Analysis of Leadership Perceptions, Skills and Traits as Perceived by Agribusiness and Industry Professionals

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Abstract

Leadership continues to be an important topic in both the agricultural industry and agricultural education discipline. This study focused on identifying to what degree individual leadership perceptions, skills and traits should be emphasized when preparing college graduates for the agribusiness profession. Participants included employers at University of Minnesota and Iowa State University agriculture career fairs and members of the Minnesota Teacher Induction Program business network. Participants agreed that effective leaders are open to change (M=3.48), effective listeners (M=3.49), knowledgeable about their technical field (M=3.23), can be trusted (M=3.18) and are team players (M=3.17). According these agribusiness professionals, the five most important leadership skills are being accountable (M=3.78), taking responsibility (M=3.75), communicating (M=3.73), learning (M=3.58) and adapting to change (M=3.61); and the five most influential leadership traits are honesty (M=3.71), positive attitude (M=3.71), trustworthiness (M=3.66), self-confidence (M=3.60) and dependability (M=3.60). These findings, like previous studies, confirmed that leadership qualities continue to be invaluable as businesses and organizations develop in a complex global economy and these qualities are equally important in agribusiness. An ongoing connection and exchange of leadership knowledge and resources among colleges of agriculture and agribusiness professionals ensures that future agricultural leaders leave college well prepared for leadership challenges and opportunities in the workplace.

Keywords: Leadership, Leadership Skills, Leadership Traits

Introduction/Theoretical Framework

Agribusiness helps support worldwide demand for food, fiber, fuel and natural resources. As agricultural research and technology accelerates, so do new career opportunities that require new knowledge and skills. Success in these new opportunities also requires leadership and developing students' leadership qualities continues to be an important topic in both the agricultural industry and agricultural education discipline. Various leadership writers (Bolt, 1996; Gardner, 1990) believe we approached the 21st century with a dramatic deficit in leaders. However, Bolt emphasized the deficit was really in leadership development and not leadership itself. Similarly, 75% of respondents in the IBM Global Human Capital Study (IBM, 2007) reported that the inability to develop future leaders is a critical issue for organizations. Kouzes and Posner (2007) also suggested the world is facing problems that need strong leadership to guide society towards a better future.

The preparation of future generations of leaders will not end anytime soon. It has been well noted that leadership competencies are integral for navigating a path through rapidly escalating global complexity (IBM, 2010). There is an ongoing need to describe and understand the importance of leadership around the world today. Lenhardt et al. (2011) emphasized that employers who hire for agriculture-related careers desire to hire college graduates who possess effective leadership skills. Higher education has been entrusted with the role of developing leaders for a global society (Astin et al., 2000). Many higher education institutions are working to address the problem by providing high quality leadership activities and programs to students (Riggio et al., 2003).

Analysis of Leadership Perceptions

Many studies have been conducted on leadership and its connection to industry. Rosenberg et al. (2012) concluded that ongoing communication is vital to the connections between educational institutions and industry. When employers communicate their needs and educational institutions modify their curricula in a timely manner, current and engaging learning experiences can result. An ongoing exchange of information, knowledge and resources between colleges of agriculture and agribusiness/industry regarding leadership and employability skill requirements can improve the content and context of new leadership development curricula.

Also, there appears to be an increasing effort in higher education to stay attuned to agribusiness/industry's leadership needs through the development of new leadership training programs in colleges of agriculture around the country. Brungardt (2011) found that graduate students who had exposure to several leadership courses had a significantly higher level of skill development than students who had no leadership courses. Rosenberg et al. (2012) described a series of seven studies dating back to the 1980s that laid the foundation for research in the area of employability skills needed in business. In their study, a sample of 97 human resource managers who recruited at a California university identified leadership skills as the second most important dimension among eight dimensions of employability valued in college graduates. The managers mentioned responsibility, self-esteem, integrity and honesty as characteristics that define leadership.
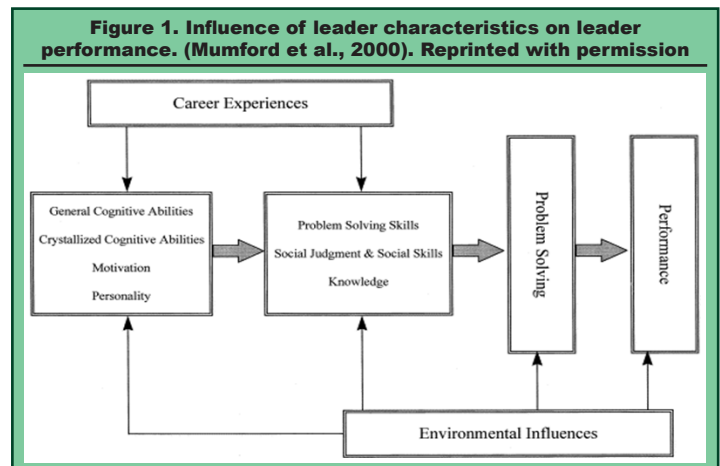
Dormody and Seevers (1994) believed youth develop leadership skills by public speaking, holding an office and participating in meetings. Sawi and Smith (1997) defined leadership skills as leadership, teamwork, decision-making, problem solving, reasoning and communication as well as personal qualities such as responsibilities, self-esteem and integrity. Other leadership skills are organization and delegation, problem solving, sharing leadership, communication, futuristic thinking, decision-making, time management, divergent thinking, conflict resolution, goals setting and group dynamics. Hustedde and Woodward (1996) identified 14 communication-related skills that often need to be developed in leadership training programs: active listening, facilitation, imagination, interviewing, collaboration, conflict resolution, deliberation, evaluation, negotiation, power analysis, strategic planning, team building, vigilance and volunteer management. In a study conducted by Smalley (2005), communication skills was identified as the most important skill.

