WOMEN'S SELF-PERCEIVED LEADERSHIP SKILLS IN A COLLEGIATE AGRICULTURAL EDUCATION COURSE

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Abstract

Leadership is evolving from its partiarchal roots to the emerging paradigm of a network of shared leadership. This new model which values the traits and abilities of communication, inclusion and nurturance has paved the way for greater participation of women in the leadership equation. However, preparation of young women leaders in agriculture may require changes in our educational methodologies. The purpose of this study was to evaluate the effectiveness of leadership education methodologies for female students. Students enrolled in a collegiate agricultural leadership development course constituted the sample of the study. No relationship was discovered between women 's previous leadership experiences and their perceived ability to work with groups, make decisions, communicate or understand self. However, women in an all-female section had a stronger perception of their ability to lead, work with groups, make decisions, communicate and understand themselves than women in a coeducational Based on these findings it was recommended that an all-female class be made available for women in collegiate agricultural leadership development courses.

Introduction

As more and more women entered the workplace and assumed positions of leadership in traditionally male industries such as agriculture, leadership educators needed to assess whether they were adequately preparing young women to succeed as leaders (Cummins, 1995). Aburdeen and Naisbitt (1992) stressed the importance of this changing scenario not be ignored, underestimated or misunderstood. Fritz, Brown Lunde and Banset (1996) agreed that it was critical to understand the changes and events related to gender, and to understand what both sexes could do to insure the likelihood of success in their professional careers.

However, individual success for women was only a part of the situation. The emergent view of organizational leadership recognized the need for a more nurturing or "feminine" style (Lee, 1994). Leadership was evolving from its patriarchal roots to the emerging paradigm of a web-like network of shared leadership. With this new model leaders were expected to develop a shared vision, build community, foster dialogue and nurture collective capability. This shift away from hierarchical, task-driven organizations created even greater opportunity for women (Helgesen, 1990; Aburdeen & Naisbitt, 1992). The door opened for a model of partnership, based on linking rather than ranking (Block, 1993). However, preparation of young women leaders needed for this transformation in agricultural organizations required changes in our educational methodologies. The literature clearly showed that classroom settings were largely based on theories and practices which were often ineffective and directly counter to the ways women learn and develop. In addition, leadership scholars warned that in order for organizations to survive in times of rapid change, organizations needed to become learning- or knowledge-based organizations that fostered an environment receptive to growth, risk and creativity (Senge, 1990; Bridges, 1996). The success of an organization in the 2 1 st century will be marked by its ability to learn together (Senge, 1990). If women are to fully participate as

leaders within learning organizations, agricultural educators need to understand gender-specific ways of learning. Viewed through the female developmental lens, leadership instruction may be different for women than for men.

Theoretical Framework

Women as Leaders

As leadership scholars called for a more relational model, women's particular strengths were increasingly valued. The literature clearly revealed several traits typically associated with women. Eagly and Johnson (1990) found in their meta-analysis of leadership style that women employed a more democratic or participative style than men. Sally Helgesen's study (1990) of female executives found that women led by building relationships, sharing information, and fostering an atmosphere of inclusion. Smith and Smits (1994) noted that, "We need to encourage feminine styles of leadership, not to replace, but to balance masculine styles" (p.46).

Many authors examined not the leadership style that women brought to an organization, but rather the inner traits they possessed to succeed. Astin and Leland (199 1) discovered several shared qualities among women leaders including: intellectual competence, assertiveness, personal awareness, and confidence. Cantor and Bernay (1992) also found that a woman's confidence in her own abilities was crucial to success. The authors developed a leadership equation for women which included "competent self' as a key factor. This competent self implied that women must have a strong sense of selfwhich was not defined by other people or institutions.

Women's Development of Self

Developmental theorist Carol Gilligan (1982) found, for women, that forging a sense of self could be problematic. Gilligan showed that feminine identity (sense of self) was threatened by separation from other people. Conversely, male ego boundaries were defined through separation. Gilligan challenged the psychological literature on moral development that equated increased development with increased separation. The author discovered that very often for women, moral "goodness" meant self-sacrifice, hindering development. Women judged themselves by their care and concern for others, resulting in a constant tension between doing for others and fulfilling their own potential. Whereas men resolved this conflict with a hierarchical ordering, women saw a network of relationships on whose continuation they all depend. This paradox clearly presented a predicament for women in leadership development within the existing hierarchical structures.

