ohio County Extension Directors, while controlling for the effect of intervening variables?
5. What is the relationship between measures of job performance and leader effectiveness of Ohio County Extension Directors?

6. What is the relationship between measures of emotional intelligence and cultural intelligence of Ohio County Extension Directors?

7. What is the relationship between measures of leader behavior and trusting work relationship?

This study was descriptive in nature and utilized a correlational research design and quantitative methodology. The target population for this census study consisted of County Extension Directors employed by Ohio State University Extension in all 88 counties in Ohio, in addition to selected subordinates and associates. Data collection was completed in three phases involving the use of historical data and online survey instruments with two subject groups and two online survey administration platforms.

Data collection began with the collection of cultural intelligence and emotional intelligence measures from County Extension Directors. The measure of cultural intelligence of Ohio County Extension Directors was the mean score of cultural intelligence based on their responses on the 20-item self-reported CQ instrument (see Appendix A). The measure of emotional intelligence was the total standardized EQ score based on responses of County Extension Directors on the 133-item self-reported EQ instrument.

Thereafter, selected subordinates and associates of Ohio County Extension Directors respondents were invited to provide data for measures of perceived leader behavior, perceived trusting work relationship, and perceived leader effectiveness. The
measure of perceived leader behavior was based on the mean score of selected subordinates and associates who were asked to complete the 30-item LPI-Observer instrument (see Appendix B) by reporting their perception of leader behavior exhibited by their respective County Extension Director. The measure of perceived trusting work relationship was assessed using the 10-item BTI instrument (see Appendix C). Each selected subordinate or associate was asked to rate their willingness to engage in a trusting work relationship with their respective County Extension Director. The measure of perceived leader effectiveness was based on the mean score of selected subordinates and associates who were asked to complete the 15-item Leader Effectiveness Scale instrument (see Appendix D). Each selected subordinate or associate was asked to report their perception of the effectiveness of leader achievement regarding their respective County Extension Director. Data for the perceived job performance measure of Ohio County Extension Directors were collected from OSU Human Resources personnel based upon a supervisor rating provided by their respective Regional Extension Director on the 2011 - 2012 annual performance review.

The data collection process produced 71 usable responses for the measure of cultural intelligence of Ohio County Extension Directors yielding a usable response rate of 85.5% (N = 83), 63 usable responses for the measure of emotional intelligence of Ohio County Extension Directors yielding a usable response rate of 89% (n = 71), 159 useable responses of selected subordinates and associates of Ohio County Extension Directors yielding a useable response rate of 61.9% (n = 257). Data analysis involved the use of descriptive statistics as well as multiple regression and correlation analysis.
Summary of the Findings

Results for each research question that guided this study are presented below.

Research Question 1

Research question one was “What is the relationship between measures of emotional intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?” According to the findings in this study, Ohio County Extension Directors’ emotional intelligence was unable to explain a significant proportion of the variance associated with their perceived job performance, after controlling for effect of the intervening variables of perceived leader behavior and perceived trusting work relationship.

Research Question 2

Research question two was “What is the relationship between measures of emotional intelligence and leader effectiveness of Ohio County Extension Directors, while controlling for the effect of intervening variables?” Based on the findings in this study, Ohio County Extension Directors’ emotional intelligence was unable to explain a significant proportion of the variance associated with their perceived leader effectiveness after controlling for the effect of the intervening variables of perceived leader behavior and perceived trusting work relationship. However, the combination of Ohio County Extension Directors’ perceived leader behavior and their perceived trusting work relationship with their subordinates and associates explained a significant proportion of the variance associated with perceived leader effectiveness.
Research Question 3

Research question three was “What is the relationship between measures of cultural intelligence and job performance of Ohio County Extension Directors, while controlling for the effect of intervening variables?” According to the findings in this study, cultural intelligence of Ohio County Extension Directors was unable to explain a significant proportion of the variance associated with their perceived job performance after controlling for the effect of intervening variables of perceived leader behavior and perceived trusting work relationship. Ohio County Extension Directors’ cultural intelligence was not related to their job performance.

Research Question 4

Research question four was “What is the relationship between measures of cultural intelligence and leader effectiveness of Ohio County Extension Directors, while controlling for the effect of intervening variables? According to the findings in this study, Ohio County Extension Directors’ cultural intelligence was unable to explain a significant proportion of the variance associated with their perceived leader effectiveness after controlling for the effect of the intervening variables of perceived leader behavior and trusting work relationship. Ohio County Extension Directors’ cultural intelligence was not related to their perceived leader effectiveness.

Research Question 5

Research question five was “What is the relationship between measures of job performance and leader effectiveness of Ohio County Extension Directors?” Based on the findings of this study, a Pearson product-moment correlation coefficient value of .253
(r = .253, p > .01) was found to represent the magnitude of the linear relationship between measures of job performance and perceived leader effectiveness. The result revealed no statistically significant relationship was found between the measures of Ohio County Extension Directors’ job performance and their leader effectiveness perceived by their subordinates and associates. In addition, the measure of Ohio County Extension Directors’ perceived job performance was not found related to measures of their emotional intelligence, cultural intelligence, perceived leader behavior, or perceived trusting work relationship.

**Research Question 6**

Research question six was “What is the relationship between measures of emotional intelligence and cultural intelligence of Ohio County Extension Directors?” Based on the findings of this study, a Pearson product-moment correlation coefficient value of .417 (r = .417, p < .01) was found to represent the magnitude of the linear relationship between measures of emotional intelligence and cultural intelligence. According to Davis’ (1971) conventions, Ohio County Extension Directors’ emotional intelligence and cultural intelligence were moderately related.

**Research Question 7**

Research question seven was “What is the relationship between measures of leader behavior and trusting work relationship?” Based on the findings of this study, a Pearson product-moment correlation coefficient value of .674 (r = .674, p < .01) was found to represent the magnitude of the linear relationship between measures of perceived leader behavior and perceived trusting work relationship. According to Davis’
(1971) conventions, Ohio County Extension Directors’ perceived leader behavior and perceived trusting work relationship with their subordinates and associates were substantially related.

**Discussion of the Results**

Discussion of the results of this study will address each variable of interest in this study, recommendations for practice, and suggestions for future research.

**Interpretation of Findings and Relationship to Previous Literature**

The conceptual model presented in Chapter 1 (Figure 1.1) illustrates the variables of interest and potential relationships among the variables. Based on the findings, a review of literature, and the researcher’s insights, a discussion of the findings is organized by variable of interest, exploring the findings, what they may mean, and how they relate to existing literature.

**Job performance.** According to Campbell (1990), job performance is defined as how well a person performs their job toward the accomplishment of organizational outcomes. A leader’s job performance in this study refers to the results achieved through completing administrative duties assigned to County Extension Directors. The results of this study revealed that neither emotional intelligence, nor cultural intelligence explains a significant proportion of the variance associated with the perceived job performance of Ohio County Extension Directors after controlling for the effects of perceived leader behavior and perceived trusting work relationship.

While there are many studies in the literature that examine factors related to job performance across a wide variety of positions, the amount of research conducted to
identify factors specifically related to employees in administrative leadership (i.e., management) roles is relatively limited. Previous literature related to factors contributing to job performance of employees in administrative leadership positions, included: behavior (Campbell et al., 1970; Gentry et al., 2008; Lawler & Porter, 1967); management level (Blau, 1986); manager’s skill and influence (Abdalla, 1983), and cultural intelligence (Livermore, 2010; Van Voerkom & De Reuver, 2009). However, the results of this study revealed otherwise- Ohio County Extension Director’s measure of job performance was not found related to their perceived leader effectiveness, emotional intelligence, cultural intelligence, perceived leader behavior, or perceived trusting work relationship.

In a study of school principals in Kenya, Ayiro (2009) found a very weak correlation between emotional intelligence and the performance of school principals. His findings corroborate the results of this study. The result that the variables of interest in this study were unable to show a positive relationship with a leader’s job performance does not concur with the results of previous studies that indicated a positive relationship between a leader’s job performance and other contributing factors.

Finding that the relationship between job performance and other variables of interest in this study were not statistically significant may have resulted from two reasons: limited variability associated with the job performance measure of Ohio County Extension Directors in this study, and different physical locations between Ohio County Extension Director respondents and their respective Regional Director. Detailed discussions are presented in the following section.
Limited variability associated with the job performance measure of Ohio County Extension Directors in this study. The measure of job performance used in this study involved historical data from the annual performance review of each County Extension Director. Reliability of the annual performance review was not assessed as part of this study. Additionally, using job performance scores from one of the five performance categories (i.e., Administrative service) may not provide a sufficient range of variance for the score to be utilized as an adequate proxy of Ohio County Extension Director’s job performance.

Different physical locations between Ohio County Extension Director respondents and their respective Regional Director. For the state of Ohio, County Extension Directors across 88 counties are supervised by three Regional Extension Directors. The annual performance review of each Ohio County Extension Director was assessed by their respective Regional Director. Most Regional Directors and their respective County Extension Directors do not usually work together at the same physical office location on a daily basis, which might influence their knowledge of the actual job performance of each County Extension Director. Different physical locations between Ohio County Extension Directors and their respective Regional Director might affect the assessment of County Extension Director’s job performance which further affects the findings of this study.

Leader effectiveness. Scholars in leadership studies have made efforts to discover what contributes to effective leadership. For example, Amagosh (2009) summarized research on factors that may influence leadership effectiveness: individual
leadership characteristics (e.g., intelligence, emotional intelligence, generalized self-efficacy), leadership skills and behaviors (e.g., self-regulatory, self-motivational, empowering), and a contextual factor (i.e., environment). Amagosh (2009), Vardiman et al, (2006), and Bodinson (2005) defined leadership effectiveness as a leader’s success in influencing followers toward achieving organizational objectives. Kim (2007) summarized factors with the potential to influence one’s leadership effectiveness, including intelligence, dominance, gender role, generalized self-efficacy, self-monitoring, emotional intelligence, conscientiousness, emotional stability, and extraversion. Block and Manning (2007), and Bodinson (2005) identified essential roles of effective organizational leaders include establishing and reinforcing values and purpose, developing a vision and identifying strategies necessary to achieve the vision, building the community necessary to implement the strategies, and initiating and managing the changes necessary to assure growth and survival. Results of the research findings vary depending on how leadership and leader effectiveness are each defined, and the specific context in which these studies were conducted.

Derived from Hollander’s relational theory (1995), leadership in this study was defined as a social reciprocal process of influence involving leaders and followers who engage in an interdependent relationship to achieve a shared goal in an organizational context. Leader effectiveness was operationalized as the degree of effectiveness achieved when a leader works with others to accomplish results by fulfilling administrative job responsibilities within the organization. Specifically, the variable of leader effectiveness in this study was a perceived measure. Results of this study revealed that neither
emotional intelligence, nor cultural intelligence explained a significant proportion of the variance associated with perceived leader effectiveness of Ohio County Extension Directors after controlling for the effect of the intervening variables of perceived leader behavior and perceived trusting work relationship.