Effective leadership skills have been judged as necessary for success in the complex and rapidly changing agricultural industry (McKinley et al., 1993). Many agricultural employers have reported characteristics and skills that leaders need to have in order to meet business goals and objectives. Exposure to a variety of forms of leadership through involvement outside of the classroom offers experiences and background knowledge that students can draw on as they integrate

leadership theories and skills (Bolt, 1996; Kouzes and Posner, 1990; Wren, 1994). Kelley Bishop (2004), executive director of Michigan State University career services and placement, identified 12 competencies employers seek in college graduates: working in a diverse environment, managing time and priorities, acquiring knowledge, thinking critically, communicating effectively, solving problems, contributing to a team, navigating across boundaries, performing with integrity, developing professional competencies, balancing work and life and embracing change.

There is some debate as to whether leadership is a skill or trait. Trait and skill theory both date back to the early 20th century, but provide different perspectives on leadership development. In trait theory, traits were identified as "innate qualities" with which individuals were born. Stogdill (1948), the first to challenge the notion that leadership traits were universal to all situations, included the traits of intelligence, alertness, insight, responsibility, initiative, persistence, self-confidence and sociability in the very first leadership study. In subsequent surveys, Stogdill (1974) included items such as drive and risk-taking as leadership traits. A unique characteristic of trait theory is that it focuses solely on the leader and not the leader's followers. Trait theory gained credibility as a leadership description, in part because it has been used to describe historical icons including Lincoln, Ghandi, Catherine the Great, Napoleon Bonaparte and many other powerful leaders (Northouse, 2010). In contrast, skill theory focuses on characteristics, or abilities, that can be learned and developed. Skill theory dates back to Katz (1955), who published a Harvard Business Review article titled "Skills of an Effective Administrator." Katz used a three-skill approach that measured technical, human and conceptual skills. This theory helped validate the importance of leaders having all three skills, depending on the level they were at within their organization. This theory also espouses that some skills are more important than others depending on the dynamics and level of a profession.

The skills model of leadership (Figure 1) Mumford et al., 2000) provides the framework for this study. This model illustrates the movement from individual attributes (i.e., cognitive abilities, motivation, personality) to

Figure 1. Influence of leader characteristics on leader performance. (Mumford et al., 2000). Reprinted with permission

competencies and then to leadership outcomes in the form of effective problem solving and performance. As leaders develop, external influences (i.e., career experience and environment) also shape and form their leadership perceptions, skills and traits—and ultimately how they achieve leadership outcomes.

The skills model of leadership suggests a need for ongoing research in an effort to further leadership development and education (Mumford et al., 2000). In the agricultural industry, there is a need to identify how agribusiness professionals who hire college graduates perceive leadership, the importance of leadership skills and the traits that influence leadership development. Because common traits are not considered universal to all leadership situations (Northouse, 2010), there is a need to study leadership traits in addition to leadership beliefs and skills.

Purpose/Objectives

The purpose of this study was to identify to what degree individual leadership perceptions, skills and traits should be emphasized when preparing college graduates for an agribusiness profession. The study had the following objectives:

- Identify to what extent agricultural employers agree with leadership perception statements.
- Determine the level of importance of selected leadership skills and knowledge statements—as perceived by agricultural employers.
- Determine the extent to which selected traits influence leadership development in the agricultural industry—as perceived by agricultural employers.

