

## EXPLORING THE UNIQUE CHALLENGES AND OPPORTUNITIES OF FEMALE LEADERS WITHIN THE AGRICULTURAL INDUSTRY:

### A Panel Discussion

#### Abstract

Panel discussions as a pedagogical tool allow students to engage with topics of leadership and deliver conceptual understanding in leadership education. Although undergraduate leadership development students have reported a preference for the instructional method, the use of panel discussions as a teaching practice has not been prevalent among leadership educators. For this exploratory, non-experimental study, a retrospective pre-post test evaluation questionnaire was utilized to capture changes in student perceptions related to key topics following a Women in Agricultural Leadership panel discussion. Perceptions and awareness toward women agricultural leaders were shown to increase significantly after participation in the panel discussion, thereby generating further opportunities for positive and insightful discussion.

#### Introduction

A key proposition of authentic leadership theory is the creation of inclusive, caring, and engaged organizational climates by authentic leaders focused toward the development of strengths (Gardner, Avolio, Luthans, May, & Walumbwa, 2005). Positive organizational climates in which transparency and fairness are emphasized sustain authentic relationships between leaders and followers (Gardner et al., 2005). As authentic leaders strive to establish positive organizational climates, it is important they understand the realities of their organizational context. According to King, Altman, and Lee's (2011) *Discovering Leadership Framework*, this task is described as "understand[ing] the broader circumstances that influence your current leadership situation" (p. xvii), such as the changing relationship

with customers, changing definitions of careers, the rise of globalization, technological innovations, and generational, gender, and cultural diversification of the workforce.

The personal leadership development course in the undergraduate agricultural leadership program at Oklahoma State University (Pennington & Weeks, 2006) was revised and approved as a social science credit for the university's undergraduate core curriculum in 2017. Reflective in the new title, "Agricultural Leaders in Society," the course emphasizes authentic leadership theory through analysis of agricultural leaders and societal impacts. It is a core value of the leadership program to help develop students' authenticity as leaders, with the knowledge that many enrolled in this course will seek employment opportunities in the agricultural, food, and natural

resources sector (Pennington, 2006). The relationship of organization, community, and workforce changes to leader-behavior is investigated in this course. Diversity, and in particular, gender diversity within the agricultural industry, is emphasized to develop students' potential to influence positive organizational climates. During the fall 2017 semester, a Women in Agricultural Leadership panel discussion was utilized as an innovative practice to aid student synthezation of key concepts related to gender diversity, the organizational realities component of the Discovering Leadership Framework (King, Altman, & Lee, 2011), and the development of positive organizational climates as authentic leaders (Gardner et al., 2005).

## Literature Review

Research in leadership and gender has increased over the past few decades. With women increasingly entering the workforce and politics, the need has arisen to investigate and discuss the underrepresentation of women in leadership positions within organizations. The barriers women face when pursuing upper level leadership positions is described as a leadership labyrinth (Eagly & Carly, 2007), "conveying the impression of a journey riddled with challenges all along the way - not just near the top - that can and has been successfully navigated by women" (Northouse, 2016, p. 399). By decreasing gender stereotypes, creating equitable work environments for all genders, supporting equitable domestic responsibilities, and promoting useful negotiation and leadership styles, more effective women leaders have started to emerge within corporations and politics (Northouse, 2016).

The 2012 Census of Agriculture reported 13.6% of farms had women principal operators; however, this statistic does not account for the numerous women involved in other capacities within the agricultural industry (Fenton, Braiser, & Henning, 2010). Literature identifies issues with work-life balance,

lack of mentorship, and unsupportive organizational climates as challenges women agricultural leaders face (Albright, 2006; Fenton et al., 2010; Foster & Seevers, 2003; Trauger et al., 2008). Agricultural leadership education programs may play an important role in continuing to close the gender gap within the agricultural, food, and natural resources sector through the development of authentic leaders poised to influence and improve organizational climates.

