OVERCOMING GENDER BIAS WITH SELF-EFFICACY: A CASE STUDY OF WOMEN AGRICULTURAL EDUCATION TEACHERS AND PRESERVICE STUDENTS

Kathleen D. Kelsey, Associate Professor
Oklahoma State University

Abstract

Women have been traditionally underrepresented in secondary agricultural education as teachers and students. Using critical theory as the lens for interpreting findings, this case study sought to explore female teachers' and preservice students' experiences in secondary agricultural education to better understand their perceptions of barriers to entry into the profession. Two-thirds of the women reported that they experienced gender bias from school administrators, community members, and peers; however, they exhibited a high degree of self-efficacy for teaching agricultural education that allowed them to persist in spite of any barriers. However, all discriminatory experiences are more likely to discourage women in preservice education from entering the profession. It is recommended that agricultural teacher educators prepare female preservice students with the knowledge and skills necessary to face and overcome gender bias in a variety of formal and informal educational contexts, especially job-seeking interviews, to increase their chances of career entry into secondary agricultural education in this state.

Introduction and Background

Women have traditionally been underrepresented as secondary agricultural education teachers. Why women do not participate at equal rates with men as agricultural education teachers has been the subject of much study. A review of the agricultural education literature focuses on women's perceived motives for and barriers to teaching agricultural education.

Women are motivated to teach agricultural education because they want to improve agriculture, they enjoy teaching young people, and they were influenced by peers, parents, or other family members to enter the profession (Thompson, 1986). Foster, Pikkert, and Husmann (1991) found that women pursued careers as agricultural education teachers because they loved agriculture, enjoyed working with youth, and it was an extension of their high school vocational agriculture and National FFA Organization (FFA) experiences. They also had a passion for teaching.

However, barriers exist for women who pursue careers in nontraditional fields; most notable were gender bias and physical attractiveness (Fitzgerald & Betz, 1983). Gender bias based on occupational sex stereotyping has been reported in the agricultural education literature as the most significant barrier for women who desire to teach agricultural education.

Bradley (1971) reported that there was a place for women agricultural instructors, but only in multi-teacher programs as horticulture teachers. Thompson (1986) reported women agricultural education teachers "experience incidences of discrimination and generally have more difficulty in finding jobs and attaining acceptance as vocational agriculture teachers than do their male counterparts" (abstract). Knight (1987) found 33% of the women who taught secondary agricultural education in Ohio experienced gender bias at some point in their careers from administrators and male agricultural education teachers. Foster et al. (1991) believed that gender bias was a deterrent to women entering the

profession. Cano (1990) reported that female agricultural education teachers also perceived gender bias from members of the community where they worked.

Additionally, respondents in the Foster et al. (1991) study reported several factors that contributed to the low numbers of females teaching secondary agricultural education. The most common responses were "the area is traditionally male dominated, acceptance by the community is difficult, too much stress and time on the job, and not knowledgeable enough in agricultural subjects" (p. 242). Foster (2001a) found that the most important barrier for women teaching agricultural education was "acceptance by peers and other males in industry" (p. 392). One of Foster's (2001a) participants said that "other agricultural education teachers [male] view female teachers as *hobby advisors* – the largest problem I see in being a female AgEd teacher is having to *prove* you are qualified" (p. 392).

Among Foster's (2001a) respondents, 62% felt that they had experienced a barrier or challenge as a teacher due to their gender. In a companion qualitative study, Foster (2001b) reported that women faced additional choices that men did not in defining their careers, such as choosing between having children or not, dealing with guilt related to working long hours when children were young, spousal support in balancing family and work, and ultimately having to choose between raising children or building a career as an agricultural education teacher. Cano (1990) and Thompson (1986) reported that women in agricultural education experienced loneliness and were passed over for state level leadership positions.