Methods/Procedures

The population for this descriptive survey study consisted of all participants of three groups: University of Minnesota College of Agriculture career fair participants (UMF CFANS), Iowa State University College of Agriculture and Life Science (ISU CALS) career fair participants and the Minnesota Teacher Induction Program (MN TIP Net.) business network (a group of business professionals). The response rate at the University of Minnesota career fair was 32.07% (n = 34). The response rate at the Iowa State University career fair was 17.82% (n = 90). The response rate for the Minnesota Teacher Induction Program was 84.61% (n = 44). This population was selected as a purposive sample of convenience to better understand to what degree individual leadership perceptions, skills and traits should be emphasized when preparing college graduates for an agribusiness profession. A larger response rate may have been seen in the Minnesota Teacher Induction Program due to the researchers having a connection to the participants.

We used Smalley's (2005) survey instrument as a way to identify how perceptions, skills and traits have changed since the original study. The original instrument was constructed through a Delphi process to identify the perceptions, skills and traits deemed most appropriate by graduating undergraduate students. This instrument was broken down into three sections. In section one, participants used a Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree) to indicate the extent to which they agreed or disagreed with select leadership perception statements. A perception was defined for participants as a belief people have about leadership.

In section two, participants used a Likert-type scale (1 = not important, 2 = somewhat important, 3 = important, 4 = very important) to indicate the extent to which select leadership skills are important for new agricultural employees to possess. Traits were defined as distinguished qualities of individuals that may be possessed by leaders. In section three, participants used a Likert-type scale (1 = no influence, 2 = some influence, 3 = moderate influence, 4 = high influence)

Table 1. Ranked Leadership Perception Statements by Group									
	MN TIP Net. (n = 44)			UMF CFANS (n = 34)			ISU CALS (n = 90)		
Perception statements	Rank	M	SD	Rank	M	SD	Rank	M	SD
Leaders are effective listeners.	1	3.57	.553	2	3.42	.579	2	3.48	.726
Leaders are open to change.	2	3.45	.709	1	3.50	.521	1	3.51	.710
Leaders can be trusted.	3	3.25	.657	5	3.09	.609	5	3.21	.609
Leaders aspire to possess high positions in their organization.	4	3.20	.600	7	2.97	.551	8	2.97	.640
Effective leaders are knowledgeable about their field.	5	3.18	.680	3	3.21	.641	3	3.31	.556
Leaders are team players.	6	3.11	.680	4	3.12	.753	4	3.28	.571
Leaders understand themselves.	7	3.09	.583	6	3.00	.538	6	3.08	.691
To be promoted in one's career you must be a strong leader.	8	2.91	.650	11	2.71	.657	9	2.97	.640
Only those who recognize the needs of others are leaders.	9	2.91	.654	15	2.47	.600	13	2.69	.622
Those who respect others are leaders.	10	2.91	.668	10	2.74	.561	7	3.08	.691
Those who take charge are leaders.	11	2.86	.713	13	2.56	.606	14	2.66	.621
Students highly involved in organizations are leaders.	12	2.84	.772	12	2.59	.696	12	2.79	.622
Students highly involved in community are leaders.	13	2.84	.576	8	2.79	.551	10	2.87	.690
Those who understand challenges are leaders.	14	2.75	.613	9	2.76	.640	11	2.83	.616
Leaders are in charge.	15	2.64	.569	14	2.50	.508	17	2.34	.604
Students who are actively involved in athletics are leaders.	16	2.41	.501	16	2.38	.502	15	2.50	.652
People who are easy to talk with are leaders.	17	2.36	.589	17	2.38	.508	16	2.47	.640
Once you are a leader you are always a leader.	18	2.34	.741	18	2.15	.563	18	2.19	.681
Leaders go along with others.	19	1.95	.686	19	2.06	.621	19	2.16	.695
High academic success ensures strong leadership.	20	1.79	.741	20	1.91	.618	20	2.06	.706

Note. Item mean is shown in boldface. Scale: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree

to indicate the extent to which select leadership traits influence leadership development. Skills were defined as the abilities that are acquired or developed. Each item was placed by construct into the web-based software package Qualtrics.

A panel of experts consisting of industry professionals and agricultural teacher educators with an expertise in leadership education and survey development reviewed the instrument and deemed it face valid. Reliability coefficients ranged from α = 0.70 to α = 0.86 and were considered acceptable to good according to George and Mallery's (2003) conventions. Contacts with the participants followed Dillman et al. (2009) tailored design method. Contacts were made with participants by sending an initial invitation to participate in the study and follow up contacts to the three groups of participants. In an effort to control for nonresponse error, we compared early and late respondents as recommended by Lindner et al. (2001) and found no statistically significant differences. Data were analyzed using descriptive statistics (Gall et al., 2005).