The National Leadership Education Research Agenda (NLERA) outlines teaching, learning, and curriculum development as priority one for leadership educators, with an emphasis to identify innovative, outcomes-based teaching approaches within Leadership Education (Andenoro et al., 2013). A variety of instructional strategies are known to be used in leadership education, with little impact on student learning reported (Allen & Hartman, 2009). Conceptual understanding, identified by Conger (1992) as one of four approaches to leadership development, "focuses on improving the individual's knowledge through exposure to the topic of leadership" (p. 48). Connecting Conger's (1992) approaches with pedagogical techniques utilized in leadership education programs, Allen and Hartman (2009) identified a panel of experts as a well-suited source of learning to deliver conceptual understanding for learning objectives. This learning activity, henceforth referred to as a panel discussion by the authors, allows students to "listen and interact with a panel of experts who share their experience as it relates to the topic of leadership" (Allen & Methods

According to the recently released text, *Women's Leadership Journeys*, by Tan and DeFrank-Cole (2019), "the influence of exposure to women as leaders can shape women's beliefs about leadership and its attainability" (p. 3). The text highlights the importance of "women viewing women in leadership positions," (Dasgupta & Asgari, 2004, as cited in Tan

& DeFrank-Cole, p. 3), noting that “the experience of learning about women leaders coupled with seeing women as leaders helped women to adjust and change their stereotypic views of leadership” (p. 3). By providing a panel discussion that focused on the challenges and opportunities female leaders face within the agricultural industry, students were able to see women acting in leadership roles and gain an understanding of how women have “broken barriers and navigated their way to leadership” (Tan & DeFrank-Cole, 2019, p. 3).

## Conceptual Framework

This study was guided conceptually by the Discovering Leadership Framework (King et al., 2011) shown in Figure 1. By integrating the relationship of an individual’s leadership vision, leadership values, and leadership profile with personal and organizational realities, the Framework describes the influence these factors have on the impact and legacy of a leader (King et al., 2011).

The Discovering Leadership Framework (King et al., 2011) provides a model for students to follow as they move toward developing authentically as leaders. Authentic leadership is framed by Gardner et al. (2005) as interactions and relationships between leaders and followers, supported by an understanding of self-awareness and self-regulation, that contributes and sustains each other at the cultural level of an organization. “A supportive organizational climate provides greater opportunities for authentic leadership and followership to be sustained, while potentially altering the climate itself to make it more authentic” (Avolio, 2003, as cited in Gardner et al., 2005, p. 367). By understanding the organizational realities affecting leadership, such as the challenges often associated with gender inequity, students develop the capacity to alter the organization’s climate as authentic leaders. Authentic leaders must be able to recognize the contributions of gender, generational, and cultural diversity to the overall organizational climate to understand complex issues and promote collaboration (King et al., 2011).

