

definitions used to classify traditional and non-traditional students? Are the recruitment efforts really reaching the "real" non-traditional students? Further study needs to be undertaken to answer these questions.

The College of Agriculture needs to be more aware of the role of the guidance counselor in providing first information on the College of Agriculture. The College could develop activities to inform guidance counselors of the many opportunities available in agriculture.

Recommendations

1. This study should be continued in a longitudinal fashion to determine if trends shown in the data remain constant over time.
2. The data produced as a result of this study should be used to evaluate current recruitment activities and revise the procedure to reach better the desired target audience.
3. Similar studies should be conducted at other institutions that have attempted to recruit high-ability non-traditional students.
4. Colleges have a limited budget for student recruitment activities. Steps must be taken to insure that money used for recruitment is efficiently spent. Colleges should use cost benefit analysis to evaluate current recruitment activities. Research should be conducted on the development of better and more cost effective recruitment activities to attract the non-traditional audience.

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High School Vocational Agriculture and Success in College

R. Lee Cole and
David A. Bokor

With tight money and fewer high school students available for recruitment, the College of Agricultural Sciences at Oregon State University wanted to know where to place their recruitment money. There was also great interest, on the part of agricultural educators in the state of Oregon, in knowing the potential for success in college (specifically a College of Agriculture) of students who had participated in vocational agriculture while attending high school but who had not participated in the college preparatory curriculum. It was felt that information of value to both concerns could be gathered in one study.

A previous study indicated that taking vocational agriculture in high school was one of six factors which significantly influenced post-secondary success as measured by completing the post-secondary program, Rudolph and Yoder (1987). Rudolph and Yoder did state, however, that the single most effective criterion for determining success in college was the student's post-secondary aspirations.

Warmbrod and Doerfert (1987) found that class rank and ACT scores may be better predictors of college success than the high school curriculum studied. It appeared from the literature that the type of high school curriculum studied and therefore college entrance requirements based on high school curriculum prerequisites may not be the best predictor of college success.

Several investigators have looked at such things as the GPA of students entering college and the continued learning patterns of high school students (Riesenberg 1987, Shelhamer and Letham 1987, Lawrence 1984). Many of these studies have indicated that students of high school vocational agriculture programs could be successful in college agriculture degree efforts. Enhanced recruitment by the College of Agricultural Sciences in high school vocational agriculture programs might be a valid recruitment activity. The focal concern of this study was the GPA of graduating college seniors. Both college and high school administrators and counselors indicated strongly that graduating GPA was the bottom line in determining student success. It was also felt that if students could not succeed academically as measured by GPA, then they should not be actively recruited by the College of Agricultural Sciences.

A final major factor in determining the direction of this study was that academic requirements are added to student schedules at the high school level under the

Cole is a professor of Agricultural Education, Oregon State University, Corvallis, OR and Bokor is the Vocational Agriculture Teacher at Crescent City, CA

assumption that these requirements will produce students who are better prepared either for immediate work or for college. At the same time, according to Evans and Herr (1978) one of the major goals of vocational education is to, "increase options available to each student." One way to increase options for students of vocational agriculture programs is to make sure they can succeed in college and not limit them to sub-baccalaureate employment only. However, if the added high school academic requirements created to enhance college success do not, in fact, enhance college success significantly over the standard requirements for students in vocational agriculture programs, then perhaps those increased requirements should be reconsidered.

It was therefore decided that a descriptive study which used inferential statistics to help describe differences in the groups studied as well as predict population outcomes would help identify answers to the concerns raised in the introduction of this article.

Purpose

The purpose of this study was to determine if differences existed between college of agriculture students who had participated in a high school college preparatory curriculum and those students who had participated in the high school vocational agriculture curriculum as measured by collegiate GPA. The following specific research questions were investigated:

1. What difference existed between accumulative collegiate GPA for students of the high school college preparatory and vocational agriculture curricula?
2. What differences existed between students of the high school college preparatory and vocational agriculture curricula for collegiate GPA by various required subject areas.
3. Did graduating college students perceive that their high school curricula added anything to their employability or potential to secure a job, as a college graduate?

Procedures and Analysis of Data

During spring term of 1987, all students classified as seniors in the College of Agricultural Sciences at Oregon State University were identified. There were 306 students thus identified. A random sample of 102 students was drawn to insure a minimum cell count of 15 students in each of four anticipated cells (vocational agriculture only, college preparatory only, combination of college preparatory and vocational agriculture, and general education). The minimum cell size of 15 in a four cell structure with a population of 306 was calculated using the Cohen Power Analysis formulas, Cohen (1969).

