

# TEACHER ATTRITION AMONG WOMEN IN SECONDARY AGRICULTURAL EDUCATION

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## Abstract

*Although women have enjoyed majority status as teachers in most disciplines, they are under-represented in secondary agricultural education (AGED). To better understand female under-representation within agricultural education, this study used Grissmer and Kirby's (1987) theory of teacher attrition to investigate the career-related experiences of female preservice students in the agriculture education department at Oklahoma State University and AGED teachers within Oklahoma using a mixed-method case study design. It was found that, although the women were well prepared to teach and had contextually rich experiences in AGED, only a fraction of the women who entered the preservice program successfully gained employment as AGED teachers. Reasons for attrition included a lack of commitment to teaching AGED, being place-bound, and gender bias from school administrators. To reduce attrition, women desiring to teach AGED and those already in the field need support from university faculty, state staff, and school administrators in regard to challenges they face in nontraditional careers to increase specific human capital and a commitment to the profession.*

## Introduction

Women have enjoyed majority status as teachers for the past century. In 1900, 70% percent of all teachers were women (Allison, 1995). Research confirms that this trend has not changed. In 2003, 53% of all secondary school teachers were women (U.S. Department of Labor Women's Bureau, 2003). Yet, women in secondary agricultural education (AGED) have been significantly underrepresented since 1917 when Congress authorized funding for vocational education in public schools via the Smith-Hughes Act. Twenty years ago, Knight (1987) found that women held 5% of the AGED positions nationwide. In 2001, women represented 22% of all AGED teachers (Camp, Broyles, & Skelton, 2002). Nationwide, women are gaining equity as AGED teachers. Women constituted the majority (61%) of students graduating from AGED preservice programs in California and 37% of that state's AGED teachers were female (Trexler, et al., 2004); however, in Oklahoma women do not enjoy this trend

and represent 3% of the AGED teaching force.

## A Theory of Teacher Attrition

Grissmer and Kirby's (1987) theory of teacher attrition proposes variables for explaining why teachers leave their jobs. Attrition is defined as "those who leave teaching for at least one year" (p. 10) voluntarily (another job, homemaking, return to school, unemployed, or out of labor force) or involuntarily (failure to secure a teaching position when one is desired or staff reduction).

Teachers leave in a predictable U-shaped curve that is tied to their life cycle and career stages. The highest rate of attrition occurs early in the teacher's career (change jobs, attend graduate school, and childbirth) and at the end of one's career (retirement, illness, and death). Deciding to stay in teaching depends upon six interdependent variables; a) the degree of human capital acquired to do a specific job in a specific location, b) the degree of transparency present during the hiring process, c)

previous work experience when hired, d) changes in family status (marriage, divorce, spouse moving to another job, and childbirth), e) compensation and working conditions, and f) job opportunities in- and outside of teaching.

The human capital variable is further explained as “individuals make systematic assessments of the net monetary and non-monetary benefits from different occupations and make systematic decisions throughout their career to enter, stay, or leave an occupation” (Kirby & Grissmer, 1993, p. 10). Human capital is the benefit a person receives from a career. As people gain human capital that is position and location specific to their career, the probability of them leaving their positions decreases. There are two types of human capital, generic and specific. Generic capital can be transferred easily to different careers while specific capital is relevant to that career only. The higher the amount of specific capital an individual has, the less likely she or he will change professions.

### Literature Review

Teacher attrition is a concern to society as the cost and time involved in preparing teachers is considerable. Attrition appears to be especially high within the AGED discipline. A longitudinal study of California vocational education teachers (Thompson, 1986) found that of the 713 teachers who prepared to teach AGED between 1975 and 1985, only 242 (34%) were still teaching AGED in 1985. Thirty-seven percent of those who received their credentials never taught. Of the 37% who never taught, the majority (67%) were women. One-half of the remaining teachers who were placed quit by the fall of 1985. Likewise, Woodin (1973) reported that only 55% of the graduates who qualified to teach AGED entered the profession.

In AGED, not only are there higher attrition rates among women, many college institutions experienced challenges in placing their female AGED graduates because of their gender (Thompson, 1986). The reasons given for the difficulty in placement were a perceived lack of mechanical and practical skills and a lack

of mobility by the hiring school administrator.