Numerous studies found very clear evidence that the public educational system was not meeting women's needs. Sadker and Sadker (1994) found that women were twice as Likely as men to be silent during class discussions. Krupnik (1985) described the college classroom as one where men performed and women watched. Men talked longer and were more Likely to interrupt. When women did speak, self-doubt frequently compromised the power of their statements (Tannen, 1990). Tannen summarized that, "ways of talking associated with masculinity are also associated with leadership and authority" (p. 240). However, following Gilligan's thesis, if a woman adapted her style of communication to a position of authority, she risked compromising her sense of self. Horner (1972) found that women appeared to have a problem with competitive achievement, especially against men, and that problem emanated from a perceived conflict between femininity and success.

The All-female Learning Environment

The researcher found evidence in the literature that a single-sex classroomprovided female students with an environment that encouraged participation. In non-traditional subjects, such as math and science, females receiving single-sex instruction had higher self-esteem, more positive attitudes about academics, were more confident in their ability to

perform in non-traditional subjects, and had higher academic achievement (Grossman & Grossman, 1994; Sadker & Sadker; Lee, Marks, & Byrd, 1994). Although academic achievement was perhaps the most compelling argument for the single-sex classroom, individual preference was also considered. Aries (1976) discovered that over time, women preferred an all-female grouping over a mixed sex grouping. Keohane (1991) suggested that all-female classrooms sustained a sense of connectedness that women need to develop their voice as leaders.

Purpose of the Study

The purpose of this study was to: 1) determine if a relationship existed between women's previous leadership experiences and their self-perceived leadership skills; and 2) examine the differences of self-perceived leadership skills between women in an all-female educational setting and women in a coeducational setting. Based on the purposes of this study, the following four hypotheses were formulated and tested statistically:

H_{01}= There was no relationship between a female student's prior leadership training and self-perceived leadership skills prior to a collegiate leadership course.

H_{02}= There was no relationship between a female student's prior leadership training and self-perceived leadership skills following a collegiate leadership course.

H_{03}= There was no difference in self-perceived leadership skills by females enrolled in an all-female section and females enrolled in a coeducational section prior to a collegiate leadership course.

H_{04}= There was no difference in self-perceived leadership skills by females enrolled in an all-female section and females enrolled in a coeducational section following a collegiate leadership course.

Procedures

Population/ Sample Design

The population for this study consisted of students who enrolled in collegiate academic leadership classes. The sample consisted of students who enrolled during the 1996 Fall semester, in a collegiate leadership course directed by a department of agricultural education (n=87). Purposive sampling was employed in the study. The logic and power of purposive sampling lies in focusing in-depth on a small number of information-rich cases that fit the purpose of the study (Patton, 1990; Babbie, 1992). H_{03} and H_{04} utilized a subset of the sample. Only students that registered for the all-female laboratory section (n=20) and the coeducational control section (n=20) were included in this part of the study.

A correlational design was used for this study. The dependent variable was the Leadership Skills Inventory (LSI) score. The independent variables were gender and previous leadership experience. Since random assignment was not possible (students self-selected into the various sections of the course) the research design was quasi-experimental. The treatment was an all-female educational setting, and the control was a coeducational setting. To determine statistical significance, an alpha level of $p < .05$ was established a priori for all analyses. For inform&ion purposes results of $p <. 10$ were reported, due to the exploratory nature of the study.

The laboratory experiences of the experimental (all-female) and the control group (coeducational) were kept as identical as possible, with the exception that the experimental group was exposed to the treatment (all-female classroom setting). Students were unaware during registration and throughout the course that their particular sections were part of a study. A female principle investigator taught both the control and experimental sections to eliminate any possible teacher effect and to maintain the integrity of the all-female setting. Although the principle investigator

was also the instructor, she had previous experience teaching the class and followed a prescribed lesson to eliminate bias. Identical experiential learning activities were used in all laboratory sections.