Nevertheless, this study yielded other unanticipated findings related to perceived leader effectiveness. The combination of Ohio County Extension Directors’ perceived leader behavior and the perceived willingness of subordinates and associates to engage in a trusting work relationship with their respective County Extension Director were related to perceived leader effectiveness of Ohio County Extension Directors. Moreover, perceived leader effectiveness was positively related to emotional intelligence, perceived leader behavior, and perceived trusting work relationship. In other words, even though detailed causal factors need to be investigated further among variables, the results of this study suggest that leaders with greater emotional intelligence display better leader behaviors as perceived by subordinates and associates. Furthermore, County Extension Directors that exhibit better leadership behavior are also perceived as more effective leaders. A substantial association also exists between perceived leader behavior and trusting work relationship. Leaders who are perceived with having a trusting work relationship with their subordinates and associates are perceived as more effective leaders.

The results of this study corroborate the findings of previous studies by Amagosh (2009) and Kim (2007) that emotional intelligence, and leadership behavior as factors that contribute to leadership effectiveness. Thus, the results of this study also extend the
knowledge base by offering empirical evidence of how those factors relate to leadership effectiveness.

Moreover, findings from this study revealed a weak association between perceived leader effectiveness and job performance. According to Hollander (1978), leadership effectiveness relies on the way things are done in order to accomplish intended group outcomes. The goal of obtaining good performance concerns productivity and benefits while leadership effectiveness portrays concerns beyond performance and profits, with a focus on ‘how’ in addition to ‘what’ in the process (Hollander, 1978). The variable of perceived leader behavior that was measured in this study reflects ‘what’ in the leadership process, however, the measure of perceived leader behavior was not related to the measure of perceived job performance in this study. Results of this study revealed a gap among perceived job performance, perceived leader behavior, and perceived leader effectiveness, which appear to support Hollander’s perspective that job performance does not necessarily mirror leadership effectiveness.

In Hollander (1995)’s relational theory, leadership exists only when responsive followership is involved. Obtaining data from subordinates and associates on their respective County Extension Director in this study can be considered a proxy measure of responsive involvement in the leadership process. The subordinates and associates who participated to provide feedback in this study can be considered as their responsive involvement in terms of taking the opportunity to express their willingness to engage in the leadership process. It was further concluded that the results of this study may support the relational leadership theory (Hollander, 1995) with empirical evidence that responsive
involvement of followership is a critical component of leader effectiveness in leader-follower relationship.

**Leader behavior.** Leader behavior refers to the observable set of skills and abilities of leaders (Kouzes & Posner, 2002). The variable of leader behavior in this study was a perceived measure. Based on the results of this study, perceived leader behavior was highly correlated with variables of interest in this study (reflected in the degree of association from the highest to lowest correlation): perceived leader effectiveness, perceived trusting work relationship, and emotional intelligence. Among the three correlations, the most strongest correlation was found between perceived leader behavior and perceived leader effectiveness, which is in concert with Posner and Kouzes (1988). In their study, Posner and Kouzes (1988) examined leader effectiveness, and found LPI-Other (aka LPI-Observer instrument used in this study) to be able to explain nearly 55% of the variance associated with leader effectiveness as assessed by leaders’ subordinates. It was concluded that the perception of subordinates and associates about leader behavior was highly correlated with the degree of leader effectiveness perceived by subordinates and associates. Results of this study support the findings of the study by Posner and Kouzes (1988). Leaders who are perceived as displaying better leadership behaviors are more likely to be perceived as more effective leaders.

Additionally, the results of this study also revealed a positive correlation between perceived leader behavior and perceived trusting work relationship. Ohio County Extension Directors who are perceived to exhibit better leadership behaviors are more
likely to be able to engage in a trusting work relationship with their subordinates and associates.

Leadership involves interdependent relationships between leaders and followers, in which both parties cooperate to achieve an intended shared goal (Hollander, 1995). Similarly, Kouzes and Posner (2002) defined leadership as “. . . a relationship between those who aspire to lead and those who choose to follow” (p. 20). The degree to which subordinates and associates are willing to engage in a trusting work relationship with their respective County Extension Director represents a proxy measure of followers’ responsive involvement as a reflection of their decision be responsive in the leadership process. It was concluded that this study supports previous studies related to the importance of the leader-follower relationship (Hollander, 1995; Hollander & Webb, 1995; Kouzes & Posner, 2002; Sunstrom, De Meuse, & Futrell, 1990) by providing empirical evidence of the relationship between perceived leader behavior and perceived trusting work relationship.

Furthermore, the results of this study also provide empirical evidence to help to extend the body of knowledge with respect to relation-oriented behavior. Bass (1990) and Yukl (2008) summarized in three major categories of leader behavior, including: relation-oriented, task-oriented, and change-oriented. Relation-oriented behaviors involve mutual trust between leaders and followers, which leaders demonstrate through the way in which relationships are built and sustained with followers. Integration of both task- and relation-oriented leader behaviors was suggested as the best way to attain effective leadership (Blake & Mouton, 1964). The findings of this study revealed strong
bivariate relationships among perceived leader behavior, perceived trusting work relationship, and perceived leader effectiveness. The combination of perceived leader behavior and perceived trusting work relationship explained a 76% of the variance associated with perceived leader effectiveness. Therefore, this study supports the body of knowledge related to leadership theories in previous studies by Bass (1990), Blake & Mouton (1964), and Yukl (2008).

**Trusting work relationship.** Trust, as defined by McAllister (1995), is “... the extent to which a person is confident in, and willing to act on the basis of, the words, actions, and decisions of another” (p. 25). Trust can be established at different levels, and developed over time (Lewicki & Bunker, 1995; Six & Skinner, 2010; Weiss & Molinaro, 2005). Scholars have identified trust as a critical foundation between parties in cooperative relationships (Brower et al., 2009; Lewicki & Bunker, 1995; McAllister, 1995; Shapiro et al., 1992; Sue-Chan et al., 2012). Dirks and Skarlicki (2004) also identified trust as an important contributor to effective leadership. Trust in leaders may help to maximize individual efforts and performance, as well as utilize shared efforts made toward a common goal (Dirks & Skarlicki, 2004). For the purpose of this study, perceived trusting work relationship between a leader and their subordinates and associates was examined as a potential mediating factor that may influence the perception of subordinates and associates regarding their respective leaders.

Based on the findings of this study, perceived trusting work relationship was not found to be significantly correlated to leaders’ job performance, however, perceived trusting work relationship was found to be positively related to perceived leader behavior.
According to the trust building process proposed by Six and Skinner (2010) presented in chapter 2 (see Figure 2.3), trust is built and evolves over time through multiple iterations of observation, evaluation, and mutual decision-making between the parties involved in the trust-building process. In the trust building process, B acts according to how B perceives A’s pattern of expectations and draws conclusions about whether trust is built. If A concludes that B’s acts are trustworthy, A will act to make himself vulnerable to B’s actions and in turn, B will perceive A’s action as indications of whether A is trustworthy or not, and likely to act in accordance with A’s expectations, which will be perceived as the confirmation of A’s initial trust (Six & Skinner, 2010). The trust building process is interactive and evolves over time. In the trust building process, considering A as a leader, and B as a follower, the extent to which followers trust their leaders depends on how behaviors of their respective leaders are perceived in the process of mutual interaction. Given these points, it was concluded that this study provides support for the trust building process proposed by Six and Skinner (2010) based upon the positive relationship found between perceived leader behavior and trusting work relationship.

Moreover, it was also concluded that the findings of this study offer initial evidence of how effective leadership may be attained through the lens of the trust building process in leader-behavior relationships. In a leadership process, followers assess leader behaviors and draw conclusions based upon their observations, and decide whether they are willing to trust their leaders. Likewise, leaders evaluate followers’ behaviors and draw conclusions based upon their observation, and decide whether they are willing to
trust their followers. The reciprocal process of leadership continues to evolve through the engagement of leaders and followers over time to develop mutual trust.

According to Hollander (1995), effective leadership is more likely to be attained in a process with reciprocity and the potential for two-way influence and power sharing. The results of this study appear to contribute support for the belief that effective leadership is attained through a trusting building process in the leader-follower relationship. Based upon finding on a positive association between perceived trusting work relationship, perceived leader behavior, and perceived leader effectiveness, it was concluded that followers’ willingness to engage in a trusting work relationship with their leader is directly related to how followers perceive the behaviors exhibited by their leaders, and how followers perceive their leaders’ effectiveness. In other words, the three variables of interest are intertwined in a trust building process in leader-follower relationships. The better leader behavior is perceived by subordinates and associates, the higher chance that a trusting work relationship may be engendered between the subordinates and associates and their respective leader. The higher degree of trusting work relationship was perceived by subordinates and associates, the better chance leaders are perceived as effective leaders. It was concluded that a continuous cycle may be manifested among perceived leader behavior, perceived trusting work relationship, and perceived leader effectiveness in the leadership process. Conversely, a negative cycle might also emerge which engenders distrust if any of the variables are not perceived in a positive relationship. Consequently, it was concluded that perceived leader behavior, perceived trusting work relationship, and perceived leader effectiveness are intertwined
and could be complementary to each other in a trust building process in a leader-follower relationship to attain effective leadership.

**Emotional intelligence.** Emotional intelligence is another key variable of interest in this study. Emotional intelligence, as a complex psycho-social construct, was defined as the ability to recognize and understand emotions and the skills to use this awareness to manage self and relationships with others (Goleman, 1995). Emotional intelligence reflects on how a person applies knowledge to the immediate situation (Bar-On, 2004). According to Goleman (1995), emotional intelligence consists of four skills, including self-awareness, self-management, social-awareness, and relationship management. Earley and Ang (2004) acknowledged that conclusions of both Goleman (1994) and Bar-On (2004) are concerned with how emotional intelligence is exhibited in terms of social skills. Interpersonal relationship building skills as a social skill is one of the professional competences required by Extension professionals (Cochran, 2009). A growing body of leadership literature identifies emotional intelligence as a crucial determinant of effective leadership (Bradberry & Greaves, 2009; George, 2000; Kerr et al., 2005; Rosete & Ciarrochi, 2005; Weinberger, 2009), which inspired this study to explore the relationship between emotional intelligence, job performance, and leadership effectiveness in OSU Extension system.

Emotional intelligence includes both cognitive and social skills, and can only be observed and reflected through actions and behaviors. Based on the findings of this study, emotional intelligence was not related to either a leader’s job performance or perceived leader effectiveness, while perceived leader behavior and perceived trusting work
relationship are being controlled. However, when bivariate relationships were examined, emotional intelligence was found to be positively related to perceived leader behavior, and perceived leader effectiveness. This result supports the theory that emotional intelligence can be observed through behaviors and actions (Bar-On, 2004), and that a leader’s emotional intelligence is indirectly linked to a leader’s perceived effectiveness (Weinberger, 2009).