In spite of the barriers reported in the literature, many women continue to choose agricultural education teaching careers, and their numbers have increased nationally over the past two decades from 5% (Knight, 1987) to 22% in 2001 (Camp, Broyles, & Skelton, 2002). In California, women constituted the majority (61%) of students graduating from agricultural education preservice programs, and 37% of the state's agricultural education teachers were female (Trexler, et al., 2004). However, in Oklahoma, women constituted 3% of the agricultural education teaching force in 2005.

Purpose of the Study

The purpose of this case study was to explore female secondary agricultural education teachers' and preservice students' experiences within the profession to better understand their perceptions of barriers to entry into the profession. Specifically, the study sought to answer the following two research questions: 1) Did women in Oklahoma experience gender bias within the profession? and 2) what coping mechanisms did women adopt to work in a nontraditional career?

Epistemological Framework

This study was conceptualized from a critical theorist's perspective. The underlying assumptions when designing the study were that 1) more qualified women desire to teach agricultural education in this state than are currently employed, 2) women face barriers to entry because of gender, and 3) by uncovering and reporting gender bias in the field, more qualified women will be able to enter their chosen careers.

Critical theory posits that society can be changed through citizen action and can become more just if citizens do not accept the status quo (Rasmussen, 1996). Engaged citizens must constantly question or criticize what is and compare it to what ought to be for progress. Critical theorists ask what is preventing society from making progress by challenging the status quo. In this case, the researcher questioned why there were not more women teaching secondary agricultural education in this state when the preservice program is consistently populated with women. Critical theorists never accept the way things are, but rather strive to uncover what things are capable of becoming in their most enlightened forms (Nowlan, 2005). Marx (cited by Rasmussen, 1996) stated "philosophers have always interpreted the world; the point is to change it" (p. 11). It is believed that thought and action should be intertwined to transform the present reality into a more just and equitable

one where qualified professionals can enter their chosen careers free of discrimination.

Methods

The case study method was used for framing the study (Merriam, 1998). Both qualitative and quantitative data were collected. Case study is appropriate for situational and exploratory research as this method allows researchers to seek meaning in addition to description. The population included all female students who took at least one secondary teacher preparation course at Oklahoma State University from 1999 to 2004 (n = 65). Students' whose grade-point average was less than 2.50 were excluded because they were not qualified to enter the professional education program. All female agricultural education teachers in Oklahoma were also included in the study (n = 13) for a total population of 78 women. To protect the identity of the subjects, these women are identified by participant number in the text.

The participants were solicited by letter and telephone. Those that chose to participate were engaged in a long interview that was audio-taped, transcribed, and mailed back to them for verification. Those that did not participate failed to respond to the letter and telephone messages. After the initial letter solicitation and one to two follow-up telephone messages, the researcher assumed the women did not want to participate and made no further attempts to contact the subjects. The researcher makes no assumptions regarding nonparticipation as there was no contact with nonrespondents.

All interviews adhered to a semi-structured interview protocol. Demographic questions were asked regarding age, ethnic and geographic background, marital status, children, and youth experiences in the agricultural education context (FFA and 4-H activities). Data were also collected to verify attendance at the land-grant university and about their experiences in the agricultural education major while at the university. To begin the conversation regarding the role of gender in the workplace, the women were asked about their job seeking experiences and their current positions as agricultural education teachers, including their primary responsibilities. Current teachers were asked if they thought that being female had a positive or negative affect on obtaining their jobs and if they had encountered difficulties on the job because of their gender. These two questions stimulated the bulk of the discussion that is reported in this study. The women were also asked about job satisfaction and future career goals. Participants were engaged in free flowing dialogue as well as probing questions that evolved during the interview process to explore emerging themes. No two interviews were exactly the same, but the focus remained on exploring women's career-related experiences in the agricultural education context.

The interview transcripts were cleaned and loaded into a qualitative data analysis software program (ATLIS\ti). This program allowed the researcher to organize and categorize the data, known as coding and memoing. The codes were then grouped together, distilled, and analyzed for patterns and themes. An overall portrait of participants' responses was constructed and used to draw conclusions and recommendations (Creswell, 1998).