A mailed survey instrument was developed which sought student demographics, GPA and perception information. The instrument was field tested on 25 seniors identified in the population who were not part of the study sample. Instrument validity was checked by a panel of high school administrators, college ad-

ministrators, agricultural education staff, high school counselors, and high school teaching staff. Instrument reliability was checked (Cronbach's alpha = 0.91). The instrument was mailed. A second mailing was done two weeks later, and phone follow-ups were done two weeks after the second mailing. A total of 101 usable responses (99%) were acquired. The only non-respondent refused to complete all of the instrument for personal reasons. Input from the three groups (1st mailing, 2nd mailing, and phone follow-up) were tested, and there was no statistically significant differences among the groups.

Table 1 contains the student profile for high school preparation of study participants.

Table 1. High School Study Profile for Study Participants

Category	Percent
Vocational Agriculture (3 or more years and no college preparatory)	16
Combination (1-2 years of vocational agriculture and some college prep but not all)	24
College Preparatory (as identified by the high school of graduation and no vocational agriculture)	37
General Education (neither college prep nor vocational agriculture)	23
TOTAL	100

The data were treated with the single classification analysis of variance (ANOVA). The Least Significant Differences (LSD) multiple comparison test was used to identify where differences existed when they occurred. Chi Square was used on dichotomous data. The alpha level was set at 0.05 for all tests.

Results

Responses to questions regarding high school preparation and that preparation's influence on decisions of the college student are reported in Table 2.

Table 2. Influence of High School Preparation on College Decisions

Type of Prep. Group (curricula)	Influenced Decision to Attend College X	Influenced Choice of Major X	Quality of H.S. for Completing Current Major X
1. Vocational Agriculture only (n = 16)	2.077	1.462	2.308
2. Combination (n = 24)	2.200	2.150	2.950
3. College Prep. only (n = 35)	2.101	3.419*	2.968
4. General Education (n = 23)	2.737	3.526*	3.105
TOTAL n = 101	F = 2.562 Prob. = 0.061 No stat. dif.	F = 33.536 Prob. = 0.000 *Stat. sig. dif. [1 = 2] = [3 = 4]	F = 0.663 Prob. = 0.578 No stat. dif.

The instrument response scale for these questions was as follows: 1 = A Great Extent; 2 = To Some Extent; 3 = Very Little Extent; 4 = Not at All

There were no statistically significant differences among the high school curricula studied for influencing the students decision to attend college. There was a difference by curricula for the decision regarding the students choice of major. The quality of the high school curricula for preparing the student to do the academic work required of them in college as perceived by students was not significantly different for each of the curricula studied.

Both high school and college administrators specifically asked for information regarding time spent in college and changes in majors for students. Table 3 shows that data.

Table 3. Time Spent in College and Changes of Major

Group	Type of Preparation (curricula)	Years of College Attended X	Changed Major Percent
1.	Vocational Agriculture only (n=16)	4.500	31.25*
2.	Combination (n=24)	4.952	70.83
3.	College Prep. only (n=38)	5.172	76.32
4.	General Education (n=23)	6.308*	56.52
TOTAL n = 101		F = 3.306 Prob.=0.024 [1=2=3] < [4]	Chi Square = 10.903 df = 3 P = 0.05 [1] < [2=3=4]

There were fewer students changing majors who had taken vocational agriculture. Students who took vocational agriculture, a combination of vocational agriculture and college preparatory or the college preparatory curricula took fewer years to complete their degree programs than students who participated in the general education curriculum only.

Information regarding the collegiate GPA of students by curricula is presented on Table 4.

Table 4. Accumulative and Specific GPA Data by High School Curricula.

Type of GPA	GROUPS			
	Vocational Agriculture Only (N=16) X	Combination (N=24) X	College Prep. Only (N=38) X	General Education (N=23) X
1. Accumulative GPA	2.97	2.84	2.98	2.67
2. GPA in Writing Courses	2.95	2.65	3.25	2.84
3. GPA in Math Courses	2.90	2.80	2.97	2.55
4. GPA in Science Courses	2.92	2.70	2.94	2.58
5. GPA in Social Science	2.83	2.80	2.86	2.65
6. GPA in Humanities	2.87	3.00	2.86	2.56
7. GPA in Ag Courses	3.46	3.35	3.26	3.07

There were no statistically significant differences in GPA at the 0.05 level for any specific subject or by accumulative GPA for the curricula studied.

The final question asked whether the students perceived (through job interviews or other sources) that the curricula of their high school preparation would add significantly to their college work in helping to secure employment. Table 5 provides the students' responses.

Table 5. High School Curricula's Contribution to Employment After Completing College

Group Type of Preparation (Curricula)	Mean Response Yes=2, No=1 X
1. Vocational Agriculture only (n=16)	1.385*
2. Combination (n=24)	1.097
3. College Prep. only (n=38)	1.050
4. General Education (n=23)	1.000
TOTAL n = 101	F = 3.881 Prob.=0.012 [1] > [2=3=4]

Although the contribution to employment scale was dichotomous the variable was continuous and, therefore, the ANOVA procedure was used to test for statistical significance. Students of high school vocational agriculture programs perceived that their high school preparation would contribute significantly to their ability to get a job at a much higher rate than

students of the other three high school preparation curricula.