The findings from this study also support the notion that leaders with greater emotional intelligence are perceived to display better leader behaviors and ultimately greater leader effectiveness. In the previous section, the trust building process in a leader-follower relationship involved positive interaction among perceived leader behavior, trusting work relationship, and perceived leader effectiveness. According to previous studies, emotional intelligence is a leadership capacity that can be learned and developed (Goleman, 2006; 1995; Goleman et al., 2002; Merkowitz & Earnest, 2006; Nwokah & Ahiauzu, 2010; Stein, 2008). Developing leader’s emotional intelligence may contribute to enhancing specific leader behaviors that are informed by emotional intelligence, and for leaders to be able to engage in a trust building relationship with their subordinates and associates. Emotional intelligence may help a leader with better self-awareness and social awareness during the process of forming leader-follower relationships, which may further influence leader behavior that is exhibited. This positive relationship may also contribute to self- and relationship-management to increase the degree of the willingness for the leader’s subordinates and associates to engage in a trusting work relationship, which may ultimately lead to greater leader effectiveness as
assessed by subordinates and associates. Therefore, it was concluded that emotional intelligence may contribute to a trusting leader-follower relationship building process and ultimately to a higher degree of effective leadership.

The finding that emotional intelligence was positively related to perceived leader effectiveness, and perceived leader behavior, yet was unable to explain a significant proportion of the variance associated with perceived leader effectiveness after controlling for the effect of intervening variables of perceived leader behavior and perceived trusting work relationship may have resulted from two reasons: emotional intelligence is a psycho-sociological construct that can only be displayed and observed through behaviors; and only the total EQ score in the measure of emotional intelligence was used in this study. Detailed discussions are presented in the following section.

*Emotional intelligence is a psycho-sociological construct that can only be displayed and observed through behaviors.* Emotional intelligence can only be displayed and observed through behaviors (Bar-On, 2004). Behaviors exhibited by a leader reflect how a leader adapts strategies to apply in immediate situations. This leads to the results when holding leader behavior constant, no significant proportion of the variance associated with perceived leader effectiveness was able to be explained by emotional intelligence as a sole predictor variable.

*Only the total EQ score in the measure of emotional intelligence was used in this study.* Total standardized EQ score was used as the sole measure of emotional intelligence of Ohio County Extension Directors, which is of limited interpretations in this study. The total EQ score from the measure of emotional intelligence in this study
(i.e., EQ-i 2.0) indicates how emotionally intelligent a respondent is in terms of how well the respondent is at perceiving and expressing oneself, developing and maintaining social relationships, coping with challenges, and using emotional information in an effective and meaningful way (MHS, 2011b). The total EQ score is composed of scores from five composite scales that contain 15 subscales. The five composite scales include self-perception, self-expression, interpersonal, decision making, and stress management. The fifteen subscales include: self-regard, self-actualization, emotional self-awareness, emotional expression, assertiveness, independence, interpersonal relationships, empathy, social responsibility, problem solving, reality testing, impulse control, flexibility, stress tolerance, and optimism (MHS, 2011). Emotional intelligence was found to be positively related to perceived leader behavior. Data from specific composite scales or subscale components scores of emotional intelligence may be able to explain a significant proportion of the variance associated with leader behavior. However, these data (except for total EQ score of each County Extension Director respondent) were not analyzed in this study. In other words, composite and subscale component EQ scores might have potential to reveal significant degree of association between emotional intelligence and perceived leader effectiveness.

Thus, further investigations should be conducted by adding more options for data analysis in multiple regression equation. One option could be examined by incorporating demographic characteristics (e.g., gender, years of service with OSU Extension) to analyze emotional intelligence and its relation to perceived leader behavior and perceived leader effectiveness, which may contribute to a better understanding of the relationship
among the three variables of interest. Another option could be examined by analyzing the composite and subscales of emotional intelligence in order to further identify which specific composite and subscale component contributes to perceived leader behavior, and perceived leader effectiveness. Structural equation modeling could also be utilized to further analyze a potential model of specific causal relationships among variables of interest.

**Cultural intelligence.** Cultural intelligence, as defined by Earley and Ang (2003) is “. . . a person’s capability for successful adaptation to new cultural settings, that is, for unfamiliar settings attributable to cultural context . . .” (p. 59). Cultural intelligence consists of three general facets: cognitive, motivational, and behavioral; and it reflects cognitive processing by capturing one’s self-concept and its degree of differentiation and flexibility (Earley & Ang, 2003). Fast changing environmental contexts included changing demographics and rapid globalization present challenges for leaders to perform well and lead effectively. Cultural intelligence is considered to be a capability that is needed for leaders to be more effective in cross-cultural contexts (Livermore, 2010). Therefore, another major part of this study was conducted to explore the relationship between cultural intelligence, job performance, and leader effectiveness.

The findings of this study revealed that the variable of cultural intelligence was unable to explain a significant proportion of the variance associated with either job performance or perceived leader effectiveness after controlling for the effect of intervening variables of perceived leader behavior and perceived trusting work.
relationship. However, Ohio County Extension Directors’ cultural intelligence was found to be positively related to their emotional intelligence.

According to Ang and Van Dyne (2008), cultural intelligence is a strong predictor of a leader’s performance when placed in multicultural situations. The findings that cultural intelligence was unable to explain a significant proportion of the variance associated with either job performance or perceived leader effectiveness after controlling for the effect of intervening variables of perceived leader behavior and perceived trusting work relationship, may have resulted from the following reasons: demographic characteristics of Ohio County Extension Directors, lack of diversity of staff in OSU Extension system, more cultural contexts to be identified, and feedback to be generated with other stakeholders in different cultural contexts.

**Demographic characteristics of Ohio County Extension Directors.** Based on the demographic characteristics in this study, 92.6% of Ohio County Extension Director respondents reported themselves as white-non Hispanic origin. The entire OSU Extension system is comprised of 92.6% of employees with white non-Hispanic origin (OSU Extension, 2013b) while 83.6% residents in the state of Ohio are white non-Hispanic origin (U.S. Census Bureau, 2013). Thus, it can be implied that a largely homogeneous group of Ohio County Extension Directors serving a relatively homogeneous cultural context. Groves and Feyerherm (2011) conducted a study with a highly diverse sample of working adults, and found that cultural intelligence of leaders was more strongly related to leader performance after controlling for demographic characteristics and emotional intelligence. The findings from this study reveal that Ohio
County Extension Directors are not faced with a multicultural context, which may explain why cultural intelligence was unable to predict a leaders’ performance.

**Lack of diversity of staff in OSU Extension.** The OSU Extension system is comprised of a highly homogeneous population in terms of race and ethnicity (i.e., 92.6% white- non Hispanic origin). The lack of diversity of staff within the organization might have resulted in insufficient variance of diverse staff for Ohio County Extension Directors to engage in behaviors that are informed by cultural intelligence. The employee demographics profile of OSU Extension remains constant while the trend of changing demographics profiles of Extension audiences the OSU Extension professionals serve continues to evolve. Challenges may emerge on how to effectively conduct programs to prepare future Ohioans with the capability of cultural intelligence to be successful in working cross-culturally. Moreover, the construct of cultural intelligence can be re-examined in the future when OSU Extension system is comprised of diversity of staff that reflects demographics profiles of the state of Ohio.

**More cultural contexts to be identified.** Cultural intelligence is the capability to function effectively across various cultural contexts (Earley & Ang, 2003), including, but not limited to, nationality, ethnicity, gender, generational, religious, and disability. A variety of cultural contexts plays a key role for cultural intelligence to be properly exhibited and observed. The cultural context that Ohio County Extension Directors faced in this study was limited to the organizational context involving leaders, followers, and stakeholders. No other cultural contexts were specifically identified to assess the
measure of cultural intelligence of Ohio County Extension Directors in this study in order to explore the effects that might be more associated with cultural intelligence.

*Feedback to be generated with other stakeholders in different cultural contexts.*

According to Livermore (2010), in addition to working across ethnic cultures, being able to navigate various organizational contexts is also a critical element in cultural intelligence for leaders to be effective. Organizational contexts including programmatic and interdisciplinary areas of work were not measured in this study, and should be considered in future research. Different programmatic and interdisciplinary areas of work may involve various degrees of diverse cultural contexts. Programmatic areas of work in Family and Consumer Sciences, Community Development, and 4-H Youth Development may involve more diverse cultural contexts in comparison with that of Agriculture and National Resources for the state of Ohio. Within a highly homogeneous demographic cultural context, alternatives to generate feedback from multiple stakeholders should be considered to observe what behaviors that Ohio County Extension Directors when working with stakeholders in various cultural contexts, such as rural, suburban, and urban communities, interdisciplinary program areas, different organizational contexts. Alternatively, a comparison study between different demographic cultural contexts might also be considered in future research.

Therefore, it might be concluded that within the relatively homogeneous cultural context in which Ohio County Extension Directors serve, cultural intelligence is not a strong predictor of either a leader’s job performance or perceived leader effectiveness after controlling for the effect of the intervening variables of perceived leader behavior.
and perceived trusting work relationship. In this study, there was no significant relationship found between cultural intelligence and other variables of interest, except for emotional intelligence.

Despite the fact that the findings discussed earlier in this chapter, this study revealed a positive relationship between measures of Ohio County Extension Directors’ cultural intelligence and emotional intelligence. The results of this study corroborate previous findings from Earley and Peterson (2004) that individuals with high cultural intelligence are more likely to reformulate their concept according to specific cultural context in which they are faced, and then display appropriate behavior in the specific cultural context. They further elaborated that being able to reformulate one’s concept according to the cultural context is fundamental for individuals with high emotional intelligence (Earley & Peterson, 2004). This study provides support to findings of previous studies that cultural intelligence and emotional intelligence are related (Earley & Peterson, 2004; Earley & Mosakowski, 2004; Livermore, 2010; Moon, 2010a).

Furthermore, findings of a study by Moon (2010a) suggested that after controlling for age, gender, and months of cross-cultural experience, emotional intelligence factors related to social competence (i.e. social awareness and relationship management) explained cultural intelligence over and beyond the emotional intelligence factors related to self-competence (i.e. self-awareness, and self-management). Specific facets of cultural intelligence and their relationships with emotional intelligence dimensions were not examined in this study. Further research should be conducted to explore factors of
emotional intelligence that are related to specific facets of cultural intelligence in the context of OSU Extension.

**Recommendations for Practice**

Based on the results of this study, recommendations for Extension professionals are presented below.

**Demonstrate appropriate behavior to engender trust.** The importance of perceived leader behavior as it relates to establishing trusting work relationships, and perceived leader effectiveness was revealed in the context of OSU Extension in this study. Researchers have identified trust as a critical foundation in cooperative relationships (Brower, et al., 2009; McAllister, 1995; Lewicki & Bunker, 1995; Shapiro et al., 1992), as well as an important requisite of effective leadership (Dirks & Skarlicki, 2004). Extension professionals with administrative leadership responsibilities should increase awareness of the role of leader behavior in the trust building process, and demonstrate appropriate behavior to establish trust in the leadership process. In other words, trust is more likely to be established between leaders and followers if better leader behaviors are demonstrated and perceived in the leadership process.