Merriam (1998) recommended six strategies for enhancing validity in qualitative research. Participants' claims were triangulated with program planners' understanding of certain facts about the program's structure and format. Member checks were accomplished by mailing participants a copy of their interview transcripts for verification. Draft copies of the report were shared with members of the agricultural education community, including the participants of the study, for peer examination and feedback. The study was conceptualized with teacher educators, adding an element of collaborative research to further enhance validity. Researcher's bias can never fully be removed; however, an awareness of personal biases was acknowledged and checked with peer reviewers. The researcher holds a social constructionist epistemology and acknowledges that her experience in the agricultural education domain helped to conceptualize the study, including selection of interview questions and interpretation of

the data. There was no attempt to generalize the results of the case study to this or other populations.

Findings and Conclusions

Of the 78 women who were invited to participate in the study, 36 chose to do so (46% response rate). The participants' mean and median age was 25 years with a standard deviation of 6 years (range = 34 years, from 21 to 55). Thirty-four of the women were Caucasian, one was African American, and one was of Caucasian and Native American heritage. Thirteen of the women were married (36%) while 23 were single (64%). Five of the married women had children. Four women had at least one child under the age of two at home. The women's identification numbers and career status are detailed in Table 1.

Table 1
Career Status of Study Participants

Status	*f*	*%*
Current Students (B.S. and Masters' students)		
Had not completed student teaching experience (numbers 1, 6, 11, 14, 19, 31, 36, 37, 49, 52, 63, 67)	12	33
Had completed student teaching experience (numbers 9, 54, 66)	3	8
Subtotal Enrolled in University	*15*	
Graduated		
Not teaching (numbers 8, 23, 28, 51, 57, 60)	6	17
Teaching but not AGED (numbers 2, 15, 29)	3	8
Teaching secondary AGED (numbers 3, 13, 26, 43, 56, 71, 74, 77, 78)	9	25
Teaching college agriculture (numbers 17, 20, 59)	3	9
Subtotal Graduated from University	*21*	
Total	36	100

Sixty-four percent (n = 23) of the women spoke about experiencing gender bias in the agricultural education domain in this state in four key situations: the early field experience, student teaching, when applying and interviewing for jobs, and on the job. The women reported being treated equitably during their preservice teacher preparation program at the university. While the women were clearly discriminated against and experienced gender bias from peers, public school administrators, and community members, those who succeed in secondary agricultural education had high self-efficacy. Thus, the qualitative findings and conclusions are focused on two major themes: experiencing gender bias and overcoming gender bias with self-efficacy.

Experiencing Gender Bias

The women discussed the problems they encountered when attempting to enter the profession including denial that a problem existed for women in agricultural education, male-female relationships in the workplace, attitudes of older teachers and community members, superintendents and principals as gatekeepers, and discouraging remarks from others about women in the profession. The women talked about how being a woman in a nontraditional profession impacted their attitudes and behaviors, which varied. Some became even more determined to succeed while others changed their majors, leaving agricultural education behind.

Seventeen women identified the gatekeepers who keep women out of the secondary agricultural education profession as public school administrators (principals and superintendents), school board members, and male agricultural education teachers. The women perceived that the

gatekeepers discriminated by refusing to interview women for jobs, asking women gender-biased questions during interviews, and telling women they did not belong in the profession (numbers 6, 8, 9, 13, 14, 15, 17, 20, 23, 28, 29, 36, 37, 43, 59, 71, 77).

For example, participant number 8 observed that discrimination is centralized with the superintendents who, in turn, reflect the values of their communities. "Ultimately, it's the superintendent who makes the hiring decisions." Participant number 14 said superintendents and school board members would not hire women because they "don't picture a female driving a dually pickup or pulling a stock trailer." Participant number 15 believed she was passed over for a job in favor of a male teacher who was not certified to teach at the time of hire. She said, "I should have slapped a lawsuit but I didn't. I kept my mouth shut. They didn't want a woman."