Why do so many teachers fail to enter or leave their chosen profession after investing resources to earn a credential or license to teach? Consistent with Grissmer and Kirby's (1987) theory of teacher attrition, Billingsley and Cross (1991) reported that certain aspects of the school environment were the cause of teacher attrition, such as a lack of administrative support, lack of collegial and parental support, and insufficient involvement in decision-making.

Additionally, Gonzalez (1995) found that many dispositional and work environment elements combined to influence teacher attrition. The dispositional factors that were most common among teachers who left teaching were youth (less than 30 years old), being female, high scores on teacher exam(s), mid to upper social economic status (SES), little experience, low level commitment to teaching, and ineffective coping strategies. The environmental factors that caused teacher attrition were high school teaching assignment, large class size or caseload or both, unsupportive administrator, excessive paperwork, ambiguous or conflicting role demands, few job rewards, and lack of decision making opportunities.

Stinebrickner (2002, p. 197) found that “the commonly portrayed scenario in which a teacher is *lured* away from teaching by the attractiveness of a non-teaching job is not the primary cause of teacher attrition.” The study found that a large amount of teacher attrition was directly related to changes in the teacher's family situation in which childbirth was a major cause.

### Purpose of the Study

Agricultural education preservice courses at Oklahoma State University have been consistently populated with women who made up from 16-33% of the introductory courses from 1999 to 2002, yet, women constituted only 3% of the AGED teachers in the state at the time of this study. The purpose of the study was to investigate female under-representation in AGED through the lens of Grissmer and Kirby's (1987) theory of teacher attrition to better

understand this phenomenon. Research questions were to 1) profile the women demographically, 2) analyze attrition trends of students in the preservice program, and 3) qualitatively explore women's experiences in the AGED context.

### Methods

A mixed-method case study approach was used for collecting and analyzing data and drawing conclusions (Greene & Caracelli, 1997; Merriam, 1998). Case study is appropriate for situational and experiential research as this method allows the researcher to seek understanding in addition to description. The case was bound by gender, time, and location. Mixed methods included descriptive and demographic data in addition to long interviews to capture rich, thick descriptions of the complexities of the women's experiences in the AGED context.

The population ( $N = 78$ ) included all female students who took at least one preservice course at Oklahoma State University from 1999 to 2004 ( $n = 65$ ). All 13 female AGED teachers in the state were also invited to participate in the study ( $n = 13$ ). To protect the identity of the subjects, the women are identified by participant number in text. Direct quotations are referenced by numbers in parentheses indicating location in the original transcript. For example, (143:148) would indicate that the quotation came from these line numbers in the transcript for audit purposes.

The participants were solicited by letter and telephone and asked to participate in a long interview that was audio-taped, transcribed, and mailed back to them for verification (member checking). All interviews adhered to a semi-structured interview protocol. The interviewer also engaged participants in probing questions that evolved during the interview process to explore emerging themes. The interview transcripts were loaded into a qualitative data analysis software program (ATLIS\i). The program allowed the analyst to organize and categorize the data, known as coding and memoing. The codes were then grouped together and analyzed for patterns and themes. An overall portrait of participants'

responses was constructed and used to draw conclusions and recommendations. Quantitative data were retrieved from the university student information system and analyzed using Microsoft Excel©.

Merriam (1998) recommended six strategies for enhancing validity in qualitative research. Participants' claims were *triangulated* with preservice program planners' claims regarding 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 the preservice program planners 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 her experience in the AGED domain helped to conceptualize the study, including selection of interview questions. There was no attempt to generalize the results of the case study to this, or other populations.

### Findings

#### *Demographic Profile of the Participants*

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 six years. Thirty-four of the women were Caucasian, one was African American, and one reported being of Caucasian and Native American heritage. Thirteen of the women were married (36%) while 23 were single (64%). Five of the married women reported having children, four of which had at least one child under the age of two.

The participants' numbers and career status are provided in Table 1. Fifteen of the 36 women were current university students (42%). Three women had completed their student teaching experience, 12 had not. Of the remaining 21 participants who had

graduated and were certified to teach AGED, nine were doing so. Three women were teaching college-level agricultural

courses and three were teaching but not AGED. The remaining six women were not teaching.