Being able to exhibit leadership qualities and capabilities that model the suggested behaviors is critical for County Extension Directors. Cochran et al. (2012) suggested several behaviors to manage the increased complexity in Extension operations posed by the trends that are affecting Extension. Those behaviors included being flexible and proactive; embracing change; more effectively managing work and life balance issues; and building relationships to better collaborate in a diverse work environment.
(Cochran et al., 2012). Therefore, demonstrating appropriate behaviors is recommended for Extension professionals to engender trust, and ultimately promote collaboration through teamwork to accomplish shared goals while continuing to carry out the mission of Extension in a changing environmental context.

Enhance leader effectiveness through a reciprocal process between leader behavior and trusting work relationship. Effective leadership is the foundation of organizational performance (Hollander, 1995). Based on the findings and results of this study, it is recommended that leaders may consider enhancing their effectiveness through a reciprocity process between leader behaviors and trusting work relationship.

Trust is relational and constructed through reciprocal interactions, including the processes of self-disclosure and response, as well as perspective taking and enactment (Weber & Carter, 2003). In a trust building process (Six & Skinner, 2010), assessments and judgments are continuously iterated and evolving, which mutually influence how each party is willing to establish mutual trust. Leaders and followers continue to observe, assess and improve actions that engender mutual trust to establish a trusting work relationship. Improved leader behavior and trusting work relationship can then serve as a foundation to enhance leader effectiveness in the leadership process. Therefore, leaders should be encouraged to engage in behaviors that contribute to reciprocal process between leaders and followers to further enhance leader effectiveness for greater organizational success.

Engage in leader behaviors that are informed by emotional intelligence. Based on the findings of this study, Extension professionals should engage in leader
behaviors that are informed by emotional intelligence in the pursuit of effective
leadership. The construct of emotional intelligence is the ability to recognize and
understand emotions and capitalizing on those skills to manage themselves and their
relationships with others (Goleman, 1995). The four social skills embedded in emotional
intelligence include self-awareness, self-management, social-awareness, and relationship
management (Goleman, 1995).

Bar-on (2004) further elaborated emotional intelligence as “... an array of
noncognitive capabilities, competencies, and skills that influence one’s ability to succeed
in coping with environmental demands and pressures” (p. 14). An array of noncognitive
capabilities, competencies, and skills are specifically identified in the five composite
scales of emotional intelligence instrument used in this study (i.e., EQ-i 2.0), including
self-perception, self-expression, interpersonal, decision making, and stress management.
These five composite scales contain fifteen subscale components, including self-regard,
self-actualization, emotional self-awareness, emotional expression, assertiveness,
independence, interpersonal relationships, empathy, social responsibility, problem
solving, reality testing, impulse control, flexibility, stress tolerance, and optimism (MHS,
2011). Understanding one’s emotional intelligence helps individuals to perceive, identify
and observe their own strengths and weaknesses. Possessing a greater knowledge of
emotional intelligence expands what individuals know about themselves, aware of the
emotions of others, manage their own emotions, and then be able to further navigate the
best strategies to apply in immediate situations. For Extension professionals whose jobs
involve varieties of interpersonal interaction, understanding emotional intelligence and engaging in behavior that is informed by emotional intelligence is recommended.

In addition, scholars have identified that emotional intelligence is a leadership capacity that can be learned and developed (Goleman, 1995; Goleman et al., 2002; Merkowitz & Earnest, 2006; Nwokah & Ahiauzu, 2020; Stein, 2008). Strong interpersonal skills and good teamwork skills (K. Smith, personal communication, Oct. 9, 2012) are two major employee qualifications sought by Extension for its talent pool. From an organizational perspective, leadership development programs about specific behaviors that can be informed by emotional intelligence should be offered to enhance capability of Extension professionals for Extension to continue to carry on its mission in improving people’s lives and communities.

**Re-assess the measure of annual job performance review of Ohio County Extension Director.** Based on the findings of this study, no significant relationship was found between the supervisor ratings of Ohio County Extension Directors’ job performance and perceived leader effectiveness. A conceptual gap appears to exist between job performance review and perceived leader effectiveness. From an organizational perspective for the purpose of future leadership development and planning, the validity and reliability of the annual job performance measure should be examined to reflect the degree of leader effectiveness in a leadership position of County Extension Director within the context of OSU Extension.
Suggestions for Future Research

The results of this study provide support for previous studies with empirical evidence regarding the knowledge base of the relationships among job performance, perceived leader effectiveness, emotional intelligence, cultural intelligence, perceived leader behavior, and perceived trusting work relationship in the context of OSU Extension. Based on the findings of this study, and a literature review, the following topics should be addressed in future research:

1. Explore differences in the relationship among the variables of interest by adding demographic characteristics.

2. Utilize Structure Equation Modeling (SEM) data analysis approach to further investigate a model with specific causal relationships proposed among variable of interest.

3. Investigate specific composite scale and subscale components of emotional intelligence that may more significantly predict a proportion of the variance associated with perceived leader behavior.

4. Identify an appropriate proxy of leader’s job performance measure: What is the appropriate proxy of leader’s job performance? What options need to be considered in the context of specific research interest?

5. Generate a 360-degree feedback for the measure of job performance and perceived leader effectiveness to perform a thorough assessment on the relationship among variables of interest. One of the options could be collecting
data of supervisor-ratings of leader effectiveness, and to explore the relationship between supervisor-ratings and subordinates-rating of leader effectiveness.

6. Consider utilizing samples from different cultural contexts (e.g., different stakeholders from rural, suburban, and urban communities) to further investigate the relationships among the measure of cultural intelligence and other variables of interest in this study.

7. Consider using alternative research methods, such as comparative studies to compare results between states of Extension system with different demographic characteristics (e.g. homogeneous vs. heterogeneous population), qualitative approach to collect in-depth interview data to identify specific findings, or longitudinal study to analyze the trends and change on relationships among the variables of interest.

**Summary**

Leader effectiveness and job performance are key measures of organizational effectiveness, which are influenced by organizational leadership. Leadership capacities related to effective leadership and job performance such as emotional intelligence and cultural intelligence are thought to be highly correlated to leader effectiveness and job performance. However, empirical studies that assess the relationships among measures of leader effectiveness, job performance, emotional intelligence and cultural intelligence are limited (Groves & Feyerherm, 2011) in general and specifically in the Extension System.
County Extension Directors of the Ohio State University Extension are responsible for providing administrative leadership for Extension personnel at the county level in Ohio in addition to their existing role as an Extension Educator. Changing demographics, trends affecting Extension, and challenges from working with diverse audience all create a need for Ohio County Extension Directors to serve as role models on how and what to address the needs of the increasingly diverse Extension clientele while carrying out the mission. This study was conducted to explore the relationships among measures of job performance, perceived leader effectiveness, emotional intelligence, and cultural intelligence of County Extension Directors in Ohio, while controlling for potential effects in the measures of perceived leader behavior and perceived trusting work relationship.

This study was descriptive in nature and utilized a correlational research design with quantitative methodology. The target population for this census study consisted of County Extension Directors employed by Ohio State University Extension in all 88 counties in Ohio, and selected subordinates and associates of respective County Extension Director respondents. Data collection was completed in three phases involving the use of historical data and online survey instruments with two subject groups and two online survey administration platforms.

Findings pertaining to each research question that guided this study included:

- Neither emotional intelligence, nor cultural intelligence explains a significant proportion of the variance associated with the job performance of Ohio County
Extension Directors after controlling for the effect of the intervening variables of perceived leader behavior and perceived trusting work relationship.

- Neither emotional intelligence, nor cultural intelligence explains a significant proportion of the variance associated with perceived leader effectiveness of Ohio County Extension Directors after controlling for the effect of intervening variables of perceived leader behavior and perceived trusting work relationship.

- Ohio County Extension Director’s measure of job performance was not related to perceived leader effectiveness.

- Emotional intelligence of Ohio County Extension Directors is positively related to their cultural intelligence.

- Ohio County Extension Directors’ perceived leader behavior exhibited a positive relationship with their perceived trusting work relationship with their subordinates and associates.

Moreover, additional bivariate relationships found between variables of interest in this study were also discussed in this chapter. Despite the findings that not all research questions in this study revealed significant relationships, this study provides empirical evidence support for previous studies and theories related to leader behavior applied in the context of OSU Extension system.

The mission of OSU Extension set forth in the OSU Extension Strategic plan is “... engaging people to strengthen their lives and communities through research-based educational programming” (OSUE, 2008, p.3). The ‘people’ here can be defined as the external and internal clientele served by Extension professionals. Based on the results of
this study and in light of challenges resulting from changing demographics for Extension organization to continue to carry on its mission to better serve all people in Ohio, Ohio County Extension Directors are recommended to: (a) demonstrate appropriate leader behavior to engender trust; (b) enhance leader effectiveness through a reciprocal process between leader behavior and trusting work relationship, and (c) engage in leader behaviors that are informed by emotional intelligence.
References


King, J. (2010, October). *History and Philosophy of Agricultural and Extension Education*. Lecture presented at class of AEE 800 of Agricultural Communication, Education, and Leadership, the Ohio State University.


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Thering, S. (2007). A methodology for evaluating transdisciplinary collaborations with university in mind: An example from the Green community development in


Appendix A: The Cultural Intelligence Scale (CQS)
CED Study: Part I - CQ

Read each statement and select the response that best describes your capabilities. Select the answer that BEST describes you AS YOU REALLY ARE.

Please note:
I. Intercultural interactions occur domestically when people interact with those from a different subgroup (e.g., different age, sex, ethnicity, functional background) in their home country (domestic diversity).

II. Intercultural interactions also occur when people travel to different countries or interact with people from a different cultural (international diversity).

© Cultural Intelligence Center 2005. Used by permission of Cultural Intelligence Center. Note: Use of this scale granted to academic researchers for research purposes only. For information on using the scale for purposes other than academic research (e.g., consultants and non-academic organizations), please send an email to cquery@culturaliq.com

1. I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.

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2. I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.

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3. I am conscious of the cultural knowledge I apply to cross-cultural interactions.

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4. I check the accuracy of my cultural knowledge as I interact with people from different cultures.

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5. I know the legal and economic systems of other cultures.

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6. I know the rules (e.g., vocabulary, grammar) of other languages.

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7. I know the cultural values and religious beliefs of other cultures.

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8. I know the marriage systems of other cultures.

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9. I know the arts and crafts of other cultures.

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10. I know the rules for expressing non-verbal behaviors in other cultures.

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11. I enjoy interacting with people from different cultures.

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12. I am confident that I can socialize with locals in a culture that is unfamiliar to me.

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13. I am sure I can deal with the stresses of adjusting to a culture that is new to me.

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14. I enjoy living in cultures that are unfamiliar to me.

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15. I am confident that I can get accustomed to the shopping conditions in a different culture.

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16. I change my verbal behavior (e.g. accent, tone) when a cross-cultural interaction requires it.

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<th>Slightly Disagree</th>
<th>Neutral</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
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17. I use pause and silence differently to suit different cross-cultural situations.

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<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Neutral</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
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18. I vary the rate of my speaking when a cross-cultural situation requires it.

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<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Neutral</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
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CED Study: Part I - CQ

19. I change my non-verbal behavior when a cross-cultural situation requires it.

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<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Neutral</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
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</table>

20. I alter my facial expressions when a cross-cultural interaction requires it.

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<tr>
<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Neutral</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
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21. Please provide the following information.

