TRANSFORMATIONAL LEADERSHIP RESEARCH IN AGRICULTURAL EDUCATION: A SYNTHESIS OF THE LITERATURE

Bradley C. Greiman, Associate Professor
University of Minnesota

Abstract

Leadership development is viewed as a foundational component of agricultural education and has been associated with the field since the early 20th century. An emerging research topic is leadership style and inquiry that is focused on transformational leadership. In an effort to contribute to the field's knowledge base in leadership development and to guide a leadership research agenda, a synthesis of literature examined transformational leadership. Premier journals in the field and several affiliated journals published from 1990 to 2008 were selected for analysis. The study concluded that a small but recent number of articles focused on transformational leadership and the majority of research was conducted with extension personnel. Most studies focused on participants from a single state, and almost all of the studies gathered leadership style data through a self-reported procedure. Demographic variables and their relationship to leadership style received the most attention of researchers. Compared to the Multifactor Leadership Questionnaire (MLQ) normative sample, college of agriculture deans, extension personnel, and agricultural education teachers perceived they had higher scores for most leadership factors. Suggestions for future research are presented and draw attention to the potential that this line of inquiry has for a field that embraces leadership development.

Introduction

Leadership development is viewed as a foundational component of agricultural education and has been associated with the field since the early 20th century. Passage of the Smith-Hughes Act in 1917 provided funding to support agricultural education programs in secondary schools. Developing leadership skills in students became an integrated approach within the agricultural education program when the FFA organization was established in 1928. Today, the emphasis on leadership continues as the FFA organization has a mission of premier leadership, personal growth, and career success for students involved in agricultural education (National FFA Organization, 2006). As a result, the high school program has been successful in assisting students to develop their leadership skills through the integrated leadership model (Butters & Ball, 2006; Connors & Swan, 2006). Further, the teacher who leads the agricultural education program and the local FFA chapter has been identified as having a major impact on students' leadership development (Morgan & Rudd, 2006; Vaughn & Moore, 2000).

In addition to leadership being associated with agricultural education in a formal context, leadership development occurs in nonformal and informal settings such as agribusiness, organizations, and extension. The Smith-Lever Act in 1914 established the Cooperative Extension System and resulted in formation of the 4-H program and its mission of developing leadership in youth. In addition, adult and community leadership has been recognized as a component of extension education programs and a key aspect of rural development (Seevers, Graham, Gamon, & Conklin, 1997). Research findings support the contribution of extension and 4-H programs to the economic, social, physical, and cultural environment of communities (Seevers et al.).

Leadership development (Buriak & Shin, 1993; *National Research Agenda,* 2007; Radhakrishna, 1998) has been identified as an important area for agricultural education scholars to fully develop the knowledge base of the field

(Barrick, Hughes, & Baker, 1991; Williams, 1991). Researchers have conducted literature reviews focused on the historical development of leadership activities in the FFA and 4-H (Hoover, Scholl, Dunigan, & Mamontova, 2007), the major areas of leadership development research (Connors & Swan, 2006), and the development of leadership skills by FFA members (Butters & Ball, 2006). Missing from the literature associated with agricultural education is a review of leadership style research. In support of this need, Avolio and Bass (2004) argued that it is necessary to first identify and understand one's personal leadership style before an individual can develop leadership in others. As a result, this study is being conducted to contribute to agricultural education's knowledge base in leadership development and to guide a research agenda focused on transformational leadership.

Transformational Leadership and Full-Range Leadership Theory

There are a variety of leadership theories and corresponding leadership style instruments that have been advocated by researchers. However, much of the leadership research since the late 1980s has concentrated on the positive effects of transformational leadership (Avolio, 1999; Bass, 1985; Lowe & Gardner, 2000; Tickle, Brownlee, & Nailon, 2005). The most widely used instrument to assess transformational leadership style is the Multifactor Leadership Questionnaire (MLQ) (Avolio & Bass, 2004; Hunt, 1999; Lowe, Kroeck, & Sivasubramaniam, 1996). Research to determine effective leaders in organizations such as business, education, government, medical, military, religious, and volunteer has relied on the MLQ to measure leadership style (Bass & Avolio, 1999; Berson, Shamir, Avolio, & Popper, 2001). The first version of the MLQ was developed over 20 years ago (Bass, 1985), and the instrument has undergone many revisions and adaptations. Various versions of the MLQ have been used in the United States and more than 30 countries, and translations of the MLQ have been completed in numerous languages (Avolio & Bass, 2004).