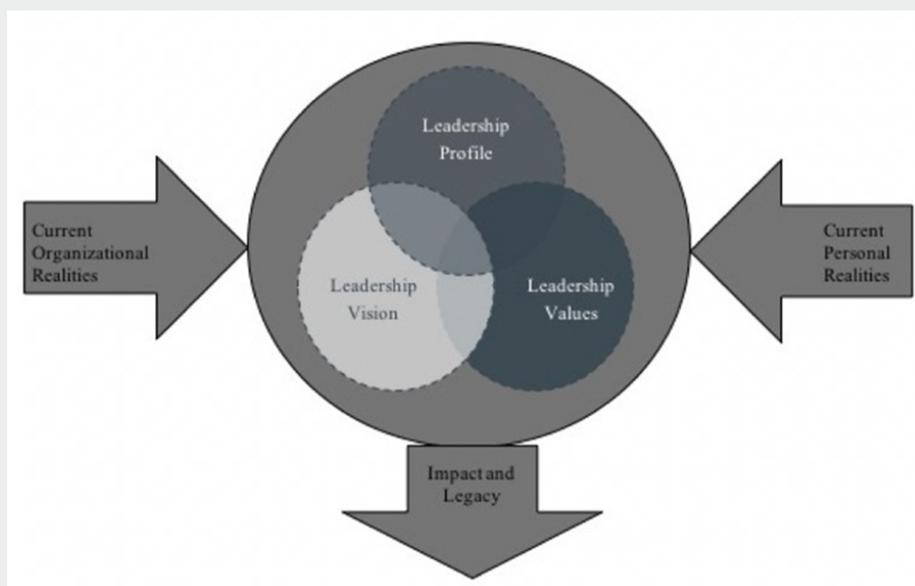


Figure 1. Discovering Leadership Framework. Adapted from *Discovering the Leader in You* (p. 153), by S. N. King, D. G. Altman, & R. J. Lee, 2011, San Francisco, CA: Jossey-Bass. Copyright 2011 by John Wiley & Sons, Inc. Adapted with permission.

## Methods

An exploratory, non-experimental design was utilized to describe the change in perceptions and awareness of students related to women agricultural leaders (Privitera, 2017). A convenience sample (Privitera, 2017) was utilized, consisting of students in two sections of the agricultural leaders in society course for the fall 2017 semester, as well as students enrolled in the same course for the spring 2018 semester.

The study was guided by the following research questions:

1. What were students' awareness and perceptions of women agricultural leaders before and after the Women in Agricultural Leadership panel discussion?
2. Did the students find the panel discussion helpful and recommend its future use as an instructional tool in

the course to deliver content related to women in agricultural leadership?

3. What were students' qualitative feedback and takeaways from the Women in Agricultural Leadership panel discussion?

Participants. Thirty-two students were enrolled in two sections of the agricultural leaders in society course during the Fall 2017 semester. In addition to these students who participated in the panel in person, the Spring 2018 section (n = 20) of the course viewed a recording of the panel discussion in class. The population consisted of male and female undergraduate students from several majors within the college of agricultural sciences and natural resources (see Table 1). Students from all three sections of the course completed the retrospective pre-post test evaluation instrument (N = 56) and agreed to allow their responses to be used for the purposes of this study.

Table 1.  
Participant Demographic Characteristics Discussion (N = 52)

Demographics	<i>f</i>	%
<b>Gender</b>		
Male	14	26.9
Female	38	73.1
<b>Undergraduate Classification<sup>a</sup></b>		
Freshman	13	25.0
Sophomore	11	21.2
Junior	20	38.5
Senior	7	13.5
<b>Major<sup>b</sup></b>		
Agricultural Leadership	10	20.0
Agricultural Education	10	20.0
Agricultural Communications	9	18.0
Agricultural Education/Animal Science	6	12.0
Other Agriculture-related degrees	15	30.0

\*an = 51; bn = 50

Data Collection and Analysis. In the class meeting immediately following the Women in Agricultural Leadership panel discussion, the retrospective pre-post test evaluation instrument (Davis, 2003) was administered as a course assignment to capture the change in students' perceptions and awareness toward women agricultural leaders. Literature purports this analysis method is more accurate in comparison to a traditional pretest-posttest design, as "respondents are given an opportunity to learn how much they know about a subject prior to responding to a questionnaire" (Davis, 2003, para. 4).

The instructor-developed evaluation instrument consisted of twelve questions (six pre-test questions and six post-test questions) that utilized a five-point, Likert-type scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree) to assess students' level of agreement with statements pertaining to awareness and perceptions of women agricultural leaders. The statements were developed based on the key topics identified during initial discussions with each of the four panelists, course learning objectives, and the study's research questions, and reported a Cronbach's alpha of 0.743 ( $p < 0.5$ ), establishing internal consistency (Creswell, 2008). When reporting Cronbach's alpha, Creswell (2008) recommended looking for high positive coefficients e.g., .60 or above (Warmbrod, 2014). The panel's overall rating as helpful to the course was measured by a four-point, Likert-type scale (1 = Not Helpful, 2 = Somewhat Helpful, 3 = Helpful, 4 = Very Helpful). A bipolar rating scale (Yes/No) assessed students' recommendation of the panel discussion for future use in the course. Additional open-ended questions related to the use of the panel discussion, as well as demographic questions, were also utilized. Face and content validity were established through review by a panel of faculty experts familiar with the course learning outcomes and purpose of the panel discussion (Litwin, 2003).