First Name

Last Name

Email Address

Age

Years of Employment with CSU Extension

22. Education level

- O Master's degree
- O Doctoral degree

Other (please specify) ...

23. Race/ Ethnicity

Other (please specify) ...

24. Please indicate if you'd like to have the option of having your individual assessment report.

- O YES
- O NO
Use of Permission

From: Linn Van Dyne [vandyne@culturalq.com]
Sent: Friday, October 12, 2012 11:09 AM
To: Yueh-Ti Chen
Cc: 'Dawn Knox'
Subject: using CQ in your dissertation

Hello Claire,

Thank you for your interest in using cultural intelligence in your dissertation. We are always pleased to learn that others want to build on our work.

The scale is copyrighted, but we make it freely available to academics for scholarly work aimed at publication in academic journals. Thus, you have my permission to use the scale in your dissertation research. Should you want to use it for consulting or program evaluation in the future, please contact me to make the necessary arrangements.

If you decide to use the scale on your own, you will need to create and administer your own questionnaire using whatever software works best for you.

If you decide that you would like to offer a benefit to those who are willing to help you out with your dissertation by completing the survey, you may want to consider using our on-line assessment services.

The value of using the on-line assessment is that each participant will receive a personal feedback report that allows them to compare their scores with the world-wide norms. The feedback reports also include reflection questions to help participants make sense of the feedback. Finally, reports also provide guidance on creating personal development plans for ways to use CQ strengths and work on CQ capabilities that are not so strong. We find that offering the feedback reports increases participation and the quality of responses because the reports provide a “reward” to those who help with the research. The feedback reports also help participants to enhance their self-awareness of their capabilities.

We offer these on-line assessments to academics at highly discounted rates.

The cost of standard CQ assessment and feedback reports is $12 per participant. The cost of enhanced CQ assessment and feedback reports that also include feedback on cultural values is $12 per participant.

Should you wish to use our on-line assessment and have us provide you with the data in an xls file, the cost of each data set is $100. For example, if you have a pre and post
research design, you would administer the assessment at T1 and T2. The cost for both data sets would be $200.

I hope this is helpful. Please let me know if you have questions or if you would like more information on our on-line assessments and feedback.

Best wishes with your research.

Linn

-----Original Message-----
From: Yueh-Ti Chen [mailto:chen.529@buckeyemail.osu.edu]
Sent: Thursday, October 11, 2012 10:54 AM
To: cquery@culturalq.com
Subject: Question about administrating CQS scores

Hi,

I am Claire Yueh-ti Chen, a PhD candidate at the department of Agricultural Communication, Education, and Leadership, the Ohio State University. I plan to use CQS in my dissertation, and am working on my proposal at current stage.

I'd like to consult with you in regard of how to administrate CQS assessment. I understand CQS (20-item scale) can be offered complimentary for research purpose, but have the following questions that you might be able to help with answers?

(1) Do you have an online portal that participants can access? Or, the researcher who needs to use CQS needs to create an online version using his/her preferred online tool, such as Survey Monkey?

(2) After the data is collected, how are CQ scores summated? Do I, as researcher, summate those data by myself?

Thank you and looking forward to your feedback!

Best regards,
Claire Yueh-ti Chen
Appendix B: Leadership Practice Inventory (LPI-Observer)
To what extent does your County Extension Director (CED) engage in the following behaviors? Choose the response rating that best applies to each statement.

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1. My CED sets a personal example of what he/she expects of others.

<table>
<thead>
<tr>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
<th>Occasionally/Sometimes</th>
<th>Fairly Often</th>
<th>Usually</th>
<th>Very Frequently</th>
<th>Almost Always</th>
<th>N/A</th>
</tr>
</thead>
</table>

2. My CED talks about future trends that will influence how our work gets done.

<table>
<thead>
<tr>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
<th>Occasionally/Sometimes</th>
<th>Fairly Often</th>
<th>Usually</th>
<th>Very Frequently</th>
<th>Almost Always</th>
<th>N/A</th>
</tr>
</thead>
</table>

3. My CED seeks out challenging opportunities that test his/her own skills and abilities.

<table>
<thead>
<tr>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
<th>Occasionally/Sometimes</th>
<th>Fairly Often</th>
<th>Usually</th>
<th>Very Frequently</th>
<th>Almost Always</th>
<th>N/A</th>
</tr>
</thead>
</table>

4. My CED develops cooperative relationships among the people he/she works with.

<table>
<thead>
<tr>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
<th>Occasionally/Sometimes</th>
<th>Fairly Often</th>
<th>Usually</th>
<th>Very Frequently</th>
<th>Almost Always</th>
<th>N/A</th>
</tr>
</thead>
</table>

5. My CED praises people for a job well done.

<table>
<thead>
<tr>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
<th>Occasionally/Sometimes</th>
<th>Fairly Often</th>
<th>Usually</th>
<th>Very Frequently</th>
<th>Almost Always</th>
<th>N/A</th>
</tr>
</thead>
</table>

6. My CED spends time and energy making certain that the people he/she works with adhere to the principles and standards that we have agreed on.

<table>
<thead>
<tr>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
<th>Occasionally/Sometimes</th>
<th>Fairly Often</th>
<th>Usually</th>
<th>Very Frequently</th>
<th>Almost Always</th>
<th>N/A</th>
</tr>
</thead>
</table>

7. My CED describes a compelling image of what our future could be like.

<table>
<thead>
<tr>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
<th>Occasionally/Sometimes</th>
<th>Fairly Often</th>
<th>Usually</th>
<th>Very Frequently</th>
<th>Almost Always</th>
<th>N/A</th>
</tr>
</thead>
</table>

8. My CED challenges people to try out new and innovative ways to do their work.

<p>| Almost Never | Rarely | Seldom | Once in a While | Occasionally/Sometimes | Fairly Often | Usually | Very Frequently | Almost Always | N/A |</p>
<table>
<thead>
<tr>
<th>CED Study- Subordinates &amp; Associates</th>
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<tbody>
<tr>
<td><strong>9. My CED actively listens to diverse points of view.</strong></td>
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<tr>
<td>Almost Never</td>
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<td><img src="image" alt="Scale" /></td>
</tr>
<tr>
<td><strong>10. My CED makes it a point to let people know about his/her confidence in their abilities.</strong></td>
</tr>
<tr>
<td>Almost Never</td>
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<tr>
<td><img src="image" alt="Scale" /></td>
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<tr>
<td><strong>11. My CED follows through on the promises and commitments that he/she make.</strong></td>
</tr>
<tr>
<td>Almost Never</td>
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<td><img src="image" alt="Scale" /></td>
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<tr>
<td><strong>12. My CED appeals to others to share an exciting dream of the future.</strong></td>
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<tr>
<td>Almost Never</td>
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<td><img src="image" alt="Scale" /></td>
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<tr>
<td><strong>13. My CED searches outside the formal boundaries of his/her organization for innovative ways to improve what we do.</strong></td>
</tr>
<tr>
<td>Almost Never</td>
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<tr>
<td><img src="image" alt="Scale" /></td>
</tr>
<tr>
<td><strong>14. My CED treats others with dignity and respect.</strong></td>
</tr>
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<td>Almost Never</td>
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<td><img src="image" alt="Scale" /></td>
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<td><strong>15. My CED makes sure that people are creatively rewarded for their contributions to the success of projects</strong></td>
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<td>Almost Never</td>
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<td><img src="image" alt="Scale" /></td>
</tr>
<tr>
<td><strong>16. My CED asks for feedback on how his/her actions affect other people's performance.</strong></td>
</tr>
<tr>
<td>Almost Never</td>
</tr>
<tr>
<td><img src="image" alt="Scale" /></td>
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</table>
## CED Study - Subordinates & Associates

### 17. My CED shows others how their long-term interests can be realized by enlisting in a common vision.

<table>
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<tr>
<th>Frequency</th>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
<th>Occasionally/Sometimes</th>
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<th>Usually</th>
<th>Very Frequently</th>
<th>Almost Always</th>
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### 18. My CED asks "What can we learn?" when things don't go as expected.

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<tr>
<th>Frequency</th>
<th>Almost Never</th>
<th>Rarely</th>
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<th>Occasionally/Sometimes</th>
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### 19. My CED supports the decisions that people make on their own.

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<th>Frequency</th>
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<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
<th>Occasionally/Sometimes</th>
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### 20. My CED publicly recognizes people who exemplify commitment to shared values.

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<th>Frequency</th>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
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### 21. My CED builds consensus around a common set of values for running our organization.

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<th>Frequency</th>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
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### 22. My CED paints the "big picture" of what we aspire to accomplish.

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<th>Frequency</th>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
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### 23. My CED makes certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.

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<th>Frequency</th>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
<th>Occasionally/Sometimes</th>
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</table>

### 24. My CED gives people a great deal of freedom and choice in deciding how to do their work.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
<th>Occasionally/Sometimes</th>
<th>Fairly Often</th>
<th>Usually</th>
<th>Very Frequently</th>
<th>Almost Always</th>
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### 25. My CED finds ways to celebrate accomplishments.

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<th>Frequency</th>
<th>Almost Never</th>
<th>Rarely</th>
<th>Seldom</th>
<th>Once in a While</th>
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<th>Fairly Often</th>
<th>Usually</th>
<th>Very Frequently</th>
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### CED Study - Subordinates & Associates

<table>
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<tr>
<th>Question</th>
<th>Scale</th>
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<tbody>
<tr>
<td>26. My CED is clear about his/her philosophy of leadership.</td>
<td>Almost Never</td>
</tr>
<tr>
<td>27. My CED speaks with genuine conviction about the higher meaning and</td>
<td>Almost Never</td>
</tr>
<tr>
<td>purpose of our work.</td>
<td></td>
</tr>
<tr>
<td>28. My CED experiments and takes risks, even when there is a chance of</td>
<td>Almost Never</td>
</tr>
<tr>
<td>failure.</td>
<td></td>
</tr>
<tr>
<td>29. My CED ensures that people grow in their jobs by learning new skills</td>
<td>Almost Never</td>
</tr>
<tr>
<td>and developing themselves.</td>
<td></td>
</tr>
<tr>
<td>30. My CED gives the members of the team lots of appreciation and support</td>
<td>Almost Never</td>
</tr>
<tr>
<td>for their contributions.</td>
<td></td>
</tr>
</tbody>
</table>
Use of Permission

January 22, 2013

Claire Yuch-Ti Chen  
Room 250, AgAdmin Building  
2120 Fyffe Road  
Columbus, Ohio 43210

Dear Ms. Chen:

Thank you for your request to use the Leadership Practices Inventory (LPI) in your dissertation. We are willing to allow you to reproduce the instrument in written form, as outlined in your request, at no charge. If you prefer to use our electronic distribution of the LPI (vs. making copies of the print materials) you will need to separately contact Lisa Shannon (ls Shannon@wiley.com) directly for instructions and payment. Permission to use either the written or electronic versions requires the following agreement:

(1) That the LPI is used only for research purposes and is not sold or used in conjunction with any compensated management development activities;  
(2) That copyright of the LPI, or any derivation of the instrument, is retained by Kouzes Posner International, and that the following copyright statement is included on all copies of the instrument;  
"Copyright 2003 James M. Kouzes and Barry Z. Posner. All rights reserved. Used with permission",  
(3) That one (1) electronic copy of your dissertation and one (1) copy of all papers, reports, articles, and the like which make use of the LPI data be sent promptly to our attention; and,  
(4) That you agree to allow us to include an abstract of your study and any other published papers utilizing the LPI on our various websites.