Data Collection

The instrument used to assess the students' self-perception of leadership skills was the Leadership Skills Inventory (LSI), developed at Iowa State University in 1980 by Carter and Townsend (Townsend, 1981). The LSI contained 2 1 statements describing various leadership and life skills. These statements corresponded to five internal scales for analysis: working with groups, understanding self, making decisions, communicating and leadership. Responses were measured on a five point Likert-type scale. The reliabilities for the five scales were as follows: communicating (.73), working with groups (.75), making decisions (.63), leadership (.83), and understanding self(.67). The LSI survey (pretest) was administered to all students enrolled in the leadership course during the first week of Fall semester 1996, and again (posttest) during the last week of classes. All data were collected in the common lecture setting of 200 students.

Results and Findings

Pearson's Product Moment correlation coefficient was used to test hypotheses one and two. These hypotheses were tested to determine if a relationship existed between female students' previous leadership training and their self-perceived leadership skills prior to or following the course. Correlations were made between the five Leadership Skills Inventory measurement scales and four different categories of previous leadership experience. The four categories of previous leadership experience included: leadership courses in high school, leadership courses in college, leadership activities in high school, and leadership activities in college.

A review of posttest results indicated a statistically significant relationship between participation in high school leadership courses and the LSI Leadership scale. This correlation indicated that the more leadership courses a woman took in high school, the stronger she perceived her ability to lead. Although the researcher was unaware of the exact content of these courses, this attempt was an effort to measure the number of leadership courses experienced. Statistically significant relationships were found between participation in high school and collegiate leadership activities and the LSI Leadership scale. These correlations indicated that the more academic leadership activities a woman participated in, the stronger she perceived her ability to lead. No other statistically significant correlations found between previous leadership experience and se&-perception of leadership skills. Results are summarized in Table 1.

A review of posttest results indicated statistically significant relationships between a woman's perceived ability to lead and previous academic leadership courses and activities. These results indicated that following leadership training, women recognized the value of their leadership courses and activities and indicated these past experiences developed their ability to lead.

Posttest correlations (Table 2) revealed statistically significant relationships between participation in high school and collegiate leadership courses and the LSI Working with Groups scale. These correlations indicated that the more academic leadership courses a woman took, the stronger she perceived her ability for working with groups. No other significant relationships were found in the correlations. The other elements of the leadership composite were not statistically related to previous leadership courses or activities.

A t-test for independent means was used to test hypotheses three and four. These hypotheses were tested to determine any difference in self-perceived leadership skills by females enrolled in the all-female section and females enrolled in the coeducational section prior to and following a

Table 1. Relationships Between Previous Leadership Experience and Self-Perceived Leadership Skills"-Prior to Training (n=87)

Leadership Self-Perceptions	High School Leadership Course Experience[b]	Collegiate Leadership Course Experience[b]	High School Leadership Activity Experience[b]	Collegiate Leadership Activities Experienceb
Working with Groups	r=.008	r=.15	r=.14	~-06
	p=.94	p=.16	p=.21	p=.61
Understanding Self	r=-.06	r=-.06	r=-.002	r=-.06
	p=.62	p=.62	p=.99	p=.59
Communicating	r=.05	r=-.08	r=.11	r=.05
	p=.64	p=.45	p=.3 1	p=.68
Making Decisions	r=-. 11	r=.04	r=-.06	r=.11
	p=.30	p=.71	p=.59	p=.33
Leadership	r=.22*	r=.10	r=.35*	r=.23*
	p=.04	p=.36	p=.00 1	p=.04

"Adjusted for missing cases. [b]A (0 courses or activities)=0, B (l-2 courses or activities)=2, C (3-4 courses or activites)=4, D (5-6 courses or activites)=6, E (7 or more courses or activities)=7.
*p<.05

collegiate leadership course. Means of all five LSI measurement scales were compared for the all-female (treatment) and coeducational (control) laboratory sections. There were no statistically significant differences between the groups of women in the two sections *prior* to the treatment.

Means of all five LSI measurement scales were compared for the all-female (treatment) and coeducational (control) laboratory sections *following* the course. Statistically significant differences were found between the means of the groups for all five LSI measurement scales. Following the leadership course, women in the all-female section had stronger perceptions of their abilities to work with groups, understand self, communicate, make decisions, and lead than women in the coeducational section. A summary of the results is reported in Table 3.