The MLQ is grounded in full-range leadership theory (FRLT) (Avolio & Bass, 1991). Building on the previous work of leadership scholars (Bass, 1985; Burns, 1978; Downton, 1973; House, 1976), Avolio and Bass (1991) proposed FRLT. The theory consists of three constructs which represent distinct leadership styles: transformational, transactional, and laissez-faire. Further, FRLT incorporates nine leadership factors composed of five transformation leadership factors, three transformational leadership factors, and one laissez-faire leadership factor (Avolio & Bass, 2004; Avolio, Bass, & Jung, 1995).

Transformational leaders are adept at transforming people from followers into leaders (van Linden & Fertman, 1998) and influence followers to transcend self-interests for the greater good of their organization (Bass, 1985). Transformational leaders motivate and inspire followers to achieve extraordinary goals (Avolio & Bass, 2004), are process-oriented, and focus on *being* a leader (van Linden & Fertman). FRLT posits that transformational leadership is comprised of five factors (Antonakis, Avolio, & Sivasubramaniam, 2003; Avolio & Bass, 2004): (a) *Idealized influence (attributed)* refers to the perception that the leader is charismatic, confident, ethical, idealistic, and trust worthy; (b) *Idealized influence (behavior)* refers to leadership behavior that results in followers identifying with and wanting to emulate the leader; (c) *Inspirational motivation* refers to leadership that communicates high expectations, inspires commitment to a shared vision, and motivates followers by portraying optimism; (d) *Intellectual stimulation* includes challenging the assumptions, beliefs, and traditions of followers and organizations, and stimulating creativity and critical thinking about problems and solutions; and (e) *Individualized consideration* is defined by considering individual needs of followers and providing a supportive climate for individual growth and development.

In contrast, transactional leadership is contingent on a transaction or exchange between leader and follower that usually consists of a reward system (Bass, 1985). Transactional leaders value problem and solution identification, are product-oriented,

and focus on *doing* leadership tasks (van Linden & Fertman, 1998). Transactional leadership is theorized to comprise three leadership factors (Avolio & Bass, 2004): (a) *Contingent reward* leadership is a constructive transaction (i.e., positive reinforcement) whereby expectations are clarified and the leader rewards follower efforts based on fulfilling an agreement or obligation; (b) *Management-by-exception (active)* refers to leaders who monitor followers' performance and take corrective action (i.e., negative reinforcement) to ensure that standards are met; and (c) *Management-by-exception (passive)* leaders intervene only after standards have not been met and mistakes have already happened (i.e., negative feedback). An even more passive approach is laissez-faire, which represents an absence of leadership and results when the leader avoids making decisions, does not use his/her authority, and abdicates responsibility (Bass & Avolio, 1995; Northouse, 2004). Laissez-faire is a non-leadership approach in contrast to the more active forms of transformational and transactional leadership.

Purpose and Objectives

The purpose of this study was to examine transformational leadership research within the field of agricultural education. The following research objectives were addressed in the study:

1. Conduct a literature review to synthesize the results of leadership research using the MLQ within the field of agricultural education.
2. Identify gaps in the transformational leadership literature within the field of agricultural education and provide suggestions for future research.

Methods and Procedures

The author's initial task was to establish criteria for the search process associated with the literature review (Torraco, 2005). First, the field of agricultural education was operationalized as five broad dimensions (i.e., agricultural communications, agricultural leadership, extension and outreach education, agricultural education in university and postsecondary settings, and school-based agricultural education) as identified in the *National Research Agenda* (2007). Second, the literature review investigated premier journals representing the field's dimensions and several other affiliated journals. Premier journals selected for analysis were *Journal of Agricultural Education, Journal of Applied Communications, Journal of Extension, Journal of International Agriculture and Extension Education, and Journal of Leadership Education.* Affiliated journals that agricultural education researchers utilize to reach a more expansive readership also were selected for analysis and included *Career and Technical Education Journal* and *Journal of Career and Technical Education.*

Third, journals published from 1990 to 2008 were selected for analysis, and articles chosen for the study were required to have used the MLQ with a sample or population representing a dimension of agricultural education. The researcher consulted journal web sites and examined publications using the following search terms: *Avolio, Bass, full range leadership theory, leadership, multifactor leadership questionnaire, MLQ,* and *transformational*. In several cases, print versions of the journals were reviewed if the electronic versions were unavailable. Thirteen articles met the criteria for inclusion in the study.