Quantitative data were analyzed utilizing SPSS software with frequency distributions reported (Privitera, 2017). Student responses to open-ended questions were reviewed by the instructors, with

reported statements chosen to best exemplify student opinions and feedback for future events.

Limitations. Generalizability is noted as a limitation of the exploratory, non-experimental study. Although changes in perceptions and awareness toward women in agricultural leadership were reported by the study's participants following the Women in Agricultural Leadership panel discussion, causation cannot be inferred.

## Women in Agricultural Leadership Panel Discussion

The inaugural Women in Agricultural Leadership panel discussion was a 90-minute event organized during the fall 2017 semester for the agricultural leaders in society course at Oklahoma State University. The goal of the Women in Agricultural Leadership panel discussion was to highlight the successes and contributions of women to the agricultural field, while also discussing the unique challenges to women in the industry. The panel discussion provided an opportunity for students to learn about the experiences of four women agricultural leaders and engage in the continuing critical conversation of gender diversity in the agricultural industry.

Drawing on concepts from the course text, *Discovering the Leader in You* (King et al., 2011), and authentic leadership theory (Gardner et al., 2005), the inclusion of the panel discussion in the course was guided by four learning objectives:

1. Discuss and critique the panelists' leadership perspectives as compared to authentic leadership.
2. Interpret the implications of the challenges faced by women leaders in the agricultural industry.
3. Value the successes and contributions of women agricultural leaders; and,
4. Analyze and evaluate awareness of gender diversity challenges in the agricultural industry.

Results. The first research question for this study sought to determine students' awareness and perceptions of women agricultural leaders both before and after participation in the Women in Agricultural Leadership panel discussion. Students' perceived helpfulness of the panel discussion and recommendation for future use was the emphasis of the second research question, while research question three examined student feedback and takeaways. Results from the retrospective pre-post test evaluation instrument are addressed by research question.

Research Question 1. The retrospective pre-post test evaluation instrument sought to compare

students' perceptions toward the key topics addressed during the panel discussion. There was an increase in agreement between pre-test and post-test perceptions for the six items related to: (a) awareness of the unique challenges and opportunities faced by female leaders within the industry, (b) understanding of potential issues related to work-life balance, (c) understanding of the benefits of positive mentoring experiences, (d) understanding of how relationships between men and women working together in the agricultural industry has changed over the years, (e) differences in how men and women lead, and (f) diversity awareness (Table 2).

Table 2.

Student Pre- and Post-Test Perceptions Toward Women Agricultural Leaders.

Statements	Strongly Agree and Agree <sup>a</sup>			
	Pre-Test		Post-Test	
	<i>f</i>	%	<i>f</i>	%
I am aware of the unique challenges and opportunities that female leaders within the agricultural industry face.	32	61.6	50	93.4
I have an understanding of the potential issues related to work-life balance and strategies for achieving balance.	32	61.6	47	90.4
I have an understanding of the benefits of effective mentoring experiences.	25	48.1	48	92.3
I have an understanding of how the relationship between men and women working together in the agricultural industry has changed over the years.	26	50.0	50	96.2
I believe there are differences in the way men and women lead.	25	48.0	39	75.0
I am aware of the differences diversity (gender, generational, cultural, etc.) creates in the workplace.	40	76.9	51	98.1

\*Note. A five-point, Likert-type scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree) was utilized to assess students' level of agreement with statements pertaining to perceptions and awareness of women agricultural leaders.

aSummated responses of "Strongly Agree" (5) and "Agree" (4).