If the terms outlined above are acceptable, would you indicate so by signing one (1) copy of this letter and returning it to me either via email or by post to: 1548 Camino Monde San Jose, CA 95125. Best wishes for every success with your research project.

Cordially,

Ellen Peterson  
Permissions Editor  
Epetersen4@gmail.com

[Signature]

I understand and agree to abide by these conditions:

(Signed) Yuch-Ti Chen  
Date: Jan 28, 2013

Expected Date of Completion is: Aug 21, 2013
Appendix C: Leader Effectiveness Scale
**Leader Effectiveness Scale**

The following 15 items are based on the Ohio State University Extension position description for County Extension Directors (CED). Think about your CED and consider how you would rate their overall effectiveness in fulfilling each of the following job responsibilities. Your effectiveness rating should reflect the result your CED has achieved for each responsibility. If you are unable to rate your CED on any item, please mark N/A.

Please rate the effectiveness of your CED in fulfilling each of the following responsibilities:

| 1. Serving as a communication link with OSUE (e.g., region and state level) |
|---|---|---|---|---|---|---|---|
| Not Applicable (N/A) | Extremely Ineffective | Moderately Ineffective | Slightly Ineffective | Slightly Effective | Moderately Effective | Extremely Effective |
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| 2. Serving as a communication link with external stakeholders (e.g., advisory committee; legislators) |
|---|---|---|---|---|---|---|---|
| Not Applicable (N/A) | Extremely Ineffective | Moderately Ineffective | Slightly Ineffective | Slightly Effective | Moderately Effective | Extremely Effective |
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| 3. Providing a positive work environment |
|---|---|---|---|---|---|---|---|
| Not Applicable (N/A) | Extremely Ineffective | Moderately Ineffective | Slightly Ineffective | Slightly Effective | Moderately Effective | Extremely Effective |
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| 4. Participating in professional development |
|---|---|---|---|---|---|---|---|
| Not Applicable (N/A) | Extremely Ineffective | Moderately Ineffective | Slightly Ineffective | Slightly Effective | Moderately Effective | Extremely Effective |
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| 5. Implementing OSU Extension human resource policies |
|---|---|---|---|---|---|---|---|
| Not Applicable (N/A) | Extremely Ineffective | Moderately Ineffective | Slightly Ineffective | Slightly Effective | Moderately Effective | Extremely Effective |
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| 6. Obtaining stakeholder input and support in the development of county's annual budget |
|---|---|---|---|---|---|---|---|
| Not Applicable (N/A) | Extremely Ineffective | Moderately Ineffective | Slightly Ineffective | Slightly Effective | Moderately Effective | Extremely Effective |
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| 7. Preparing the county's annual budget and submitting it to county commissioners for funders at appropriate time |
|---|---|---|---|---|---|---|---|
| Not Applicable (N/A) | Extremely Ineffective | Moderately Ineffective | Slightly Ineffective | Slightly Effective | Moderately Effective | Extremely Effective |
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |
### CED Study - Subordinates & Associates

#### *8. Engaging Extension personnel to accomplish strategic planning goals*

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#### *9. Enhancing diversity through OSUE personnel hiring decisions (e.g., diversity encompasses gender, racial, religious, cultural backgrounds, etc.)*

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#### *10. Delivering programs designed to diverse audiences*

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#### *11. Providing resources to support your work in Extension*

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#### *12. Coaching you to improve your performance*

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#### *13. Modeling professional communication skills (i.e. listening, oral, written, etc.)*

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#### *14. Facilitating teamwork*

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#### *15. Encouraging interdisciplinary collaboration*

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CED Study- Subordinates & Associates

Please NOTE!!

If you are interested in being considered in the prize drawing for one of the four $25 gift cards, please send an email to Claire Chen (chen.528@osu.edu) indicating you've completed the survey for CED study, and provide with your name and contact information.

Thank you very much for your participation!!
Appendix D: Behavior Trust Inventory (BTI)
**CED Study- Subordinates & Associates**

**Behavioral Trust Inventory (BTI)**

Please use the seven Likert-type to rate your willingness with your County Extension Director (CED).

How willing are you to...

Copyright 2013 by Dr. Nicole Gillespie. Used by permission of Dr. Nicole Gillespie.

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<tr>
<th><em>1. Rely on your leader's work-related judgements</em></th>
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<th><em>2. Rely on your leader's work-related skills and abilities</em></th>
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<th><em>3. Depend on your leader to handle an important work issue on your behalf</em></th>
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<th><em>4. Rely on your leader to represent your work accurately to others</em></th>
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<th><em>5. Depend on your leader to back you up in difficult work situation</em></th>
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<th><em>6. Share your personal feeling about personal issues that are affecting your work</em></th>
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<th><em>7. Confide in your leader about personal issues that are affecting your work</em></th>
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<th><em>8. Discuss how you honestly feel about your work, even negative feelings and frustration</em></th>
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**CED Study- Subordinates & Associates**

**9. Discuss work-related problems or difficulties that could potentially be used to disadvantage you**

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**10. Share your personal beliefs with your leader**

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Use of Permission

From: Nicole Gillespie [n.gillespie@business.uq.edu.au]
Sent: Monday, December 17, 2012 6:28 PM
To: Yueh-Ti Chen
Subject: RE: (follow-up): Request for your permission on using BTI in my dissertation research

Dear Claire,

Apologies for the delay and thanks for the reminder. Your study sounds fascinating and yes, you are very welcome to use the BTI.
Attached are some references that you may find helpful and also a user-friendly version of the inventory. The inventory has now been used in many studies (over 20) and the factor structure and reliabilities are consistently robust.

I wish you all the best with your research.
Merry Christmas!
Nicole

Dr. Nicole Gillespie
UQ Business School
University of Queensland
Brisbane QLD 4072 Australia
Ph: (+61) 7 3346 8076
Email: n.gillespie@business.uq.edu.au

Co-Convenor EGOS Standing Working Group on 'Organizational Trust'
see http://www.organisationaltrust.org/

Guest Editor: special issue of Organization Studies on 'Trust in Crisis: Organizational and Institutional Trust, Failures and Repair' Deadline for paper submission December 2012.

Recent publications:

241
Dear Dr. Gillespie,

Hope this mail finds you well. I am writing to follow up with you on my request for your permission on using BTI in my dissertation research, in case my earlier message was slipped. Would you please kindly let me know your decision? I am hoping to start my data collection in early Jan, 2013, and would appreciate if you may kindly let me know. Again, if there is any question or concern, please feel free to let me know as well.

Thank you and looking forward to hearing from you soon!

Best regards,

Claire
My study will explore how emotional intelligence and cultural intelligence relate to leader effectiveness and job performance, while controlling for the effect of trusting work relationship. The target population is the County Extension Directors in Ohio, and their subordinates and associates.

I would appreciate if you may kindly grant your permission for me to use BTI in my dissertation research. If there is any further question regarding my study, please feel free to let me know. I would be more than happy to provide more details.

Thank you, and I look forward to hearing from you soon!

Sincerely,

Claire Yueh-Ti Chen

Doctoral Candidate
Department of Agricultural Communication, Education, and Leadership.
The Ohio State University
Appendix E: Email Communication with County Extension Directors
Pre-notification letter to all County Extension Directors sent through the Director of OSU Extension on Feb. 28, 2013

Subject: Invitation - Research Study

Greetings!

Demographic changes in the target audience served by OSU Extension along with a dispersed organizational structure often creates challenges for Extension administrators and leaders. County Extension Directors are uniquely situated as they serve dual roles as Extension administrators and Extension educators. The ability to demonstrate strong interpersonal skills and collaborate with an increasingly diverse clientele may be a critical factor affecting job performance and leader effectiveness of County Extension Directors. Therefore, we are conducting research to better understand relationships among job performance, leader effectiveness, emotional intelligence, and cultural intelligence involving County Extension Directors in Ohio.

My name is Claire Chen, and I am a doctoral candidate in Agricultural and Extension Education (AEE) at The Ohio State University. My graduate advisors are Drs. Robert J. Birkenholz and Graham R. Cochran. We are conducting this study to explore how emotional intelligence and cultural intelligence relate to job performance and leader effectiveness of Ohio County Extension Directors.

The purpose of this email is to inform you about the study and invite you to participate. Your participation will only require about 15-20 minutes of your time and the information you provide will be kept confidential. Research reports will only involve summary data, and no individual responses will be revealed.

You will soon be receiving an email message from me requesting your participation in this study. Your participation is completely voluntary; however, we appreciate your input in order to better understand and prepare future leaders in OSU Extension.

Your participation is extremely important in this process, so please consider participating in this study.

Sincerely,

Claire Yueh-Ti Chen
Doctoral Candidate
Department of Agricultural Communication, Education, and Leadership (ACEL)
The Ohio State University
Cultural Intelligence Survey Invitation Letter

Sent: March 5, 2013
To: [Email]
From: "chen.529@osu.edu via surveymonkey.com" <member@surveymonkey.com>
Subject: OSUE County Extension Director Study (Part I- CQ)
Body: Dear [FirstName],

Greetings!

This message is being sent to request your participation in a research project titled: Relationship Among Emotional Intelligence (EQ), Cultural Intelligence (CQ), Job Performance and Leader Effectiveness- A Study of County Extension Directors in Ohio. Your input as a County Extension Director is extremely valuable to us, as well as yourself. Individualized assessment reports related to your EQ and CQ will be provided at your request upon completion of the two assessments. The individualized assessment reports will provide valuable insight as you fulfill your administrative leadership responsibilities. Therefore, we highly encourage your voluntary participation. Please refer to the attachment in below link for more details about this study.

In order to utilize your time well, you are receiving this email as the first invitation to participate in this study. A second email will be sent with EQ assessment information after you complete the CQ assessment. If you agree to participate in this research, completing the CQ assessment will require about five minutes of your time.

Even though the assessment requests you to enter your name, be assured that your responses will be strictly confidential. Your participation will indicate implied consent to use your responses in this study. For questions, concerns, complaints, or if you feel you have been harmed as a result of study participation please contact Claire Chen at (614) 886-2589 or Dr. Robert J. Birkenholz at (614) 292-8921 or Dr. Graham R. Cochran at (614) 688-4246.

Thank you in advance for your consideration. Please complete your CQ assessments by March 12, 2013, if possible.

Click on this link to begin: https://www.surveymonkey.com/s.aspx

Respectfully,
Greetings!

This message is sent to request your participation in a research project about the relationship between County Extension Directors’ job performance and leader effectiveness, and their emotional intelligence and cultural intelligence. Data provided by respondents will be used to improve our understanding of the relationship among these variables, and may be used to prepare future OSUE human resource and staffing plans.