The analysis procedure consisted of a staged review of the articles. First, the abstracts were read as an initial review and to gather key concepts such as purpose of the study, participant characteristics, variables studied, and results. This information went into a concept matrix. Next, an in-depth review of each article was used to fill gaps and add categories to the concept matrix. Finally, themes were identified and became the structure for the findings.

Findings

The literature review is organized by the themes of participants, leadership style, demographic variables and leadership style, leadership style as a predictor, predictors of

leadership style, multi-level observations of leadership style, performance outcomes, and gaps in the literature and future research.

Participants

Table 1 identifies characteristics of participants in transformational leadership studies using the MLQ. Most of the studies focused on participants from a single state; however, there were three national studies conducted by Jones and Rudd (2008), Moore and Rudd (2006), and Stedman and Rudd (2006b), and two regional studies conducted by Stedman and Rudd (2005, 2006a). Table 1 reveals that the majority of transformational leadership research was conducted with extension personnel (i.e., extension educators and 4-H faculty). Limited research focused on agricultural education teachers (Greiman, Addington, Larson, & Olander, 2007; Greiman & Addington, 2008) and university students (Harms & Knobloch, 2005; Rosenbusch & Townsend, 2004). No studies were found that involved agribusiness leaders, agricultural communicators, international participants, or youth. The majority of studies involved relatively small sample sizes (range from 29 to 57) with the exception of four studies that had more modest participant numbers (range from 97 to 177): (a) Greiman et al., (b) Greiman and Addington, (c) Rosenbusch and Townsend, and (d) Stedman and Rudd (2006b).

Leadership Style

Table 2 displays self-reported leadership style and leadership factor scores from the MLQ normative sample (N = 3,375) (Avolio & Bass, 2004) and six studies conducted in the field of agricultural education. There were additional articles that reported leadership style and/or leadership factor scores, however the articles did not reveal the complete leadership data needed for inclusion in Table 2. Two of the studies were national in scope and involved different populations: (a) college of agriculture deans (Jones & Rudd, 2008) and (b) state extension leaders (Moore & Rudd, 2006) (Table 2). One regional and two state studies focused on extension personnel: (a) southern region 4-H county faculty (Stedman & Rudd, 2005), (b) Pennsylvania county extension educators (Sinasky & Bruce, 2006), and (c) West Virginia county extension agents (Woodrum & Safrit, 2003). One of the articles pertained to Minnesota agricultural education teachers (Greiman et al., 2007).

Table 1
Characteristics of Participants in Leadership Studies Using the MLQ

Study	Location of study	Sample	*N*
Brown, Birnstihl, and Wheeler, 1996	Nebraska	Extension educators	57
Bruce, Webster, and Sinasky, 2006	Northeast state	Extension educators	48
Greiman et al., 2007	Minnesota	Ag education teachers	176
Greiman and Addington, 2008	Minnesota	Ag education teachers	177
Harms and Knobloch, 2005	Midwestern state	Preservice teachers	29
Jones and Rudd, 2008	United States	College of ag deans	56
Moore and Rudd, 2006	United States	Extension leaders	47
Rosenbusch and Townsend, 2004	Land-grant university	University students	108
Sinasky and Bruce, 2006	Pennsylvania	Extension educators	48
Stedman and Rudd, 2005	Southern United States	4-H faculty	34
Stedman and Rudd, 2006a	Southern United States	4-H faculty	34
Stedman and Rudd, 2006b	United States	4-H faculty	97
Woodrum and Safrit, 2003	West Virginia	Extension educators	27

Table 2
Self-Reported Leadership Scores from MLQ Normative Sample and Leadership Studies in Agricultural Education