Research Question 2. The Women in Agricultural Leadership panel discussion was believed to be either 'helpful' (n = 20) or 'very helpful' (n = 26) by the students (88.5%). Of all the students who completed the evaluation survey, 88.5% (n = 46) reported they would recommend the use of the panel discussion for future classes. Therefore, panel discussion as an instructional tool to deliver content related to women in agricultural leadership was found to be helpful and recommended for future use by the students.

Research Question 3. Open-ended response questions on the retrospective pre-post test evaluation survey allowed students to share their thoughts about the panel discussion. Specifically regarding their opinions of the panelists, as well as additional thoughts or comments, several students provided very positive insight. Qualities such as "being relatable," having "numerous experiences," and providing "real-life examples" were cited on numerous occasions and appeared to help establish relevance with the panelists. Listed below are several selected responses which the researchers believe best exemplified the spirit of the panel discussion.

- "I found that [panelist's] experiences were very diverse and she had lots of experience in a variety of environments (& discussed personal life)."
- "Truly, I enjoyed each of their perspectives. They built well off each other, and were not afraid to voice it if they believed differently from each other. I also liked that they were in different places in their careers/personal lives. LOVED hearing from them as professionals and moms, so neat as someone who wants to be both!"
- "I thought [panelist] was the most effective. I just felt really connected to her and the jobs that she's had are one's that I would be interested in, and she kind of reminded me of my mom."

- "I think it is very helpful to see that you don't have to be from a certain background or be a certain gender to be a leader."
- "I get much more out of interactive, "real-life" presentations like this than just simple classes or professional lectures. Plus I am a woman seeking a career in the Ag field, so I value their advice and benefit from hearing their experiences."

In addition to providing input via the evaluation survey, students also completed a debriefing exercise at the end of the subsequent class meeting, where they were asked to write their "biggest takeaways" from the panel. Listed below are selected responses.

- "The biggest thing I've learned from the women in agriculture panel was that there are so many leadership styles being put into play throughout the industry, and that none of them are wrong, they just have a specific place in a specific job. All the women were great and gave me a further insight into what it looks like to be a woman in agriculture."
- "I really enjoyed hearing the differences in the workplace for men and women. My favorite line that I agreed with was 'I will hire the best person.' Who cares race, color, male or female. I will hire the best."
- "I thought it was very interesting how the women brought up the topic that sometimes other women are the ones who don't want to see them succeed. We talk about the challenges of working with men but often overlook that working with/for women is even more challenging."
- "My 'big takeaway' from the women in ag leadership panel is that women

still face issues and obstacles in the ag industry. Coming from California, I was oblivious to the fact that minorities face obstacles still since it is embraced in California. Since I am looking to move to Oklahoma or Texas or Kansas etc., this was a big eye opener for me.”

- “Be authentically you! Do not let stereotypes define you, and be the person you would like to be.”

## Discussion/Conclusion

During the semester, students in our personal leadership development course gain conceptual understanding related to the organizational realities of leadership, with particular emphasis given to examining generational, gender, and cultural diversity within the workplace. It appears that students enjoyed participating in the inaugural Women in Agricultural Leadership panel discussion and were able to broaden their perspectives pertaining to the unique challenges and opportunities that women within the agricultural industry experience. Results of the retrospective pre-post test evaluation survey indicate that students’ perceptions and awareness of women agricultural leaders were significantly enhanced after participation in the panel discussion. This activity also afforded the opportunity to encourage meaningful and timely conversations regarding the leadership roles of women within the agricultural workforce. By developing a stronger understanding and awareness of the organizational climate and realities for women in the agricultural industry, authentic student leaders may positively impact the culture as they enter the field.

Northouse (2016) contends that gender-based leadership research contradicts stereotypical expectations, concluding women and men leaders do not differ in effectiveness or style. However, the perceptions of students in this study reveal the inverse; after the Women in Agricultural Leadership panel discussion, three-fourths of the students

believed there were differences in the way men and women lead. This finding presents the opportunity for instructors to incorporate more intentional discussions based on literature related to gender differences in leadership in future course offerings to address the leadership gap experienced by women.