You are assured that your data will be kept confidential on a secure campus server. Access to your data will be limited to myself, my advisors, and the IRB at OSU. Although every effort to protect confidentiality will be made, no guarantee of internet survey security can be given. Although unlikely, transmissions can be intercepted and IP addresses can be identified. For the purpose of facilitating survey contacts, your participation record will be assigned with a random code to create a master code list. The master code list will be used to match your data with that of subordinates and associates from your respective county Extension office who may also be invited to participate in this study. Extension subordinates and associates from your county may be asked to provide data about their perceptions of leader behavior, leader effectiveness, and trusting work relationship exhibited by you in your role as County Extension Director. Responses from subordinates and associates will be kept confidential. We assure complete
anonymity and we will not attempt to track the responses of any individual participant. We will not maintain any record of who participates in this research beyond completion of data collection procedures. Data will only be reported in aggregate form and not linked to any individual respondent.

The job performance measure used in this study will be your Administrative Service score as a County Extension Director from your annual performance review completed in June, 2012. Your agreement to participate in this study will be viewed as providing implied consent for your administrative service score to be used for research purposes in this study.

The emotional intelligence and cultural intelligence measures used in this study will be based upon your response to the Emotional Intelligence Scale (EQ-i), and Cultural Intelligence Scale (CQS). You will be also asked to provide basic demographic information. Your participation will involve responding to questionnaires administered online via the Internet. You may skip any item(s) that you do not want to answer.

If you agree to participate in this research, it will involve about 20 minutes of your time. Upon your completion of the data collection instruments, you can decide if you would like to receive summary reports about your emotional intelligence and cultural intelligence scores. Please remember to indicate your preference accordingly, and we will make sure that the appropriate reports are sent to you.

Your participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled.

For questions, concerns, complaints, or if you feel you have been harmed as a result of study participation please contact Claire Chen at (614) 886-2589 or Dr. Robert J. Birkenholz at (614) 292-8921 or Dr. Graham R. Cochran at (614) 688-4246. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Office of Responsible Research Practices at 1-800-678-6251. Your participation by completing the electronic questionnaire will imply that you are giving permission for the researcher to use the data you provide for research purposes.

Thank you in advance for your consideration.

Respectfully,
Sent: March 12, 2013
To: [Email]
From: "chen.529@osu.edu via surveymonkey.com" <member@surveymonkey.com>
Subject: Reminder- CED Study Part I (CQ)
Body: Click on this link to begin the CQ assessment:
https://www.surveymonkey.com/s.aspx

Dear [FirstName],

Greetings,

This message is sent as a reminder of your invitation to participate in Cultural Intelligence (CQ) assessment as part of a research project titled: Relationship Among Emotional Intelligence (EQ), Cultural Intelligence (CQ), Job Performance and Leader Effectiveness- A Study of County Extension Directors in Ohio. Your input is not only helpful for us to generate reliable data but also valuable to better understand yourself as you fulfill your administrative leadership responsibilities at OSUE. Your individualized CQ assessment report will be provided if you are willing to complete the full CQ assessment online.

If you have already completed the CQ assessment, please accept our sincere thanks. If not, please do so at your earliest convenience. We are grateful for your help and look forward to including your input to aid in conducting research that is of benefit to you and OSU Extension.

You are assured that your responses will be kept confidential on a secure campus server. I hope that you feel comfortable in allocating 5 minutes of your time in responding to this CQ assessment by Friday, March 15.

Thank you in advance for your consideration.
Wish you a great day!

Respectfully,

Claire Chen
Doctoral Candidate
Department of Agricultural Communication, Education, and Leadership
The Ohio State University

Click on this link to begin the CQ assessment:
https://www.surveymonkey.com/s.aspx

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.
https://www.surveymonkey.com/optout.aspx

Cultural Intelligence Survey 2nd Reminder Letter

Date: March 15, 2013
To: [Email]
From: "chen.529@osu.edu via surveymonkey.com" <member@surveymonkey.com>
Subject: Reminder: CED Study Part I (CQ)
Body: Click on this link to begin the CQ assessment:
https://www.surveymonkey.com/s.aspx

Dear [FirstName],

Greetings,

Last week you received an invitation to complete the Cultural Intelligence (CQ) assessment as part of a research project titled: Relationship Among Emotional Intelligence (EQ), Cultural Intelligence (CQ), Job Performance and Leader Effectiveness- A Study of County Extension Directors in Ohio. Your input is valuable to us as it will help us to make sure that the data collection instrument generates reliable data.
If you have already completed the CQ assessment, please accept our sincere thanks. If not, please do so by Monday, March 18. We are grateful for your help and look forward to including your input to benefit OSU Extension professionals and the entire organization.

Thank you for your participation.

Respectfully,

Claire Chen
Doctoral Candidate
Department of Agricultural Communication,
Education, and Leadership
The Ohio State University

Click on this link to begin the CQ assessment:
https://www.surveymonkey.com/s.aspx

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.
https://www.surveymonkey.com/optout

Cultural Intelligence Survey 3rd Reminder

Sent: March 19, 2013 via the Director of OSU Extension
Subject: ACEL Research Study Invitation - response reminder

-sent on behalf of Claire Chen, ACEL graduate student
(advisor – Robert J. Birkenholz, professor of agricultural and Extension education)

We need your help!

I recognize that you have many demands on your time; however I strongly encourage you to complete the data collection instrument that Ms. Claire Chen is using to assess cultural awareness among Ohio county Extension directors. I believe the results of this research will benefit OSU Extension in the future. Your contribution to the research and data collection process is both important and essential.

Claire will be sending a reminder e-mail with the survey link for your use. When you get it, PLEASE take a few moments to complete the data collection instrument at your earliest convenience. Your participation is voluntary; however, we appreciate your input.
to better understand and prepare future leaders in OSU Extension.

Also, please know that your responses will be collected anonymously and maintained in a confidential data file for analysis. No individual responses or respondents will be identified.

Thank you for your assistance with this research project!

Sincerely, Keith

=================================
Keith L. Smith
Associate Vice President, Agricultural Administration; Associate Dean FAES; Director, Ohio State University Extension and Gist Chair in Extension Education and Leadership
2120 Fyffe Road, Room 3 Ag. Admin
Columbus, Ohio 43210
614-292-6181 fax: 614-688-3807
Web: http://Extension.osu.edu

Cultural Intelligence Survey Notes and Announcement

Notes sent to all County Extension Directors at OSU on March 25, 2013

Subject: CED Study - Reminder

-sent on behalf of Claire Yueh-Ti Chen, Doctoral Candidate, Department of Agricultural Communication, Education, and Leadership (ACEL)
The Ohio State University

Reminder: if you have not already done so, please complete the Cultural Intelligence (CQ) instrument that Dr. Smith mentioned in his recent e-mail. You can access the CQ instrument at the URL: https://www.surveymonkey.com/s/T3XP95Y, and it should take only about five minutes to provide your responses. Thank you!

-Claire Yueh-Ti Chen
Announcement at OSU County Extension Director Meeting

Date: March, 26, 2013

Research is an important function to a land-grant university, and OSU Extension has a strong record of support for conducting and participating in research projects. Currently, OSU Extension, the Gist Chair in Extension Leadership, and the Department of Agricultural, Communication, Education, and Leadership are partnering on a research project to assess the relationship between CED administrative leadership and measures of emotional and cultural intelligence. Please take a few minutes to respond and participate by providing research data when requested to enable our organization to continually seek out research-based strategies for organizational improvements.

Cultural Intelligence Survey Final Reminder Letter

From: Yueh-Ti Chen [chen.529@buckeyemail.osu.edu]
Sent: Tuesday, April 02, 2013 9:00 AM
To: Chen, Claire
Subject: CQ survey- your final opportunity!

Dear Claire,

Greetings!

I hope this mail finds you well. This note is sent to inform you that you are one of 24 CEDs who have yet to complete the OSU County Extension Director research project which has been endorsed by the OSU Director of Extension, Dr. Keith Smith. Your input will help us make sure that we have reliable data for analysis.

Be assured that your responses will be kept confidential on a secure campus server. We hope that you feel comfortable in allocating 5-10 minutes to respond to the CQ
assessment. Please click on the link below to complete the survey questionnaire by Thursday, April 4th. Should you have any questions or concerns about this email, please feel free to contact Claire Chen at chen.529@osu.edu. We are grateful for your help and look forward to including your input to benefit OSU County Extension Directors and the entire Extension organization.

Click on this link to begin the CQ assessment:
<https://www.surveymonkey.com/s/T3XP95Y>

Thank you for your participation.

Respectfully,

Claire Yueh-Ti Chen

Doctoral Candidate
Department of Agricultural Communication,
Education, and Leadership  The Ohio State University

Emotional Intelligence Survey Invitation Letter

Sent: March 24, 2013 via MHS Portal
Subject: Invitation- CED Study (Part II- EQ)

Dear <Respondent_FirstName>,

Greetings!

Thank you for completing the Cultural Intelligence assessment for the research project titled: *Relationship Among Emotional Intelligence (EQ), Cultural Intelligence (CQ), Job Performance and Leader Effectiveness- A Study of County Extension Directors in Ohio.* Congratulations, you are half-way there!

This email is being sent to ask you to complete the EQ assessment as your final step in the data collection process. Your input is vitally important to the success of this research. In addition, after completing the EQ assessment, we will send you an individualized report based on the data you provide. If you agree to participate, completing the EQ assessment will require about 20 minutes of your time.
Even though the assessment requests you to enter your name, be assured that your responses will be strictly confidential. Your participation will indicate implied consent to use your responses in this study. For questions, concerns, complaints, or if you feel you have been harmed as a result of study participation please contact Claire Chen at (614) 886-2589 or Dr. Robert J. Birkenholz at (614) 292-8921 or Dr. Graham R. Cochran at (614) 688-4246.

Thank you in advance for your consideration. Please complete your EQ assessment by Friday, March 29, 2013, if possible.

**Click on this link to begin: <Link>**. Please note that you must complete the questions in one sitting or the system will not save your answers and you will need to start over from the beginning.

Respectfully,

Claire Chen  
Doctoral Candidate  
Department of Agricultural Communication, Education, and Leadership  
The Ohio State University

---

**Emotional Intelligence Survey 1st Reminder**

Sent: March 28, 2013 via MHS  
Subject: 1st Reminder- CED Study Part II (EQ)

Dear <Respondent_FirstName>,

Greetings,

This message is sent as a reminder of your invitation to complete the Emotional Intelligence (EQ) assessment as your final step in the OSU County Extension Director research project.

You will be receiving the EQ assessment report after the data collection process is completed. We hope you find this to be a rewarding experience. Please be sure to provide your email address in the EQ assessment so that we can send you a personalized report.
Please note that the deadline to complete the EQ assessment is this Friday, March 29. We are grateful for your help and look forward to including your input to help us conduct research that will benefit you as well as OSU Extension.

Be assured that your responses will be kept confidential on a secure campus server. I hope that you feel comfortable in allocating 10 to 20 minutes to respond to the EQ assessment. Should you have any questions or concerns about this email, please feel free to contact Claire Chen at chen.529@osu.edu.