		National		Regional	State		
Leadership style and factor[a]	MLQ normative sample	College of ag deans[b]	Extension leaders[c]	Southern 4-H faculty[d]	PA extension educators[e]	WV extension educators[f]	MN ag ed teachers[g]
	M	*M*	*M*	*M*	*M*	*M*	*M*
Transformational	3.02	3.28	3.41	2.82	3.07	3.79	3.07
II(A)	2.95	3.18	3.16	2.78	2.98	3.91	3.00
II(B)	2.99	3.24	3.53	2.65	2.96	3.88	2.98
IM	3.04	3.44	3.54	2.93	3.09	3.93	3.16
IS	2.96	3.26	3.35	2.76	3.05	3.93	2.84
IC	3.16	3.32	3.48	3.00	3.28	3.29	3.35
Transactional	1.88	2.24	1.79	1.79	1.64	2.83	2.04
CR	2.99	3.13	3.15	2.80	3.00	3.95	3.14
MBE(A)	1.58	1.37	1.20	1.37	1.37	2.26	1.61
MBE(P)	1.07	1.17	1.02	1.21	1.27	2.29	1.37
Laissez-faire	.61	.88	.50	.76	.90	.88	1.03

Note. 5-point scale (0 = not at all, 1 = once in a while, 2 = sometimes, 3 = fairly often, 4 = frequently, if not always).
[a]II(A) = Idealized Influence (Attributed), II(B) = Idealized Influence (Behavior), IM = Inspirational Motivation, IS = Intellectual Stimulation, IC = Individualized Consideration, CR = Contingent Reward, MBE(A) = Management-By-Exception (Active), MBE(P) = Management-By-Exception (Passive).
[b]Jones and Rudd (2008).
[c]Moore and Rudd (2006).
[d]Stedman and Rudd (2005).
[e]Sinasky and Bruce (2006).
[f]Woodrum and Safrit (2003).
[g]Greiman et al. (2007).

As shown in Table 2, college of agriculture deans, extension personnel, and agricultural education teachers perceived they were more transformational in their leadership style in contrast to transactional and laissez-faire. Within transformational leadership, inspirational motivation and individualized consideration received the highest scores from the respondent groups. Within transactional leadership, it was found that contingent reward, management-by-exception (active), and management-by-exception (passive) was the relative order generally preferred by the respondents (Table 2).

In general (Table 2), college of agriculture deans, extension personnel, and agricultural education teachers had higher self-reported scores than the MLQ normative sample for transformational and laissez-faire leadership. The participants perceived they use idealized influence (attributed), inspirational motivation, intellectual stimulation, individualized consideration, contingent reward, and management-by-exception (passive) more than the MLQ normative sample. Management-by-exception (active) was perceived by participants to be used less often when compared to the MLQ normative sample.

Demographic Variables and Leadership Style

Demographic variables and their connection to leadership style received the most attention of research in agricultural education. Findings focused on gender revealed conflicting results. Researchers concluded that female university student leaders tend to be more transformational than their male counterparts, while male student leaders were more transactional (Rosenbusch & Townsend, 2004). Within transformational leadership, female teachers had significantly higher scores on individualized consideration than did males teachers (Greiman et al., 2007). Concurring, Stedman and Rudd (2005) determined that female 4-H county faculty scored the highest on individualized consideration. Other studies revealed contrasting results as males reported higher leadership scores than did female respondents among college of agriculture deans (Jones & Rudd) and Southern region 4-H county faculty (Stedman & Rudd, 2005). Yet another study reported that there was no significant difference in leadership style by gender of Minnesota agricultural education teachers (Greiman et al.).

In addition to gender, agricultural education research has assessed leadership style and its connection to age, tenure, and career choice. Stedman and Rudd (2005) found differences in the leadership factors of 4-H county faculty by age and tenure within extension. In contrast, Greiman et al. (2007) concluded that there was no significant difference in the leadership style of Minnesota agricultural education teachers based on years of teaching experience. In a study involving university students, Harms and Knobloch (2005) determined that leadership style of preservice teachers was not related to career choice.

Ethnicity and academic status were two demographic variables that received limited attention in agricultural education research involving the MLQ. No significant difference in leadership style and leadership factors by ethnicity was found among college of agriculture deans (Jones & Rudd, 2008). Among Minnesota agricultural education teachers (Greiman et al., 2007), it was concluded that there was not a significant difference in leadership style based on highest academic degree earned. However, teachers with bachelor‘s degrees and those with master‘s degrees differed on intellectual stimulation (Greiman et al.).