Conclusions

The following conclusions were drawn from this study:

1. The type of high school curricula a student participates in has little impact on the students' decision to go to college but significantly influences the choice of major for college of agriculture students.

2. College of agriculture students did not perceive a difference in their high school curricula's ability to prepare them to do the academic work required of their selected majors.

3. College of agriculture students who took vocational agriculture in high school spent fewer years completing agricultural degrees and changed majors less often than those who did not participate in vocational agriculture.

4. High school curricula did not significantly impact college student success as measured by GPA, either as an accumulative GPA or by specific subject matter areas:

5. High school curricula are perceived by College of Agriculture students with vocational agriculture backgrounds to benefit their ability to secure employment after college.

Discussion and Recommendations

It appears that high school curricula alone is not an adequate predictor of success in a college of agriculture curriculum and degree effort. Perhaps post-secondary educational aspirations, as suggested by Rudolph and Yoder (1987), are more accurate predictors of success. Post-secondary educational aspirations are subject to change even after completion of the high school curriculum. It is therefore suggested that the post-secondary aspiration of students be studied further to determine the impact this factor has on student success in college.

It is further recommended that artificially contrived college entrance requirements based on curricula be re-examined with regard to the findings of this and other studies which sought to identify college success factors. Perhaps goals, aspirations, and other measures of overall academic ability are more important entrance criteria than participation in a specific high school curriculum.

Finally, it appears from the GPA results of this study that the College of Agricultural Sciences at Oregon State University might validly recruit students from among high school vocational agriculture programs since their success in college as measured by GPA was the same as students who participated in a high school college preparatory curricula.

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Career Perceptions of Women Faculty in Colleges of Agriculture

Barbara E. Cooper and Janet L. Henderson

Abstract

This research effort was the first national study to focus specifically on women faculty in colleges and agriculture. A representative sample of 218 women agricultural faculty was selected to receive a questionnaire focusing on career satisfaction and professional development. A 72% response rate was achieved. To gather anecdotal information, personal interviews were conducted with 15 of the women. Many of the women identified a relationship between their childhood years and their current career choice. Personal interest and encouragement from others influenced the women to enter their field of study. Most of the women chose an academic career because they enjoy teaching and being with students. An overwhelming majority of the women indicated that they derive a great deal of personal satisfaction from their career. Balancing professional and personal responsibilities was a challenge for most of the women.

Introduction

Few researchers have closely examined the career perceptions of women working in colleges of agriculture. Those researchers choosing to study women faculty primarily examine sex discrimination, sex-role stereotyping, and sex biases (Butler & Marzone, 1980). These studies focus on the problems and obstacles women face who work in academic or scientific careers.

Other investigators examine career development and satisfaction. Some current research compares men and women in terms of career development. Hopkins (1984) describes the conventional path men follow to achieve success in scientific careers. These men obtain a Ph.D. at a recognized school, obtain a tenure-track appointment at a major university, do research, obtain grants, serve on committees, teach, and continue up the ladder until they become full professors. Many women, however, do not follow this conventional

career progression because of childbirth or family moves based on a spouse's career development. (Hopkins, 1984).

Other researchers compare men and women in academia in terms of professional development and quality of life. Lovano-Kerr and Fuchs (1982) found that there are many similarities in men's and women's viewpoints and career aspirations. Almost all of these researchers found that non-tenured men and women face insecurities, pressures, and a sense of isolation. Regarding women of all ages and professions, some general data do report that they are satisfied with their lives and work (Campbell, Converse & Rodgers, 1976; Campbell, 1981). No specific information is available on the perceptions of career development and satisfaction of women agricultural faculty.

Purpose and Objectives

One of the main purposes of the study was to provide descriptive data on career perceptions for a sample of women faculty in colleges of agriculture at U.S. Land-grant universities. The study was designed to investigate the following research objectives:

- (1) to describe the professional and personal characteristics of women faculty in colleges of agriculture at U.S. land-grant universities;
- (2) to describe the current job status of women faculty in colleges of agriculture at U.S. land-grant universities;
- (3) to determine perceptions of career entry held by women faculty in colleges of agriculture at U.S. land-grant universities;
- (4) to determine perceptions of career development and networking held by women faculty in colleges of agriculture at U.S. land-grant universities;
- (5) to determine perceptions of career satisfaction held by women faculty in colleges of agriculture at U.S. land-grant universities;
- (6) to determine perceptions of career challenges held by women faculty in colleges of agriculture at U.S. land-grant universities; and

Cooper resides at 527 Calvert Lane, Lafayette, IN 47905 and Henderson is an assistant professor in the Department of Agricultural Education, The Ohio State University, 204 Agricultural Administration Building, 2120 Fyffe Road, Columbus, Ohio 43210.