Thank you in advance for your consideration!

Respectfully,

Claire Chen  
Doctoral Candidate  
Department of Agricultural Communication,  
    Education, and Leadership  
The Ohio State University

    Click on this link to begin the EQ-i 2.0 assessment: <Link>

Appendix E: Email Communication with County Extension Directors

Emotional Intelligence Survey 2nd Reminder Letter

Sent: April 2, 2013 via MHS  
Subject: 2nd Reminder: EQ Survey- CED Study Part II/II

Dear <Respondent_FirstName>,

Greetings!

Last week you received an invitation to complete the Emotional Intelligence (EQ) assessment as your final step in the OSU County Extension Director research project which has been endorsed by the OSU Director of Extension, Dr. Keith Smith. Your input will help us make sure that we have reliable data for analysis.
If you have already completed the EQ assessment, please accept our sincere thanks. If not, please click on the link below to complete the survey questionnaire by Thursday, April 4th. We are grateful for your help and look forward to including your input to benefit OSU County Extension Directors and the entire Extension organization.

Thank you for your participation.

Respectfully,

Claire Chen
Doctoral Candidate
Department of Agricultural Communication, Education, and Leadership
The Ohio State University

Click on this link to begin the EQ assessment: <Link>

Emotional Intelligence Final Reminder Letter

Sent: April 5, 2013 via MHS
Subject: EQ survey- your final opportunity!

Dear <Respondent_FirstName>,

Greetings!

I hope this mail finds you well. This note is sent to inform you that you are one of 19 CEDs who have yet to complete the OSU County Extension Director research project which has been endorsed by the OSU Director of Extension, Dr. Keith Smith. Your input will help us make sure that we have reliable data for analysis.

Be assured that your responses will be kept confidential on a secure campus server. We hope that you feel comfortable in allocating 10 to 20 minutes to respond to the EQ assessment as your final step in the data collection process. Please click on the link below to complete the survey questionnaire by Monday, April 8. Should you have any questions or concerns about this email, please feel free to contact Claire Chen at chen.529@osu.edu. We are grateful for your help and look forward to including your input to benefit OSU County Extension Directors and the entire Extension organization.
Click on this link to begin the EQ assessment: <Link>

Thank you for your participation.

Respectfully,

Claire Yueh-Ti Chen
Doctoral Candidate
Department of Agricultural Communication, Education, and Leadership
The Ohio State University
Appendix F: Email Communication with Subordinates and Associates
Pre-notification

Sent: April 12, 2013 through the Director of OSU Extension

Subject: Phase II - Claire Chen - Cultural/Emotional Intelligence Study

Greetings!

Trends affecting OSU Extension such as changing demographics and increasingly complex organizational structures often create challenges for Extension administrators. County Extension Directors are uniquely affected through their dual roles as an Extension administrator and Extension educator. Being able to demonstrate strong interpersonal skills and collaborate with diverse clientele is becoming more critical to the job performance and leader effectiveness of County Extension Directors. Therefore, we are conducting research to better understand the relationship among job performance, leader effectiveness, emotional intelligence and cultural intelligence involving County Extension Directors in Ohio.

My name is Claire Chen, and I am a doctoral candidate in the Agricultural and Extension Education (AEE) graduate program at The Ohio State University. My graduate advisors are Drs. Robert J. Birkenholz and Graham R. Cochran. We are conducting this study to explore how emotional intelligence and cultural intelligence are related to job performance and leader effectiveness of Ohio County Extension Directors.

The purpose of this email is to inform you about this study and invite you to participate. Your participation will only require about 10-15 minutes of your time and the information you provide will be kept confidential. Research reports will only involve summary data, and your individual responses will not be revealed.

You will soon be receiving an email message from me requesting your participation in this study. Your participation is completely voluntary; however, we sincerely value and appreciate your input in order to better understand and prepare OSU Extension leaders in the future.

Your participation is extremely important in this process, so please consider participating in this study.

Sincerely,

Claire Chen
Doctoral Candidate
Sent: April 15, 2013
To: [Email]
From: "chen.529@osu.edu via surveymonkey.com" <member@surveymonkey.com>
Subject: Invitation- OSU CED Study
Body: Dear [FirstName],

Greetings!

This message is sent to request your participation in a research project about the relationship between County Extension Directors’ job performance and leader effectiveness, and their emotional intelligence and cultural intelligence. Data provided by respondents will be used to improve our understanding of the relationship among these variables, and may be used to prepare future OSUE human resource and staffing plans.

You are assured that your data will be kept confidential on a secure campus server. Access to your data will be limited to myself, my advisors, and the Institutional Review Board (IRB) at OSU. Although every effort to protect confidentiality will be made, no guarantee of internet survey security can be given. Although unlikely, transmissions can be intercepted and IP addresses can be identified. To ensure that the data you provide can be matched to your County Extension Director, your participation record will be anonymously assigned with a random code pertaining to each county for identification purposes. We will not maintain any record of individuals who participate in this research beyond the list of subjects who were initially invited to participate. Nor will there be any attempt to track any individual participant as all personal identifiers have been removed, and participants cannot be identified due to the fact that IP address collection will be turned off. Data will only be reported in aggregate form and not linked to any individual respondent.

If you are willing to participate in this research, it will involve about 10-15 minutes of your time. The questionnaire will ask you to provide data on three measures of leader behavior, leader effectiveness, and trusting work relationship with regard to your County Extension Director. You will be asked to respond to statements about your perception of leader behavior and leader
effectiveness regarding your County Extension Director, and your willingness
to engage in a dyadic trusting work relationship with your respective County
Extension Director. Your responses will not be shared with your County
Extension Director. You may indicate N/A (Not Applicable) on any item(s)
that you are unable to answer.

Upon your completion to the survey, you will be automatically entered into a
drawing for one of four $25 gift cards. Winners will be randomly drawn and
announced after the survey is closed.

Your participation in this study is voluntary. Refusal to participate will involve
no penalty or loss of benefits to which you are otherwise entitled. You may
discontinue participation at any time without penalty or loss of benefits to
which you are otherwise entitled.

For questions, concerns, complaints, or if you feel you have been harmed as a
result of study participation please contact Claire Chen at (614) 886-2589 or Dr.
Robert J. Birkenholz at (614) 292-8921 or Dr. Graham R. Cochran at (614)
688-4246. For questions about your rights as a participant in this study or to
discuss other study-related concerns or complaints with someone who is not
part of the research team, you may contact the Office of Responsible Research
Practices at 1-800-678-6251. Your participation by completing the electronic
questionnaire will imply that you are giving permission for the researcher to use
the data you provide for research purposes.

Click on this link to begin the survey by Friday, Apr. 19:
https://www.surveymonkey.com/s.aspx

Thank you in advance for your consideration.

Respectfully,

Claire Chen
Doctoral Candidate
Department of Agricultural Communication,
   Education, and Leadership
The Ohio State University

This link is uniquely tied to this survey for invited email address only. Please
do not forward this message.
Please note: If you do not wish to receive further emails from SurveyMonkey, please click the link below, and you will be automatically removed from our mailing list.
https://www.surveymonkey.com/optout.aspx

1st Reminder Letter

Sent: April 28, 2013
To: [Email]
From: "chen.529@osu.edu via surveymonkey.com" <member@survemonek.com>
Subject: Reminder: CED Study- Subordinates and Associates
Body: Dear [FirstName],

Greetings!

This message is sent as a reminder of your invitation to participate in a research project about the job performance, leader effectiveness, emotional intelligence and cultural intelligence of County Extension Directors in Ohio. Information provided by respondents will be used to better understand the relationship among these variables, and may be used to prepare future OSUE human resource and staffing plans. If you have not already done so, we request your voluntary participation.

You are assured that your responses will be kept confidential on a secure campus server. We will not maintain any record of individuals who participate in this research beyond the list of subjects who were initially invited to participate. Data will only be reported in aggregate form and not linked to any individual respondent.

Upon your completion to the survey, you will be automatically entered to a prize drawing of four $25 gift cards. Winners will be randomly drawn and contacted after the survey is closed.

There are no known risks associated with your participation and I hope that you feel comfortable in responding to this brief questionnaire by this Friday, April 19.

Click on this link to begin the survey: https://www.surveymonkey.com/s.aspx

Thank you in advance for your consideration.
Respectfully,

Claire Chen
Doctoral Candidate
Department of Agricultural Communication, Education, and Leadership
The Ohio State University

This link is uniquely tied to this survey for invited groups only. Please do not forward this message.

Thanks for your participation!

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list. https://www.surveymonkey.com/optout.aspx

2nd Reminder Letter

Sent: April 23, 2013
To: [Email]
From: "chen.529@osu.edu via surveymonkey.com" <member@surveymonkey.com>
Subject: Your response is needed!
Body: Dear [FirstName],

Greetings!

Last week you may recall receiving an invitation to participate in a research project about your perception of the leader behavior and leader effectiveness of your County Extension Director. Please know that this research project has been endorsed by the OSU Director of Extension, Dr. Keith Smith. Your input is needed to ensure that we have reliable data for analysis.

If you have already completed the survey, please accept our sincere thanks. If not, please click on the link below to complete the online questionnaire by this
Friday, April 26th. We are grateful for your help and value your input as we strive for continual improvement in the performance and effectiveness of OSU County Extension Directors and the entire Extension organization.

Click on this link to begin the survey: https://www.surveymonkey.com/s.aspx

Thank you for your participation.

Respectfully,

Claire Chen
Doctoral Candidate
Department of Agricultural Communication, Education, and Leadership
The Ohio State University

This link is uniquely tied to this survey and your invited group only. Please do not forward this message.

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list. https://www.surveymonkey.com/optout.aspx

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Final Reminder Letter

Sent: April 25, 2013
To: [Email]
From: "chen.529@osu.edu via surveymonkey.com" <member@surveymonkey.com>
Subject: Your final opportunity to share and win a $25 gift card!
Body: Dear [FirstName],

Greetings!

I hope this mail finds you well. This note is sent to remind you of your final opportunity to win one of the four $25 gift cards by participating in a research project about your perception of the leader behavior and leader effectiveness of your County Extension Director. This research has been endorsed by the OSU Director of Extension, Dr. Keith Smith. We would like to extend the participation deadline to next Monday when we will be proceeding with data analysis. Your input is certainly needed as it will help us make sure that we
have reliable data for analysis.

Be assured that your responses are anonymous, and no data will be singled out. We hope that you feel comfortable in allocating 10 minutes to complete the online survey questionnaire by Monday, April 29. We are grateful for your help and look forward to including your input to continue to improve the performance and effectiveness of OSU County Extension Directors and the entire OSU Extension organization.

Click on this link to begin the survey: https://www.surveymonkey.com/s.aspx

Thank you for your participation.

Respectfully,

Claire Yueh-Ti Chen
Doctoral Candidate
Department of Agricultural Communication,
   Education, and Leadership
The Ohio State University

This link is uniquely tied to this survey and invited groups only. Please do not forward this message.

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list. https://www.surveymonkey.com/optout.aspx