Leadership Style as a Predictor

Greiman and Addington (2008) identified the importance of leadership style as a predictor of youth leadership development self-efficacy (YLD-SE). Their study introduced YLD-SE as a new construct for use in leadership research. Results showed that Minnesota agricultural education teachers perceived they had *quite a bit* of YLD-SE; however, one-fourth of participants believed they had *very little* or *some influence* on youths‘ leadership development. Hierarchical regression analysis revealed that transformational and laissez-faire leadership style were significant predictors of YLD-SE. Teachers were

advised to study and adopt a transformational leadership style and reduce their laissez-faire leadership style as an approach to increase their YLD-SE.

A study (Stedman & Rudd, 2006a) involving 4-H county faculty in the Southern region of the United States determined that leadership style was not a significant predictor of volunteer administration leadership (VAL). However, it was reported that organizational culture and age were independent variables that significantly predicted VAL.

Predictors of Leadership Style

Extension educators were the only participant group utilized to examine predictors of leadership style. In general, independent variables found to predict transformational and transactional leadership style were quite similar and included tenure in extension, previous leadership development (i.e., college leadership courses, participation in leadership workshops), and VAL competencies. Moore and Rudd (2006) conducted a national study of administrators responsible for the day-to-day operation of the Cooperative Extension Service within each state. Using multiple regression techniques, the study concluded that the best model for predicting transformational leadership style included ethnicity, tenure in extension, and previous leadership development. Predictors of transactional leadership style included highest degree held, tenure in extension, and previous leadership development.

In a national study of 4-H county faculty, Stedman and Rudd (2006b) determined that a significant amount of the variance in transformational leadership was explained primarily by two VAL competencies: systems leadership and organizational leadership. The study concluded that organizational leadership was the best predictor of transactional leadership.

Multi-Level Observations of Leadership Style

Almost all of the studies obtained MLQ data through a self-reported procedure. However, several studies gathered observations of leadership style from personnel at a higher or lower organizational level. Results were mixed regarding the congruence of self-perceptions with the perceptions of others. Brown et al. (1996) exploratory study compared MLQ self-perceptions of extension leaders with subordinate colleagues' ratings. Results indicated relatively strong agreement between self and subordinate MLQ ratings. In another study, Sinasky and Bruce (2006) compared MLQ self-perceptions of 4-H educators to the observations of their supervisors. The researchers found no significant difference between scores of educators and supervisors for transactional leadership style. However, educators' ratings of their transformational leadership abilities were significantly greater than the supervisors' ratings.

Performance Outcomes

Transformational leadership was found to be related to performance outcomes (i.e., effectiveness, extra effort, satisfaction) in a study conducted with extension educators in Nebraska (Brown et al., 1996). The researchers determined that there were high positive correlations between transformational leadership factors and performance outcomes, less so with transactional leadership factors, and generally weak negative association with laissez-faire leadership style. Other researchers (Sinasky & Bruce, 2006) reported that 4-H educators rated themselves significantly higher for performance outcomes in contrast to their supervisors.

Gaps in the Literature and Future Research

It is apparent from the literature review that research conducted on transformational leadership is an emerging topic in agricultural education. A small but recent number of studies pertaining to transformational leadership have been reported in journals within the field and in affiliated journals. With one exception, all of the studies were published from 2003 to 2008. Gaps in the literature and suggestions for future research are presented.

Broaden the scope of transformational leadership research with additional participant groups. From the literature

review, it was determined that most of the research pertaining to transformational leadership was conducted with extension personnel. Limited research focused on agricultural education teachers and university students. No studies were found that involved agribusiness leaders, agricultural communicators, international participants, or youth. Thus, there are a number of participant groups that can benefit from increased involvement in leadership research.

A natural line of inquiry would be to involve youth (e.g., high school agricultural education students, FFA members, 4-H members) in research focused on their leadership style. The MLQ is deemed appropriate for use with youth in high school (B. J. Avolio, personal communication, August 15, 2008) and has been used with raters who have less than a high school degree (Bass & Avolio, 1994). However, it is possible that a youth version of a modified MLQ may prove to be more suitable; creating a leadership style instrument intended for youth might parallel Posner's (2004) rationale in developing the student leadership practices inventory. Further, longitudinal studies would provide insights pertaining to changes in youths' leadership style, specifically when contrasted to peers who are not involved with agricultural education or 4-H. Evidence to support the youth leadership development component of agricultural education could be explored in this manner.