Although a positive shift occurred in the awareness of students toward the differences diversity creates in the workplace, the change indicated the least amount of difference compared to the other statements on the evaluation survey. Authentic leaders must be able to recognize the contributions of gender, generational, and cultural diversity to the overall organizational climate to understand complex issues and promote collaboration (King et al., 2011). Diversity in the workplace is another key area instructors identified as an opportunity for improvement in the course curriculum.

Awareness and understanding of how the relationship between men and women working together in the agricultural industry has changed over the years increased the most among students participating in the panel discussion. In 2009, Boushey and O’Leary predicted the upcoming decade to be transformational in recognizing women’s contributions to the workforce. Now, as the end of the decade is nearing, women comprise more than 50 percent of the employee pool, increasing the need for authentic leaders to recognize and support gender diversity within organizations.

## Recommendations/Implications

Student results and feedback from the Women in Agricultural Leadership panel discussion retrospective pre-post test evaluation instrument supports the use of panel discussion as an effective instructional tool in undergraduate leadership education. Although the students found the panel discussion, as designed with four panelists and a 90-minute timeframe, helpful and recommend

its future use, we suggest practitioners strongly consider the timeframe needed for the instructional strategy when determining the number of panelists to invite. Based on our experience, a 90-minute panel discussion allowed our four panelists to discuss a broad variety of topics but limited the ability to achieve depth. Practitioners should consider their learning objectives and the ratio of breadth to depth they wish to achieve through use of the panel discussion when determining the time allotted for the activity and the number of panelists to involve.

By completing the evaluation instrument after participation in the Women in Agricultural Leadership panel discussion, students also provided recommendations for potential speakers at future panel discussions and suggestions for improvement. Panelist suggestions included state representatives of Farm Bureau, representatives of state commodity organizations, state legislators, representatives of the state Department of Agriculture, and Dr. Temple Grandin. Additionally, several students suggested hosting a men in agricultural leadership, or mixed-gender, panel discussion, in order to examine both male and female perspectives of leadership within the industry. Topic recommendations included suggestions for transitioning into the workforce, making a difference within the agricultural industry as a college student, detailing the pathways each panelist followed to arrive at their current career opportunities, and additional advice for achieving work-life balance. Lastly, suggestions were made pertaining to the format of the panel discussion: several students voiced the concern that they were unable to participate in the one-on-one discussions held after the initial panel due to interference with their class schedules. The suggestion was made to offer the panel in the evening in order to afford students the opportunity to interact with panelists on a more personal level.

## Recommendations for Future Research

While literature has shown that less than 6% of

leadership educators consider panel discussions as a “top 3” teaching practice (Jenkins, 2012), even though a preference for the method has been exhibited by undergraduate leadership development students (Allen & Hartman, 2009), this study has provided support for the use of panel discussions as a viable teaching strategy. Recommendations for future research include continued implementation and subsequent analysis of future panel discussions highlighting the challenges and opportunities of leaders within the agricultural industry and the delivery of additional course content. A comparison study is suggested to examine student perceptions regarding a men or mixed-gender agricultural leadership panel discussion.