While waiting in the lobby, participant number 23 who had been called for an interview overheard the school principal tell the superintendent, "I told you I do not want to interview any females for this position." During the interview the superintendent asked her questions such as "are you sure you can weld? I've never seen a girl that can teach mechanics."

Participant number 43 said,

> it is still a good old boys' network in this state. I know that there are certain questions that [administrators] are not supposed to ask during interviews and I think that, to a certain extent when they interview a woman, they still try to ask those questions. Are you married, do you have kids, how are you going to do this job? I know when I interviewed for [a job] I was asked if I thought I was going to be able to handle discipline problems that may arise with some of the boys I had in class. I think sometimes it is perceived as still a man's job. I had one parent ask me to wait until he got off work to castrate hogs because he had never seen a woman do that.

Participant number 17 said her cooperating teacher was not eager to have a woman work with him because,

> he had seen several girls [agricultural education student teachers] previously that didn't dress appropriately. They wore really tight clothes and lots of make-up and he said 'I don't want that, this is a small town and if they see you dressed like that there is no way this would work out.'

As for women secondary agricultural education teachers, participant number 13 said,

> when I tell people I am a female agricultural education teacher, they ask me who I teach with. They don't understand that I am the only one here, and that I teach welding, and deal with the livestock, and all of that.

Participant number 13 also felt that some older agricultural education teachers were "very, very traditional" and essentially rejected women as agricultural education teachers. During group meetings, several male agricultural education teachers frequently made derogatory comments about women agricultural education teachers loudly enough so that all nearby could hear. She said "I get the feeling like I am not welcome [at the group meetings] either" with comments like that. "They think it is still a man's sport and they are the ones that need to be running it."

Participant number 20 noted that "females tend to get hired in more urban versus rural settings. This state still has that very traditional outlook of production agriculture, which goes back to farmers and farmers go back to being male." Of the 13 women who were teaching agricultural education in this state, the majority (62%) were teaching in urban settings, and 62% were teaching in multi-teacher departments. Ten of the 13 (77%) teachers were responsible for teaching horticulture, a stereotypical female role. Table 2 shows the teaching profile of female agricultural education teachers in this state. Included are the divisions between urban and rural settings, multi-teacher or single teacher programs, and all subjects taught during the 2004-2005 academic year.

Table 2
Teaching Profiles of All Female Secondary Agricultural Education Teachers During the 2004-2005 Academic Year in Oklahoma

Teacher No.	Urban or Rural Setting[a]	No. of Teachers in Department	Subjects Taught
25	Urban	4	Ag 1, Animal Science (An Sci) 1, An Sci 2, Ag Science II
26	Urban	3	Horticulture (Hort), An Sci 1, Ag Power & Technology (Tech), Plant & Soil Science, Environmental Science, Aquaculture
76	Urban	3	Hort 1, Hort 2, Hort 3, Ag Communication (Ag Com)
77	Urban	2	Hort, Ag Science, Ag Com, Biotechnology (Biotech)
78	Urban	2	Hort
80	Urban	2	8th Grade, Hort, Ag Com, Ag 1
03	Urban	1	8th Grade, Hort, Ag Science, Biotech
81	Urban	1	8th Grade, Hort, Ag 1, Ag 2, Ag Power & Tech
21	Rural	2	8th Grade, Hort, Ag Com, Ag 1
71	Rural	2	8th Grade, Hort, Ag Sci, Ag Com
72	Rural	1	8th Grade, An Sci, Ag Com, Ag I, Power & Tech
74	Rural	1	8th Grade, An Sci, Ag Power & Tech, Plant & Soil Sci
13	Rural	1	8th Grade, Hort, Ag Sci, Ag Com, Ag Power & Tech, Equine Management

[a]Rural communities are those with a population that is less than 5,000.

This study revealed the multiple impacts of gender bias on women in preservice secondary agricultural education programs from seeking employment outside the state to leaving the profession. Twelve women (33%) planned to leave the state after completing their degrees or had already left and were working in another state because of the high incidence of gender bias that they encountered (numbers 6, 9, 11, 17, 36, 37, 43, 49, 52, 54, 57, 63).