With the increased globalization of the current business environment, it is becoming more important to understand the effectiveness of leadership styles being used by various cultures (Spreitzer, Perttula, & Xin, 2005). International agricultural education should explore the leadership style of extension personnel and other agriculturists with cross-cultural research. Western professionals could benefit from research results when planning and delivering leadership development programs with participants from other countries and cultures (Ardichvili & Gasparishvili, 2001).

Identify outcome measures and predictors associated with transformational leadership. This research objective gets at the heart of inquiry and challenges researchers to move beyond descriptive studies. For example, what are the advantages of a transformational leadership style in the context of agricultural education? What leadership style and/or leadership factors have a relationship with and predict youth leadership development or agribusiness performance? While research results in other fields have found that transformational leadership is associated with performance outcomes (Bass, Avolio, Jung, & Berson, 2003), this literature review determined that outcome measures and predictors were scarcely researched in agricultural education.

It is recommended that the performance outcomes (i.e., effectiveness, extra effort, satisfaction) that are part of the MLQ should be utilized by agricultural education researchers. Assuming a positive relationship is found between performance outcomes and transformational leadership style, it seems logical to identify the predictors of transformational leadership and the variables that transformational leadership predicts. Identifying meaningful variables that might have a relationship with leadership style is critical to expanding the knowledge base of leadership development in agricultural education.

Utilize multi-level raters to gain a diverse perspective about leadership style. The literature review revealed that most of the studies gathered self-reported MLQ data. While informative and a basic step, it is recommended that the multi-rater feature of the MLQ be utilized. For example, students, peer members in organizations, agriculture education advisory committee members, and administrators could provide their perspectives regarding the leadership style of the agricultural education teacher.

Determine leadership profiles for effective professionals in agricultural education. Research should explore the relationship and overlap that leadership style has with related constructs such as personality, teaching style, and mentoring style (Xirasagar, Samuels, & Stoskopf, 2005). What leadership factors are most effective in the role of an agribusiness leader, agricultural communicator, extension educator, international educator, or teacher? Or might there be specific situations that

cross multiple careers and benefit by using a particular leadership factor.

Gain a deeper understanding of transformational leadership through mixed-method approaches. Further studies are needed that utilize qualitative inquiry to complement quantitative data from the MLQ. Additional leadership dimensions might be explored through the reflective nature of personal interviews, focus groups, and case studies. Qualitative research lends itself to learning more about the challenges of youth and adults as they attempt to develop a transactional leadership style as a foundation for transformational leadership. Youth and adults who score high on various leadership factors could be asked to provide their insights regarding beliefs, actions, and strategies related to leadership development. From a relationship perspective, qualitative research would be helpful to examine the voice of followers and how the leadership style of adults and peers impacted their leadership development. For example, we know little about how the FFA advisor and 4-H leader serve as a leadership role model for youth and how peers impact youths' views on leadership development in agricultural education.

Seek to understand the beliefs that underpin leadership styles and the intersection of related theories. A line of inquiry could focus on the beliefs that individuals have regarding leadership development; researchers should build on seminal work by Greiman and Addington (2008) pertaining to YLD-SE. Extending, how does the culture of an organization impact leadership beliefs and interface with leadership style? Research should examine the potential overlap that FRLT has with relationship theories such as social capital (i.e., social networks), learning theory, ethics, and mentoring.

Conclusion

The intent of this article was to bring attention to the potential that transformational leadership research has for a field that embraces leadership development. Torraco (2005) suggested that literature reviews may address mature topics or new, emerging topics. The small but recent number of articles on transformational leadership is an indication that this area of research is beginning to emerge in agricultural education.

References

Ardichvili, A., & Gasparishvili, A. (2001). Leadership profiles of managers in post-communist countries: A comparative study. *Leadership & Organization Development Journal, 22*(2), 62-69.

Antonakis, J., Avolio, B. J., & Sivasubramaniam, N. (2003). Context and leadership: An examination of the nine-factor full-range leadership theory using the multifactor leadership questionnaire. *The Leadership Quarterly, 14*(3), 261-295.

Avolio, B. J. (1999). *Full leadership development: Building the vital forces in organizations*. Thousand Oaks, CA: Sage.

Avolio, B. J., & Bass, B. M. (1991). *The full range leadership development programs: Basic and advanced manuals.* Binghamton, NY: Bass, Avolio & Associates.