Results/Findings

Respondents were asked to indicate the extent to which they agreed with select leadership perception statements. From the twenty perception statements, the top five selected perception statements among the three groups included: leaders are open to change, leaders are effective listeners, effective leaders are knowledgeable about their technical field, leaders can be trusted and leaders are team players. All three groups most disagreed with the statement that high academic success ensures strong leadership (Table 1).

Participants identified the importance of select leadership skills. From the twenty leadership skills participants were able to select from the five skill items respondents ranked most important among the three groups included: being accountable, taking responsibility, communicating, learning and adapting to change. Two of the three groups ranked the skill of global dynamics as least important and the third group ranked it 19th out of 20 skills (Table 2).

Respondents were asked to identify the extent to which select leadership traits influence leadership in the agricultural industry. The five most influential leadership traits among the three groups included: honesty, positive attitude, trustworthiness, self-confidence and dependability. All three groups identified citizenship as the least influential trait (Table 3).

Table 2. Ranked Leadership Skill Importance by Group

Skill	MN TIP Net. (n = 44) Rank	M	SD	UMF CFANS (n = 34) Rank	M	SD	ISU CALS (n = 90) Rank	M	SD
Being accountable	1	3.88	.438	1	3.71	.474	1	3.77	.425
Taking responsibility	2	3.86	.479	2	3.71	.563	3	3.70	.602
Decision making	3	3.77	.697	4	3.47	.660	7	3.52	.522
Communicating (visual, electronic)	4	3.75	.513	3	3.68	.560	2	3.77	.545
Learning	5	3.70	.650	7	3.44	.563	5	3.60	.543
Adaptive to change	6	3.70	.650	6	3.45	.686	4	3.70	.493
Problem solving	7	3.68	.561	5	3.47	.543	6	3.56	.632
Inspiring	8	3.47	.695	16	3.03	.640	15	3.08	.729
Cooperating	9	3.45	.692	8	3.42	.753	9	3.44	.784
Supporting	10	3.42	.587	10	3.24	.781	12	3.27	.782
Coaching	11	3.41	.674	15	3.06	.750	16	3.06	.668
Visioning	12	3.41	.702	12	3.21	.758	13	3.16	.712
Understanding group dynamics	13	3.41	.644	14	3.12	.729	11	3.32	.744
Working in teams	14	3.36	.692	11	3.21	.758	10	3.40	.599
Productivity	15	3.35	.669	9	3.35	.886	8	3.44	.711
Influencing	16	3.33	.497	13	3.18	.683	14	3.14	.748
Delegating	17	3.32	.462	18	3.97	.463	17	2.91	.602
Directing	18	3.07	.354	19	2.91	.463	20	2.79	.668
Negotiating	19	2.93	.324	17	3.00	.506	18	2.91	.425
Global dynamics	20	2.84	.776	20	2.71	.676	19	2.91	.668

Note. Item mean is shown in boldface. Scale: 1 = not important, 2 = somewhat important, 3 = important, 4 = very important.

Table 3. Ranked Leadership Trait Influence by Group

Traits	MN TIP Net. (n = 44) Rank	M	SD	UMF CFANS (n = 34) Rank	M	SD	ISU CALS (n = 90) Rank	M	SD
Honesty	1	3.81	.626	2	3.65	.591	3	3.69	.674
Positive attitude	2	3.80	.691	4	3.58	.561	1	3.78	.529
Trustworthy	3	3.77	.539	6	3.55	.743	4	3.68	.469
Dependability	4	3.66	.509	5	3.56	.500	6	3.60	.882
Self-confidence	5	3.59	.542	3	3.59	.619	5	3.63	.507
Competent	6	3.59	.820	7	3.50	.561	7	3.47	.557
Drive	7	3.58	.526	1	3.65	.544	2	3.70	.741
Decisive	8	3.33	.500	9	3.35	.615	9	3.39	. 640
Enthusiasm	9	3.32	.542	8	3.38	.597	8	3.44	.612
Achievement	10	3.26	.676	10	3.15	.694	11	3.28	.557
Courageous	11	3.25	.608	19	2.88	.765	16	3.11	.638
Curiosity	12	3.18	.662	20	2.88	.506	20	3.03	.493
Loyalty	13	3.16	.651	15	3.03	.797	12	3.26	.710
Unselfish	14	3.14	.647	14	3.03	.717	13	3.19	.726
Fair-minded	15	3.12	.632	16	3.03	.660	10	3.29	.713
Courteous	16	3.05	.674	11	3.09	.570	17	3.10	.555
Imaginative	17	3.00	.566	13	3.03	.781	14	3.13	.706
Intelligent	18	2.95	.713	12	3.09	.674	15	3.12	.806
Creativity	19	2.95	.746	18	2.91	.717	18	3.09	.728
Futuristic	20	2.91	.476	17	2.94	.646	19	3.06	.671
Citizenship	21	2.55	.722	21	2.41	.631	21	2.91	.705

Note. Item mean is shown in boldface. Scale: 1 = no influence, 2 = some influence, 3 = moderate influence, 4 = high influence.