Conclusions and Discussion

Findings from testing hypotheses one and two indicated that there was little continuity or connection between women's previous leadership experiences and their present self perception of leadership skills. Since no relationships were discovered for the four LSI scales: Working with Groups, Understanding Self, Communicating or Making Decisions, it appeared that past leadership experiences did not help women become more confident in these areas. These results could be due to the fact that the previous experiences had no stability over time, reinforcing what Brungardt

Table 2. Relationships Between Previous Leadership Experience and Self-Perceived Leadership Skills" Following Training (n=79)

Leadership Self-Perceptions	High School Leadership Course Experience[b]	Collegiate Leadership Course Experience[b]	High School Leadership Activity Experience[b]	Collegiate Leadership Activity Experience[b]
Working with Groups	r=.20**	r=.21**	r=.20	r=.10
	p=.08	p=.07	p=.08	p=.37
Understanding Self	r=.07	r=-.04	r=.01	r=-.01
	p=.53	p=.74	p=.91	p=.90
Communicating	r=.14	r=.002	r=.10	r=.17
	p=.2 1	p=.99	p=.37	p=.13
Making Decisions	r=-.008	r=.06	r=-.03	r=.15
	p=.94	p=.56	p=.83	p=.18
Leadership	r=.36*	r=.23**	r=.35*	r=.30*
	p=.001	p=.05	p=.001	p=.008

'Adjusted for missing cases. [b]A (0 courses or activities)=0, B (1-2 courses or activities)=2, C (3-4 courses or activities)=4, D (5-6 courses or activities)=6, E (7 or more courses or activities)=7.
*p<.05, **p<. 10.

(1996) concluded that more research is needed to evaluate what methods influence long term growth and development in leadership. These findings could also be attributed to a lack of effective training activities that address issues such as understanding self or making decisions. The presence of a significant correlation between previous experience and the LSI Leadership scale indicated that leadership courses and activities were primarily focused on the development of leader-centered skills from the "old" leadership paradigm

These findings indicated that an all-female classroom was superior to a coeducational setting for collegiate women in the development ofworking with groups, making decisions, communicating, understanding self and leadership. In the current study, it appeared these needs were not being met in a coeducational setting. This study supported the research of numerous authors (Sadker & Sadker, 1994; Lee, Marks, & Byrd, 1994, Grossman & Grossman 1994) that found females in an all-female classroom were more confident in their ability to perform in non-traditional subjects.

Recommendations and Implications for Practice

1. The addition of gender-specific laboratory sections is recommended for leadership courses that develop the five skill areas examined in this study.

2. It is recommended that leadership courses incorporate more activities that allow women

Table 3. t-test for Independent Means of the All-female and Coeducational Sections Self-Perceived Leadership Skills Following Training

Scale	n	Mean'	SD	2-Tail Prob
Working with Groups				.003*
all-female	18	4.71	1.38	
coeducational	16	4.24	2.56	
Understanding Self				
all-female	18	4.71	1.34	.06**
coeducational	16	4.50	1.75	
Communicating				
all-female	18	4.57	1.45	.04*
coeducational	16	4.22	2.25	
Making Decisions				
all-female	18	4.56	1.19	.04*
coeducational	16	4.23	1.49	
Leadership				
all-female	18	4.45	2.25	.01*
coeducational	16	4.05	2.89	

Note: 5=strongly agree, 4=agree, 3=undecided, 2=disagree, 1 =strongly disagree
"Adjusted for missing values
*p<.05, **p<=.10.

to have opportunities to make decisions,

3. defend their choices, and take responsibility for the outcome.

4. It is recommended that instructors of leadership courses receive more training in the development of understanding self, communication, making decisions and working with groups.

5. A qualitative evaluation of women's experiences in a collegiate leadership course should be conducted to further determine stakeholder's needs in leadership development methodology.

6. It is recommended that further development be conducted on the Leadership Skills Inventory to improve reliabilities of the internal scales.

7. A similar study of male students in leadership courses should be conducted to determine their gender-specific needs in leadership development.

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