Avolio, B. J., & Bass, B. M. (2004). *Multifactor leadership questionnaire: Third edition manual and sampler set.* Redwood City, CA: Mind Garden.

Avolio, B. J., Bass, B. M., & Jung, D. (1995). *Multifactor leadership questionnaire technical report*. Palo Alto, CA: Mind Garden.

Barrick, R. K., Hughes, M., & Baker, M. (1991). Perceptions regarding supervised experience programs: Past and future direction. *Journal of Agricultural Education, 32*(4), 31-36.

Bass, B. M. (1985). *Leadership and performance beyond expectations.* New York: Free Press.

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership.* Newbury Park, CA: Sage.

Bass, B. M., & Avolio, B. J. (1995). *Multifactor leadership questionnaire leader form (5X-short).* Redwood City, CA: Mind Garden.

Bass, B. M., & Avolio, B. J. (1999). *Manual for the multifactor leadership questionnaire (form 5X).* Redwood City, CA: Mind Garden.

Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology, 88*(2), 207-218.

Berson, Y., Shamir, B., Avolio, B. J., & Popper, M. (2001). The relationship between vision strength, leadership style, and context. *The Leadership Quarterly, 12*(1)*,* 53-73.

Brown, W., Birnstihl, E. A., & Wheeler, D. W. (1996). Leading without authority: An examination of the impact of transformational leadership cooperative extension work groups and teams. *Journal of Extension, 34*(5). Retrieved June 25, 2008, from http://www.joe.org/joe/1996october/a3.html

Bruce, J. A., Webster, N. S., & Sinasky, M. E. (2006). Leadership practices employed by 4-H youth development educators in a Northeast state. *Journal of Leadership Education, 5*(3), 79-92. Retrieved June 25, 2008, from http://www.fhsu.edu/jole/issues/Jole_5_3.pdf

Buriak, P., & Shinn, G. C. (1993). Structuring research for agricultural education: A national delphi involving internal experts. *Journal of Agricultural Education, 34*(3), 31-36.

Burns, J. M. (1978), *Leadership*. New York: Harper & Row.

Butters, K. S., & Ball, A. L. (2006, May). *The development of leadership skills in agricultural education: A synthesis of literature.* Paper presented at the National Agricultural Education Research Conference, Charlotte, NC.

Connors, J. J., & Swan, B. G. (2006). A synthesis of leadership development research in agricultural education: 1988-2003. *Journal of Agricultural Education, 47*(2), 1-13.

Downton, J. V. (1973). *Rebel leadership: Commitment and charisma in a revolutionary process.* New York: Free Press.

Greiman, B. C., & Addington, L. S. (2008). Youth leadership development self-efficacy: An exploratory study involving a new construct. *Journal of Leadership Education, 7*(1), 1-23.

Greiman, B. C., Addington, L. S, Larson, T. G., & Olander, K. R. (2007). Preferred leadership style of agricultural education teachers: An expression of epistemological beliefs about youth leadership development. *Journal of Agricultural Education, 48*(4), 93-105.

Harms, B. M., & Knobloch, N. A. (2005). Preservice teachers' motivation and leadership behaviors related to career choice. *Career and Technical Education Research, 30*(2), 101-124.

Hoover, T. S., Scholl, J. F., Dunigan, A. H., & Mamontova, N. (2007). A historical review of leadership development in the FFA and 4-H. *Journal of Agricultural Education, 48*(3), 100-110.

House, R. J. (1976). A 1976 theory of charismatic leadership. In J. G. Hunt & L. L. Larson (Eds.), *Leadership: The cutting edge* (pp. 189-207). Carbondale, IL: Southern Illinois University Press.

Hunt, J. G. (1999). Transformational/ charismatic leadership's transformation of the field: An historical essay. *The Leadership Quarterly, 10*(2), 129-144.

Jones, D., & Rudd, R. (2008). Transactional, transformational, or laissez-faire leadership: An assessment of college of agriculture academic program leaders' (Deans) leadership styles. *Journal of Agricultural Education, 49*(2), 88-97.

Lowe, K. B., & Gardner, W. L. (2000). Ten years of *The Leadership Quarterly*: Contributions and challenges for the future. *The Leadership Quarterly, 11*(4), 459-514.

Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *The Leadership Quarterly, 7*(3), 385-425.