Table 1  
*Career Status of Study Participants*

| Current Status   | <i>f</i> | <i>%</i> |
|--|----------|----------|
| <b>Current Students</b> (BS and Masters students)  |          |          |
| Had not completed student teaching (Participants #1, #6, #11, #14, #19, #31, #36, #37, #49, #52, #63, and #67) | 12       | 33%      |
| Had completed student teaching (Participants #9, #54, and #66)   | 3        | 8%       |
| <i>Subtotal participants enrolled in the university</i>  | 15       |          |
| <b>Graduates</b>   |          |          |
| Not teaching (Participants #8, #23, #28, #51, #57, and #60)  | 6        | 17%      |
| Teaching but not AGED (Participants #2, #15, and #29)  | 3        | 8%       |
| Teaching Secondary AGED (Participants #3, #13, #26, #43, #56, #71, #74, #77, and #78)                          | 9        | 25%      |
| Teaching College Agriculture (Participants #17, #20, and #59)  | 3        | 9%       |
| <i>Subtotal participants graduated from the university</i>   | 21       |          |
| <b>Total</b>   | 36       | 100%     |

Seventeen women (47%) were from Oklahoma, four were from Illinois, and three each were from Iowa and Wyoming. Two women were from Kansas and one each was from Colorado, Georgia, Louisiana, Missouri, New Mexico, New York, and Ohio. Fourteen (38%) of the women's parents were involved in production agriculture and were raised on farms, 12 (34%) women were raised in a rural setting but without access to production agriculture, five (14%) grew up in a suburban setting,

while the remaining five (14%) did not respond to the question. None of the women reported being from an urban background.

#### *Women's Involvement in the AGED Context*

The women were actively involved in 4-H, the National FFA Organization (FFA), and junior breed associations as youth. The frequency and percent of the participants' AGED-related activities are listed in Table 2.

Table 2  
*Participant Involvement in 4-H, FFA, and Junior Breed Associations as Youth*

| Response    | 4-H      |      | FFA      |      | Jr. Breed Assoc |      | FFA Chapter Officer |      | FFA State Officer |      | American Farmer |      |
|-------------|----------|------|----------|------|-----------------|------|---------------------|------|-------------------|------|-----------------|------|
|             | <i>f</i> | %    | <i>f</i> | %    | <i>f</i>        | %    | <i>f</i>            | %    | <i>f</i>          | %    | <i>f</i>        | %    |
| Yes         | 26       | 72%  | 27       | 75%  | 17              | 47%  | 24                  | 67%  | 5                 | 14%  | 3               | 8%   |
| No          | 6        | 17%  | 5        | 14%  | 15              | 42%  | 8                   | 22%  | 27                | 75%  | 29              | 81%  |
| No response | 4        | 11%  | 4        | 11%  | 4               | 11%  | 4                   | 11%  | 4                 | 11%  | 4               | 11%  |
| Total       | 36       | 100% | 36       | 100% | 36              | 100% | 36                  | 100% | 36                | 100% | 36              | 100% |

Twenty-four women served in at least one FFA leadership position at the chapter level and five women went on to be elected to state officer roles. Three women reported earning the American Farmer Degree.

The women participated in a variety of Supervised Agricultural Experience (SAE) projects as high school students as well. Of the 36 women, 29 had at least one SAE project, four participants did not respond, and three did not have an SAE project. Participant #6 reported having the most SAE projects at seven. The women participated in an average of 2.4 SAE projects each while in high school. Twenty-two of the 27 (81%) women had at least one livestock project consisting of either breeding or market projects of cattle, sheep, or hogs, four claimed home economics or home improvement, three had equine projects, four had horticulture, aquaculture or agronomy, two had public speaking, two had small animals, and five participants reported other projects. Other projects were work experience in a veterinary clinic or on

the university farm, wildlife conservation, visual arts, and electricity record books.

#### *Attrition of AGED Preservice Students*

Data from the university student information system from 1999 to 2002 were used to determine the attrition of students from the preservice program. Students who completed the first course in the series (AGED 3103) were compared to students who completed student teaching (AGED 4103). Women whose GPA was less than 2.5 were removed from the study as they were not admissible into the professional education program. Women dropped out of the preservice program at substantially higher rates than did men. On average, 57% of the women dropped out of the preservice program while 37% of the men dropped out. Table 3 lists the number and percentages of students who completed AGED 3103 and who subsequently completed AGED 4103 between 1999 and 2002.