Conclusions/Implications/Recommendations

This study shed light on the leadership perceptions, skills and traits that agribusiness professionals look for when hiring college graduates and addressed the communication gap among the trio of university, industry and graduated employment seekers as stressed by Rosenberg et al. (2012). In so doing, this study identified the skills and traits that, according to Bolt (1996), need to be a part of college-level leadership development. Overall, the level of respondents' agreement on perception statements provides insight into perceptions that should and should not be reinforced as part of leadership development. The three groups most strongly agreed with statements related to internal, personal attributes. In fact, effective listening and openness to change were the

two most agreed upon statements for all three groups. Rounding out the top six statements were trust, aspire to possess high positions, knowledge about their field and team player. All three groups disagreed with statements that involved authority, the relationship between athletic involvement and leadership, academic success of leaders and easiness to relate and communicate. As in Smalley's (2005) study, "high academic success ensures strong leadership" remains at the bottom of the perceptions scale.

Respondents deemed all 20 leadership skills provided in the instrument either important or very important. In a notable departure from the other two groups, the University of Minnesota group did not include decision-making in the top five. The three groups unanimously agreed that being accountable was the most important item on the skills scale. In the Smalley (2005) study, communication was the most important skill. The University of Minnesota group ranked the skill of directing as least important, whereas the other two groups placed global dynamics at the bottom of the scale. Therefore, we recommend that all 20 of these leadership skills be incorporated into university leadership development programs.

Respondents' reported that personal attributes like honesty, positive attitude, trustworthiness, dependability and drive had the most influence. However, there was a little variation in the rankings scale among the three participant groups. The University of Minnesota and Iowa State University career fair participants ranked drive first and second, respectively. However, drive was not in the top five for Minnesota Teacher Induction Program respondents. As in Smalley's (2005) study and Kouzes and Pozner's (1990) series of studies dating back to the 1980s, respondents identified honesty as the most influential leadership characteristic.

With this study, we attempted to achieve more powerful results by simultaneously gathering like data from three separate groups that are complementary to one another demographically. An analysis using three simultaneous sets of results on the scales of leadership perceptions, skills and traits provided an opportunity to confirm the rankings within the theoretical constructs in this study. Moreover, an analysis of multiple populations provides for a more stratified and reliable analysis of leadership and more confidence in the conclusions we draw from the data. This study also provided confirmation that across three separate agricultural employer groups there are more similarities than differences in the importance of leadership skills and the influence of leadership traits. This is contrary to Mumford et al. (2007), who suggested that leadership skill requirements can differ not only among separate organizations, but also among separate levels within the same organization.

The global IBM studies conducted in 2007 and 2010 confirmed that leadership qualities continue to be invaluable as businesses and organizations develop in a complex global economy. These qualities—as well as the ability to acquire new knowledge and skills—are equally important in agribusiness, as reinforced by these findings. Excellent agricultural education and leadership training can help college students develop these essential qualities. Twenty-four years ago, the newly founded Association of Leadership Educators (ALE) recognized the need for information sharing regarding leadership research, teaching and practice. The ALE Annual Conference was held in conjunction with the National Agricultural Leadership Summit to further explore higher education research opportunities related to leadership development and education. An ongoing connection and exchange of leadership knowledge and resources among colleges of agriculture and agribusiness professionals ensures that future agricultural leaders leave college well prepared for leadership challenges and opportunities in the workplace. Change, whether from external pressure or internal planning, is a reality for all organizations. "*Leadership must create an environment in which people accept the need for change and commit physical and psychological energy to it*" (Cummings and Worley, 2008, p. 15).

Faculty in colleges of agriculture who offer leadership courses can consider the results of this study when deciding which skills and traits to emphasize in undergraduate curriculum. Future research needs to take place to determine (a) if leadership perceptions, skills and traits vary depending on the type of agribusinesses and (b) which of these skills and traits are taught within agricultural leadership programs. Additional follow up is needed with the three groups of participants to identify how the perceptions, skills and desired traits change over a period of five or ten years. Finally, little is known about how graduates' leadership perceptions, skills and traits translate (or don't) to long-term success in their business or organization.

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