Moore, L. L., & Rudd, R. D. (2006). Leadership styles of current extension leaders. *Journal of Agricultural Education, 47*(1), 6-16.

Morgan, A. C., & Rudd, R. D. (2006). Teaching leadership in agricultural science: behavioral factors that influence secondary agricultural science leadership instruction. *Journal of Agricultural Education, 47*(3), 33-44.

National FFA Organization (2006). *Official FFA manual.* Indianapolis, IN: Author.

National research agenda: Agricultural education and communication (2007). Retrieved June 15, 2008, from http://aaaeonline.org/files/researchagenda_long.pdf

Northouse, P. G. (2004). *Leadership: Theory and practice.* Thousand Oaks, CA: Sage.

Posner, B. Z. (2004). A leadership development instrument for students: Updated. *Journal of College Student Development, 45*(4), 443-456.

Radhakrishna, R. B. (1998, December). *25 years of the national agricultural research meeting: Analyzing the past to discover future research priorities*. Paper presented at the National Agricultural Education Research Conference, New Orleans, LA.

Rosenbusch, K., & Townsend, C. D. (2004). The relationship of gender and organizational setting to transformational and transactional leadership skills of selected college student leaders. *Journal of Leadership Education, 3*(3), 4-20. Retrieved March 15, 2008, from http://www.fhsu.edu/jole/issues/JOLE_3_3.pdf

Seevers, B., Graham, D., Gamon, J., & Conklin, N. (1997). *Education through cooperative extension*. New York: Delmar.

Sinasky, M. E., & Bruce, J. A. (2006). Supervisors‘ and 4-H youth development educators‘ perceptions of the leadership practices employed by educators. *Journal of Extension, 44*(3), Article 3FEA6. Retrieved June 25, 2008, from http://www.joe.org/joe/2006june/a6.shtml

Spreitzer, G. M., Perttula, K. H., & Xin, K. (2005). Traditionality matters: An examination of the effectiveness of transformational leadership in the United States and Taiwan. *Journal of Organizational Behavior, 26,* 205-227.

Stedman, N. L. P., & Rudd, R. D. (2005). Volunteer administration leadership proficiency and leadership styles: Perceptions of Southern region 4-H county faculty. *Journal of Leadership Education, 4*(2), 42-58. Retrieved June 5, 2008, from http://www.fhsu.edu/jole/issues/Jole_4_2.pdf

Stedman, N., & Rudd, R. D. (2006a). Factors contributing to volunteer administration leadership proficiency of Southern region 4-H county faculty. *Journal of Agricultural Education, 47*(2), 56-66.

Stedman, N. L. P., & Rudd, R. (2006b). Leadership styles and volunteer administration competence: Perceptions of 4-H county faculty in the United States. *Journal of Extension, 44*(1), Article 1RIB6. Retrieved June 25, 2008, from http://www.joe.org/joe/2006february/rb6.shtml

Tickle, E. L., Brownlee, J., & Nailon, D. (2005). Personal epistemological beliefs and transformational leadership behaviours. *Journal of Management Development, 24*(8), 706-719.

Torraco, R. J. (2005). Writing integrative literature reviews: Guidelines and examples. *Human Resource Development Review, 4*(3), 356-367.

van Linden, J., & Fertman, C. I. (1998). *Youth leadership: A guide to understanding leadership development in adolescents*. San Francisco: Jossey-Bass.

Vaughn, Z. J., & Moore, G. E. (2000, December). *Predictors of FFA program quality*. Paper presented at the National Agricultural Education Research Conference, San Diego, CA.

Williams, D. L. (1991). Focusing agricultural education research: Strategies for the discipline. *Journal of Agricultural Education, 32*(1), 1-12.

Woodrum, W., & Safrit, D. (2003). Leadership practices of West Virginia University extension agents working with the 4-H youth development program. *Journal of Extension, 41*(3). Retrieved June 25, 2008, from http://www.joe.org/joe/2003 june/rb3.shtml

Xirasagar, S., Samuels, M. E., & Stoskopf, C. H. (2005). Physician leadership styles and effectiveness: An empirical study. *Medical Care Research, 62*(6), 720-740.

BRADLEY C. GREIMAN is an Associate Professor at the University of Minnesota, 146 Classroom Office Building, 1994 Buford Avenue, St. Paul, MN 55108. E-mail: bgreiman@umn.edu.