Participant number 6 felt she had "no chance of getting hired as a woman." Participant number 9 planned to leave the state because "I can go to another state that is very welcoming of females and I can get a good job." Participant number 17 did not apply for jobs in this state because it was "not a place I really wanted to stay." Participant number 36 also planned to leave the state because "here the battle [for women to teach agricultural education] is

just a little bit too tough to fight. I realized that there is so much opposition" toward women. Participant number 43 said, "It is still a good old boys network." Participant number 49 felt that "I could be successful but I just don't think that I would be in my optimal environment in this state [because of gender bias]." Participant number 52 feared she could not get a job in this state because "I am a girl." Two women (numbers 14 and 57) reported leaving agricultural education and pursing other career options due to gender bias.

Six women spoke about listening to discouraging remarks made to them about their career goal. Friends, parents, community members, male agricultural education teachers, and state supervisors told them that it was difficult for women to pursue a career teaching agricultural education (numbers 14, 23, 28, 37, 54, 67).

Participant number 14 changed her major because of successive discouraging remarks made about women teaching agricultural education, including a state supervisor who lectured her class about the difficulty of placing women in agricultural education teaching jobs. She said "it is discouraging to think that I'm going to graduate in May. What am I going to do? I could teach but if you look at the statistics, it is really discouraging to think about teaching."

Participant number 23 reported that her high school agricultural education teacher was very helpful, and "one of the best agricultural education teachers in the country." When asked if he was encouraging of her career choice, she said "yes, with reservations. He knew that it would be difficult" for a female to pursue a career in agricultural education. Her college agricultural education professor was less supportive. "He was more hesitant to encourage me; he really tried to talk me out of it. He knew that it would be difficult to pursue a career in the agricultural education field for a female."

Participant number 28 reported that she experienced sex stereotyping in the community. She said, "When you get out into the field, other people not involved specifically in agricultural education always questioned [a female in an agricultural education role]." Participant number 37 was confident she would be successful as an agricultural education teacher; however, her friends were not as positive. They said, "do you really think you can get a job being an agricultural education teacher in a single teacher setting?"

Participant number 67 was discouraged from becoming an agricultural education teacher during an experience she had observing an agricultural education teacher for a class assignment. The teacher said a few times "it seems like it is really hard to be a female agricultural education teacher." When asked how she reacted to such statements, she said "it doesn't make me feel very good. Makes me question whether I really should be going into it. I have considered other areas, like extension work since he said those things to me."

Overcoming Gender Bias with Self-Efficacy

The majority of the women (64%) spoke of strategies and coping mechanisms that they used to overcome gender bias. All reflected high self-efficacy and an uncanny amount of a *can-do* attitude about their ability to be successful as agricultural education teachers. Self-efficacy is defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 71). Thus, self-efficacy becomes a determining factor for thinking, feeling, and behaving. Cognitive, motivational, affective, and selection processes are used to explain self-efficacy. An efficacious outlook on one's life enhances accomplishment and well-being, giving people the motivation to complete a task enjoyably.

The participants with high self-efficacy reported that they needed to *prove themselves* and believed they could. These 23 women were raised on farms, had parents who expected them to be strong, and had a passion for agriculture and teaching children about agriculture. They may or may not have been aware of the barriers that women faced in agricultural education when they chose their career, but they were determined not to let these barriers stand in their way. They were going to become agricultural education teachers, and if they were already

agricultural education teachers, they did not let gender bias derail them from being effective in their jobs (numbers 1, 3, 6, 8, 9, 13, 15, 17, 19, 20, 23, 31, 36, 37, 43, 51, 54, 56, 59, 60, 71, 74, 77).

Conversely, three women did not want to become a barrier buster or to be subjected to pervasive gender bias. These women demonstrated low self-efficacy toward teaching secondary agriculture education by changing majors (numbers 14, 11, 67).