Table 3  
*Number and Percentages of Students Who Completed AGED 3103 and Subsequently Completed AGED 4103 between 1999 and 2002*

| Year and Gender | Completers of AGED 3103 |     | Completers of AGED 4103 |     | Net Loss |     |
|-----------------|-------------------------|-----|-------------------------|-----|----------|-----|
|                 | <i>f</i>                | %   | <i>f</i>                | %   | <i>f</i> | %   |
| <b>1999</b>     |                         |     |                         |     |          |     |
| Male            | 42                      | 84% | 20                      | 87% | 22       | 52% |
| Female          | 8                       | 16% | 3                       | 13% | 5        | 63% |
| <b>2000</b>     |                         |     |                         |     |          |     |
| Male            | 38                      | 67% | 22                      | 71% | 16       | 42% |
| Female          | 19                      | 33% | 9                       | 29% | 10       | 52% |
| <b>2001</b>     |                         |     |                         |     |          |     |
| Male            | 46                      | 73% | 41                      | 80% | 5        | 11% |
| Female          | 17                      | 27% | 10                      | 20% | 7        | 41% |
| <b>2002</b>     |                         |     |                         |     |          |     |
| Male            | 40                      | 69% | 23                      | 82% | 17       | 43% |
| Female          | 18                      | 31% | 5                       | 18% | 13       | 72% |

#### *Low Commitment to Teaching AGED*

Nine women, five of which were current students indicated by an asterisk\*, spoke about leaving AGED and pursuing other career options (participants #11\*, #14\*, #28, #31\*, #57, #59, #60, #66\*, #67\*). Their reasons included ambiguity regarding working with high school students (participants #28 and #59), ambiguity regarding teaching AGED (participants #14, #57, and #66), preferring informal teaching such as Cooperative Extension Service work (participant #31), preferring production agriculture over teaching agriculture (participant #11), and relocation due to marriage (participants #60 and #67). Two women (participants #14 and #57) mentioned their gender as a factor in leaving AGED as they could not foresee opportunities for employment or career success as a woman.

#### *Barriers to Teaching AGED*

The women discussed barriers to teaching AGED including too much time on the job (participants #26 and #71), a lack of mobility or being place-bound (participants

#8, #23, #71, and #77), and subtle sexism or gender bias (participants #3, #15, #17, #20, #28, #77, and #78). Subtle sexism is defined as beliefs about women and men that are harmful but are internalized and considered normal or natural (Kite, 2001) and serve to hinder an individual's participation in nontraditional careers.

#### *Time on the Job*

AGED teachers have numerous responsibilities outside the classroom. Agricultural education has been theorized to support a tri-part mission: classroom teaching, SAE, and the FFA. Every high school AGED student is expected to have a SAE and join the FFA. AGED teachers not only teach during the normal school day, they also work with students on their SAE projects, prepare teams for contests, and hold FFA club meetings after school hours. Many AGED teachers work 12-hour days and weekends to meet the demands of the profession.

When asked why she thought there were so few women in AGED, participant #26 (382:396) said "because of the hours that are

involved.” Many of the female AGED teachers are single or recently married and have no children. Several women had never entered the profession or recently quit teaching AGED because of marriage. As participant #26 explained, it is difficult to do a good job teaching and a good job with your family “without killing yourself.”

Because many of the SAE projects are livestock, they require attention frequently at night, weekends, and holidays due to illness. The AGED teacher is called to treat sick animals rather than the veterinarian. By requiring a student to have an SAE, the teacher is implicating themselves as the responsible person for the animal’s welfare. As participant #26 (401:403) stated,

I feel like I am responsible for the student having that project because we are the one’s that talked to the students about it. So when they call and say they have a problem they may feel like we are leaving them out to dry. There are a lot of times I will get a phone call at 10 p.m., someone has a sick calf and what do you do? Do you tell them ‘sorry I am off duty now’ or do you say, ‘alright I will be there in 10 minutes.’

When asked what she liked least about her AGED teaching job, participant #71 (315:324) said

the time constraints, the after school and weekends. It is enjoyable, but at the same time it is tiring and sometimes you find yourself just going oh, I want some time off. We work more hours than any of the other teachers do, and sometimes people don’t always see that. They don’t always know that you are at the AGED building until 10 or 11 p.m.