## References

- Albright, C. (2006). Who's running the farm?: Changes and characteristics of Arkansas women in agriculture. *American Journal of Agricultural Economics*, 88(5), 1315-1322.
- Allen, S. J., and Hartman, N. S. (2009). Sources of learning in student leadership development programming. *Journal of Leadership Studies*, 3(3), 6-16. doi:10.1002/jls.20119
- Andenoro, A. C., Allen, S. J., Haber-Curran, P., Jenkins, D. M., Sowcik, M., Dugan, J. P., & Osteen, L. (2013). National Leadership Education research agenda 2013-2018: Providing strategic direction for the field of leadership education. Retrieved from Association of Leadership Educators website: <http://leadershipeducators.org/ResearchAgenda>
- Avolio, B. J. (2003). Examining the full range model of leadership: Looking back to transform forward. In D. Day, & S. Zaccaro (Eds.), *Leadership development for transforming organizations: Grow leaders for tomorrow* (pp. 71–98). Mahwah, NJ: Erlbaum.
- Boushey, H., & O'Leary, A. (Eds.). 2009. *The Shriver report: A woman's nation changes everything*. Washington, DC: Center for American Progress. Retrieved from <https://www.americanprogress.org/issues/women/reports/2009/10/16/6789/the-shriver-report/>
- Census of Agriculture. (2012). Race, ethnicity, and gender profile for entire United States. Retrieved from [https://www.agcensus.usda.gov/Publications/2012/Online\\_Resources/Race,\\_Ethnicity\\_and\\_Gender\\_Profiles/cpd99000.pdf](https://www.agcensus.usda.gov/Publications/2012/Online_Resources/Race,_Ethnicity_and_Gender_Profiles/cpd99000.pdf)
- Conger, J. (1992). *Learning to lead: The art of transforming managers into leaders*. San Francisco, CA: Jossey-Bass.
- Creswell, J. W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Pearson.
- Davis, G. A. (2003). Using a retrospective pre-post questionnaire to determine program impact. *Journal of Extension*, 41(4). Retrieved from <https://www.joe.org/joe/2003august/tt4.php>
- Eagly, A. H., & Carli, L. L. (2007). *Through the labyrinth: The truth about how women become leaders*. Boston, MA: Harvard Business School Press.
- Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. (2005). "Can you see the real me?" A self-based model of authentic leader and follower development. *The Leadership Quarterly*, 16(3), 343-372. doi:10.1016/j.leaqua.2005.03.003
- Fenton, G. D., Brasier, K. J., & Henning, G. F. (2010). Status of women in agriculture according to the 2007 Census of Agriculture. *Journal of Agromedicine*, 15(1), 5-6. doi:10.1080/10599240903389748
- Jenkins, D. M. (2012). Exploring signature pedagogies in undergraduate leadership education. *Journal of Leadership Education*, 11(1), 1-27.
- King, S. N., Altman, D. G., & Lee, R. J. (2011). *Discovering the Leader in You: New and Revised*. San Francisco, CA: Jossey-Bass.

## References

Litwin, M. S. (2003). *How to assess and interpret survey psychometrics* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Northouse, P. G. (2016). *Leadership: Theory and practice* (7th ed.). Thousand Oaks, CA: SAGE Publications, Inc.

Pennington, P. (2006). Authentic leadership in the college classroom. *Academic Exchange Quarterly*, 10(2), 12-16. Retrieved from <http://rapidintellect.com/AEQweb/edchoiceold.htm>

Pennington, P. & Weeks, W. G. (2006). Agricultural leadership: Oklahoma State University's new major for undergraduate students. *NACTA Journal*, 50(4), 42-46. Retrieved from [https://www.nactateachers.org/attachments/article/281/Pennington\\_December\\_2006\\_NACTA\\_Journal-9.pdf](https://www.nactateachers.org/attachments/article/281/Pennington_December_2006_NACTA_Journal-9.pdf)

Privitera, G. J. (2017). *Research methods for the behavioral sciences* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Tan, S. J., & DeFrank-Cole, L. (2019). *Women's leadership journeys: Stories, research, and novel perspectives*. New York, NY: Routledge.

Trauger, A., Sachs, C., Barbercheck, M., Kiernan, N. E., Brasier, K., & Findeis, J. (2008). Agricultural education: Gender identity and knowledge exchange. *Journal of Rural Studies*, 24, 432-439. doi:10.1016/j.rurstud.2008.03.007

Warmbrod, J. R. (2014). Reporting and interpreting scores derived from Likert-type scales. *Journal of Agricultural Education*, 55(5), 30-47. doi:10.5032/jae.2014.05030