In regard to being *barrier busters,* most communities in this state have never employed a female agricultural education teacher. The first female agricultural education teacher obtained her position in 1979 after volunteering for the school for nine years. She remained the only woman teaching agricultural education in the state for another ten years until 1989 when a second female agricultural education teacher was hired. Many female student teachers are placed with female agricultural education teachers, and a few are placed with male teachers in communities that are not accustomed to seeing women in this role.

Participant number 13 teaches agricultural education in a single-teacher department, including welding. She said,

> I feel like I've done well on some barriers because we had an auction, and we auctioned off a lot of shop [agricultural mechanics metal] projects so they [other agricultural education teachers and community members] know that we are in the shop and the kids are learning.

Participant number 17 reported that she had to

> walk a tight line. Do you have to stay professional all the time? Yes. Would a guy get some slack and joke around and push boys and get away with it? Yes. Can I push a girl? No. There are a lot of different expectations that you always have to be conscious of. When I first got there, it was definitely a boys' club.

Three women (numbers 1, 19, 56) had *no fear* in regard to their ability to obtain gainful employment as an agricultural education teacher. Participant number 1 said "I feel confident teaching animal science, plants, soil science, and agricultural communications. I just think there are different things that complement each gender." Participant number 19 reported that she was optimistic about obtaining an agricultural education teaching position. "There will be quite a few jobs opening up this spring. I feel that I will have a fair chance just as anybody else."

Many of the women were *persistent* in their search for employment as an agricultural education teacher when faced with barriers to entry. They remained committed to their career choice and eventually obtained employment as agricultural education teachers. Participant number 15 had faced numerous accounts of gender bias in her job seeking process and was unsuccessful obtaining a job in agricultural education at the time of the interview. A month after the interview, she emailed the researcher to say she had finally secured a job teaching agricultural education in another state.

Participant number 17 experienced gender bias during her student teaching experience but persisted because her father told his four daughters they could do anything they desired. She said "we didn't have a mom influence so we did the things that most guys would do." Dealing with gender bias was "just one more hurdle to jump." However, the hardest thing for her to resolve was "realizing that the stigma of being a [female agricultural education] teacher is still out there, and you do have to prove yourself."

Proving themselves as competent and capable teaching professionals was a dominant theme under self-efficacy. Sixteen women specifically discussed being strong willed and not being afraid of proving themselves to others in order to gain entry in the agricultural education profession (numbers 3, 6, 9, 13, 19, 20, 23, 36, 37, 43, 54, 59, 60, 71, 74, 77). Participant number 3 said

> as a female in the profession you feel like you have to prove yourself or you compete in those areas like agricultural mechanics. I guess subconsciously I

> gravitate towards some of those areas to prove myself. I think it is probably always in the back of my mind.

Participant number 9 credits her strength to her father who "raised us like boys." She worked on a show circuit and did a lot of hard, physical labor. She said,

> I am going to do what I want to do, and if you think I can't do it, I'm going to prove you wrong, so I've never really let guys intimidate me about being female and being involved in agricultural education.

Participant number 20 said that she was successful in securing two job offers teaching secondary agricultural communications and one job offer teaching college-level agricultural communications because "I proved myself through my previous experience. I can drive a dually pickup and hook up a trailer as good as anybody else."

Participant number 36 was told by her cooperating teacher that there was no way she was going to get a job in this state. He said, "You are a Yankee and you're a girl and if you expect to make it in this state you are crazy." After that incident, she set about proving him wrong by doing an excellent job in the classroom. She said, "I proved myself, and it was better in the end by far, a sweet victory." Likewise, participant number 59 was told by her high school agricultural education teacher that "women don't really belong in the agriculture teaching industry, so I started off trying to prove him wrong."

Participant number 77 was awarded *Teacher of the Year* by her school district and believes that women can be successful in agricultural education, but said that female agricultural education teachers must be exceptional because they are held to a higher standard than men. She said,

> I am a female in a male-dominated field, and it is really tough and challenging. It is possible, but you have to do your homework and have strong resources and a strong commitment and dedication to make it work. We have got to prove [that women can teach agricultural education] and we have got to stick to it and we have to stay in the profession.