#### *Mobility*

Another barrier that some women faced was a lack of mobility. Typically, the married women were place-bound because of their husbands’ careers (Table 4). For example, participant #23 married an AGED teacher. They both searched for AGED teaching jobs. He secured a position first so she followed him. She took a job in industry and supports his AGED program by

volunteering at the school. Participant #8’s husband bought a farm. She looked for AGED teaching jobs within a 60-mile radius but was unsuccessful securing a position. Likewise, participants #71 and #77 were place-bound because of their husbands’ careers.

#### *Subtle Sexism*

Several women spoke about experiencing sexism during the early field experience, student teaching, and when applying and interviewing for jobs. Although willing and qualified, participant #8 failed to secure a position teaching AGED in this state. While she was place-bound, an AGED job became available near her home. She applied for the position and obtained an interview. When she was sitting in the lobby waiting for her interview, she overheard the principal tell the superintendent, “I told you I don’t want to interview any females for this position” (50:52). She was not hired for that job but continued to search for employment.

Participant #15, a certified AGED teacher, believes she was passed over for an AGED teaching job because of her gender. The principal hired a man who was not certified to teach AGED for the position she interviewed for. Participant #17 (171:172) applied for AGED teaching jobs in this state with no success. She said, “They had my paperwork for a month and then they decided they didn’t want me. They just don’t want a woman.” Participant #28 (309:333) had a mock interview with a superintendent who asked her inappropriate gender-biased questions. Later when discussing her mock interview with her cooperating teacher, he commented, “if you are a woman and you had applied for a job teaching AGED there you probably wouldn’t get a real interview.”

Participant #20 (343:349) noted that “females tend to get hired in urban versus rural settings... this state still has that very traditional outlook of production agriculture, and production agriculture goes back to farmers, and farmers go back to being male.” Participant #3 (156:163) said “there is still the perception out there that if you are going to be an AGED teacher you are going to be male.”

Participant #77 (75:96) felt limited in her job search because she was place-bound and a woman. She said she focused on suburban and urban settings to increase her chances of employment. She was told by principals and superintendents that “some of the people would have concerns about you teaching shop class” when she inquired about jobs that included teaching agricultural mechanics. When asked about specific barriers participant #77 said that stereotypes, prejudice, and fear of the unknown kept communities locked into a mind set that excluded women from teaching AGED.

#### *The Job Seeking Process*

Eighteen women discussed their job seeking process (Table 4). Fifteen women wanted to teach AGED. Seven women had graduated, but were not teaching for reasons including being place-bound (participants #8, #23, and #60); no desire to teach AGED (participants #28, #29, and #57); and working in industry (participant #51). Two women were teaching AGED in another state (participants #43 and #56) and two women were teaching college level agriculture courses (participants #17 and #20). Seven of the women who discussed their job seeking process were currently teaching AGED in this state (participants #3, #13, #26, #71, #74, #77, and #78).

For the women teaching college level agriculture (participants #17 and #20), science (participant #29), teaching AGED out of state (participants #43 and #56), and

participants #20, #26, #43, and #74 who teach AGED in this state, being female had no impact on their job seeking process. Participant #26 reported that being female was an advantage as the school administration preferred a female AGED teacher to serve as a role model for female students.

However, eight women teaching or applying for AGED positions in this state reported gender-biased behaviors on the part of school administrators during the hiring process (participants #8, #13, #23, #28, #60, #71, #77, and #78). Participant #78 (40:68) was place-bound but available when an AGED position opened in her community. She reported that the community was “not ready to let anybody (a female) in yet” so she volunteered for the AGED program and substitute taught for nine years before obtaining an AGED teaching job in a multi-teacher department.

Participant #71 (197:228) assumed “those days were over” when she was job seeking. She said,

I really convinced myself that we were in 1997 and I just believed that people did not have those stereotypes that a female can't be an AGED teacher. In some rural communities I was surprised to find that was not the case. They (school administrators) asked questions that I doubt they asked the male candidates. I was really surprised when I went to some of those job interviews and found that being a female was a definite disadvantage.