The majority of the women reported that they were *confident in their abilities and skills* required to become agricultural education teachers. Participant number 31 said that she "felt well prepared to go out and teach" because of her excellent preparation at the university. Participant number 43 attributed her success to her parents who

> expected us [she and her sister] to do things that typically boys did. We did farm work. I think part of being successful is knowing what is expected of you and if that means that you need to be able to be the jack of all trades, then you need to be prepared for that.

Participant number 51 advised women "not to allow older men to knock them down because they are female." She said, "Be strong and be confident in what you say."

Conclusions

This study explored female secondary agricultural education teachers' and preservice students' experiences within the profession to better understand their perceptions of barriers to entry into the profession and their coping mechanisms for working in a nontraditional profession. The findings regarding women's discriminatory experiences in agricultural education discussed by Bradley (1971) and Thompson (1986) some years ago, and by Knight (1987), Cano (1990), Foster et al. (1991), and Foster (2001a; 2001b) more recently, currently exist in this state. The participants reported that public school superintendents and principals, male agricultural education teachers, community members, and parents did not readily accept women in the role of an agricultural education teacher. Several women reported that superintendents and principals served as gatekeepers by not inviting women for interviews or by asking gender-biased questions during interviews. Community members and male agricultural education teachers made disparaging

remarks to women seeking to become agricultural education teachers, serving to discourage them from the profession.

Sixty-four percent of the women experienced gender bias but the majority overcame gender bias with high self-efficacy in regard to teaching secondary agricultural education. Bandura (1994) reported that "it requires a strong sense of efficacy to remain task oriented in the face of pressing situational demands, failures and setbacks that have significant repercussions" (p. 73). The women who reported high self-efficacy saw themselves as barrier busters, had little fear of failure, were persistent, felt the need to prove themselves as capable women in a male-dominated career, and were confident in their abilities and skills as agricultural education teachers.

Recommendations

Combating gender bias in the workplace requires a multi-pronged approach. The Glass Ceiling Commission (1994) recommended that leaders "implement initiatives to eliminate these attitudinal, cultural, and organizational biases" (p. 26) that prevent women from advancing in nontraditional professions. For example, a few women in this study reported being blind-sided during mock and real interviews when asked gender-biased questions by school administrators. This fact surfaces two important points. First, students should be forthright in reporting these incidences to their teacher educators and other authorities, and their claims need to be taken seriously. Second, teacher educators in this state need to address discriminatory practices during the hiring process in their classrooms before women are sent into the field to make them aware of gender bias in agricultural education in this state.

In addition to awareness education, women in nontraditional careers such as agricultural education should be coached in defending their civil rights during interviews with school personnel (Lent, Brown, & Hackett, 2002). According to Bandura (1994) high self-efficacy toward a difficult task, such as successfully navigating interviews, can be influenced by "mastery experiences" (p. 72). Perseverance, sustained effort, and adversity also build self-efficacy. "Vicarious experiences provided by social models" (Bandura, p. 72) build self-efficacy by watching like-individuals perform and succeed at tasks. Social persuasion or coaching also can impact self-efficacy. Female agricultural education teachers could be recruited to work with female preservice students in a coaching and mentoring program to teach them successful coping mechanisms in working in a nontraditional career and to build self-efficacy among female students to enhance their chances at career entry.

Discussion

Several participants in this study reported that they will not seek employment in this state because of provincial attitudes that dictate sex-stereotyped roles for women (teaching horticulture in multi-teacher departments with a male co-teacher). Florida (2004) has argued that cultural pluralism is an indicator of a community's vitality. As women who are passionate about agricultural education leave the state, or the profession, or both, they take their talent and intellect with them. According to Florida, those communities that don't embrace diversity are relegated to the lower echelons of the socioeconomic structure. In 2002, Oklahoma was ranked 34th of the 50 states in terms of economic growth and prosperity (Progressive Policy Institute, 2002). According to Florida, the treatment of minorities and women is a social barometer of a community's future. Can a state and a profession afford to train and then discard qualified professionals simply because of their gender?

While this research illuminated women's self-reported experiences with gender bias in the secondary agricultural education context in one state, more research is required to better understand the variables that affect women's career entry experiences in agricultural education to explain why they remain underrepresented nationally. Fitzgerald and Betz (1983) cite informal sex discrimination and physical attractiveness as the two primary causal variables in preventing women's advancement in nontraditional careers. Empirical research

should test these variables in the agricultural education context and develop strategies for helping women gain entry in nontraditional careers.

References

Bandura, A. (1994). Self-efficacy. In V. S. Ramachandran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press.

Bradley, H. R. (1971). A woman vocational agriculture teacher. *The Agricultural Education Magazine, (44)*2.

Camp, W. G., Broyles, T., & Skelton, N. S. A (2002). *National study of the supply and demand for teachers of agricultural education in 1999-2001*. Retrieved November 10, 2005, from http://aaaeonline.org/.

Cano, J. (1990). Male vocational agriculture teachers' attitude and perception towards female teachers of agriculture. *Journal of Agricultural Education, 31*(3), 19-23.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.

Fitzgerald, L. F., & Betz, N. E. (1983). Issues in the vocational psychology of women. In W. B. Walsh & S. H. Osipow (Eds.), *Handbook of vocational psychology* (Vol. 1, pp. 83-160). Hillsdale, NJ: Lawrence Erlbaum Associates.

Florida, R. (2004). *The rise of the creative class and how it's transforming work, leisure, community and everyday life*. Cambridge: Basic Books.

Foster, B. B. (2001a). Women in agricultural education: Who are you? *Proceedings of the 28th Annual National Agricultural Education Research Conference,* 384-395.

Foster, B. B. (2001b). Choices: A dilemma of women agricultural education teachers. *Journal of Agricultural Education, 42*(3), 1-10.

Foster, R. M., Pikkert, J., & Husmann, D. E. (1991). Self-perception of gender bias among women agriculture teachers. *Proceedings of the National Agricultural Education Research Meeting,* 238-245.

Glass Ceiling Commission of the United States Department of Labor. (1994). *Cracking the glass ceiling: Strategies for success*. New York: Catalyst.

Knight, J. (1987). Current status of women teachers of vocational agriculture in Ohio and their perception of their place in the profession. *Proceedings of the National Agricultural Education Research Meeting,* 223-236.

Lent, R. W., Brown, S. D., & Hackett, G. (2002). Social cognitive career theory. In D. Brown (Ed.), *Career choice and development* (4th ed., pp. 255-311). San Francisco: Jossey-Bass.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.

Nowlan, B. (2005). *What is critical theory and why study it?* Retrieved March 8, 2005, from http://www.uwec.edu/ranowlan /intr_whystudy_crit_thy.htm.

Progressive Policy Institute (2002). *The 2002 state new economy index*. Retrieved August 31, 2005, from http://www.new economyindex.org/index.html.

Rasmussen, D. M. (1996). *The handbook of critical theory*. Oxford, UK: Blackwell.

Thompson, O. E. (1986). *Profile of vocational agriculture teachers: Trends in number, sex, preparation, and satisfaction of credential recipients*. (ERIC Document Reproduction Service No. ED 273 789).

Trexler, C., Spiess, M., Dodson, B., Vaughn, R., Freeman, F., & Bellah, K. (2004). California and its new teachers: Prisms through which to view the future of agricultural education. *Proceedings of the National Agricultural Education Research Meeting*, 445-458.

KATHLEEN D. KELSEY is an Associate Professor in the Department of Agricultural Education, Communications, and Leadership at Oklahoma State University, 466 Agricultural Hall, Stillwater, OK 74078-6031. E-mail: kathleen.kelsey@okstate.edu.