Table 4  
*Women's Experiences Seeking an Agricultural Education Teaching Position*

| Participant # | Status                            | Job Seeking Experience  | Wanted to teach AGED | Did being female impact job seeking? |
|---------------|-----------------------------------|---|----------------------|--------------------------------------|
| 3             | Teaching AGED in state            | Applied for 2 jobs in state, secured position.  | Yes                  | No                                   |
| 8             | Not teaching                      | Followed husband, place-bound. Applied for 1 job in area, received no feedback.   | Yes                  | Yes                                  |
| 13            | Teaching AGED in state            | Applied for 6 jobs, got 2 interviews and 1 offer.   | Yes                  | Yes                                  |
| 17            | Teaching college in another state | Got job immediately after applying.   | Yes                  | No                                   |
| 20            | Teaching college in state         | Did not apply for AGED jobs, but was offered 2 positions teaching ag leadership. Secured a position teaching college ag communications. | Yes                  | No                                   |
| 23            | Graduated, not teaching           | Followed husband, place-bound. Applied for 2 jobs, unsuccessful securing a position. Works in industry.                                 | Yes                  | Yes                                  |
| 26            | Teaching AGED in state            | Applied for 2 jobs, secured 1 position. Administration was partial to women to be a role model for FFA girls.                           | Yes                  | No                                   |
| 28            | Graduated, not teaching           | Applied for 6 jobs, unsuccessful securing a position in state. Decided not to pursue teaching at the time.                              | No                   | Yes                                  |
| 43            | Teaching AGED in another state    | Hired to teach AGED in state. Moved to home state and is teaching AGED.   | Yes                  | No                                   |

| Participant # | Status                         | Job Seeking Experience  | Wanted to teach AGED | Did being female impact job seeking? |
|---------------|--------------------------------|---|----------------------|--------------------------------------|
| 51            | Not teaching                   | Followed husband, place-bound. Secured a job in industry.   | Yes                  | No                                   |
| 56            | Teaching AGED in another state | Followed husband, place-bound. Received 5 job offers to teach AGED in another state.                                    | Yes                  | No                                   |
| 57            | Graduated, not teaching        | Applied for 2 jobs in another state, secured a position, turned it down. Decided not to teach at the time.              | No                   | No                                   |
| 60            | Taught AGED in state           | Interviewed for 15 jobs in this, and other states. Was hired in this state, worked for 3 years, quit to follow husband. | Yes                  | Yes                                  |
| 71            | Teaching AGED in state         | Followed husband, place-bound. Took 2 years to secure AGED teaching job in an urban multi-teacher department.           | Yes                  | Yes                                  |
| 74            | Teaching AGED in state         | Applied for and obtained 1 job in state. Had 3 years of teaching experience before coming to state.                     | Yes                  | No                                   |
| 77            | Teaching AGED in state         | Followed husband, place-bound. Focused on suburban and urban settings in multi-teacher department.                      | Yes                  | Yes                                  |
| 78            | Teaching AGED in state         | Followed husband, place-bound. Substitute taught for 9 years before securing a position teaching AGED.                  | Yes                  | Yes                                  |

### *Did Gender Impact Job Performance?*

Eleven women, all of whom had taught, were asked if they thought their gender impacted their job performance (participants #2, #3, #13, #17, #26, #43, #56, #60, #74, #77, and #78). All the women except participant #2 had taught AGED. Participants #2, #3, #13, #17, #26, #43, #56, #60, and #74 reported that their gender did not negatively impact their job performance and was not a barrier to their success.

Participant #77 said that when she first started teaching AGED parents would question her judgment in regard to livestock issues and would ask the same questions of the male AGED teacher. After being in her current position for several years, she believes she has gained the confidence of her community. Participant #78 reported that after getting past the initial gender bias, being a woman was advantageous. She served as a chaperone and role model for the girls who join the FFA.

### *Single Versus Multiple Teacher Agricultural Education Programs*

Several women discussed the fact that it was more difficult for a woman to get a job in a single teacher department versus a multiple teacher department with a male AGED teacher. In multiple teacher departments, following sex stereotype roles, men typically teach welding and animal science and women typically teach horticulture and 8<sup>th</sup> grade introduction to agriculture. Of the 13 female AGED teachers in this state, eight (62%) were teaching in multi-teacher departments. Ten of the 13 women were assigned to teach horticulture (77%) and eight of the 13 women were assigned to teach 8<sup>th</sup> grade introduction to agriculture classes (62%). Eight women (62%) taught in an urban setting while five taught in rural settings (population less than 5,000). Three women taught in single teacher departments in rural settings (23%).

## **Conclusions and Discussion**

This study documented that over a four-year span, 57% of the women who entered the AGED teacher preparation program left before student teaching. Of the participants

who graduated with a degree in agricultural education, 52% did not go on to teach AGED (participants #2, #8, #15, #17, #20, #23, #28, #29, #51, #57, and #59). This study also documented the contextually-rich background experiences of the women that are appropriate for teaching AGED. The majority of the women in this study had agricultural production experience at home and through their SAE, participated in 4-H, FFA, and Jr. breed associations, and served in FFA leadership positions at the local and state levels as youth. Contextual experience and a desire to teach AGED was not lacking among the women. Why then did only a fraction of the women who enrolled in at least one teacher education preservice course eventually gain employment as secondary agricultural education teachers?

Kirby and Grissmer's (1993) human capital theory can be applied to partially explain women's decisions to voluntarily leave AGED. If a woman believes that she has high capital invested in her career, she will be less likely to leave. Examples of human capital include the support given to her by administrators, other teachers, students, and the community, promotion opportunities, benefits, working conditions, and compatibility of work demands with family and leisure needs. The more support she receives, the less likely she will be to abandon AGED. The women who were successful as AGED teachers reported that they had high human capital in their current positions (high job specialization, being place-bound, making progress toward tenure, and were supported by their school administrators), and that being female was not a barrier to gaining employment or their success on the job.

Conversely, the women who were not successful gaining entry into the profession or who left AGED reported that a lack of support by school administrators and community members were variables for attrition. Gender bias did contribute to the lack of support women experienced evidenced by comments made to them when applying for jobs or while on the job. For those who faced gender bias in the job seeking process, mobility (willingness to leave the state) and persistence increased their chances of gaining employment

as secondary agricultural education teachers.

Grissmer and Kirby's (1987) theory accounts for attrition when the playing field is level; however, it does not account for the role of gender bias and subtle sexism as barriers for women entering nontraditional disciplines. In this study women reported that gender bias was present among male AGED teachers, school administrators, community members, and parents and served to discourage them from the profession.

### Recommendations and Future Research

Grissmer and Kirby (1987) recommend that policy aimed at retaining teachers focus on the first years of the teacher's career. The longer one remains a teacher (up to five years), the more likely one will retire from teaching. However, gaining entry into the AGED discipline was a barrier for several women because they were place-bound. Gender bias among school administrators also served to effectively keep women out of the profession. Therefore, the theory of teacher attrition should be further developed to include gender bias as a variable for involuntary attrition for those in nontraditional disciplines.

In-depth interviews uncovered challenges that women faced in seeking AGED teaching positions, including being place-bound and gender bias. Do stories of women's job seeking experiences filter back to current students, causing them to change their major before entering student teaching? In at least two cases it did (participants #14 and #57). As participant #36 said, "the battle [for women to teach AGED] is just a little bit too tough to fight in this state" (9:33). Are women adequately supported in the preservice program to help them overcome gender bias once they leave the university? More study is needed to understand the impact of preservice experiences in relationship to teacher attrition.

Many of the women in this study pointed to school administrators as the primary gate keepers in barring women from entering AGED. A few of the participants reported that some school administrators displayed subtle sexist attitudes (Kite, 2001) by asking

women illegal and inappropriate questions during mock and real interviews. It is recommended that inservice training be provided to school administrators, especially those who serve as agents for the land-grant university by sponsoring student teachers, regarding Title VII of the Civil Rights Act of 1964, specifically SEC. 2000e-2.

For the women who were successful securing employment as AGED teachers, future attrition will depend on deepening human capital and on changes in family status. The majority of the women in this study were single (64%), childless, and young (less than age 25). Thus, marriage and childbirth may increase the probability that some of these women will leave AGED in the future if they do not have high human capital in their current positions (Grissmer & Kirby 1987; Kirby & Grissmer, 1993). Those responsible for supporting AGED teachers, such as the Department of Career and Technology Education, should consider establishing a support network for women AGED teachers. Mentoring programs could be established to create higher levels of human capital for the 13 women currently teaching in the state and to encourage more women to enter the profession. Newsletters and listserves targeted toward women have been used successfully in other states to support women AGED teachers. As women marry and build their families, they will need more support and role models for negotiating career with family needs (Foster, 2001).

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