

Characteristics of Those Who Select Agricultural Education
as an Undergraduate Major at Oregon State University

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If employment trends hold true to form and there is a severe shortage of vocational agriculture teachers accompanying economic recovery, then the next two or three years could see shortages reminiscent of the 1977-1981 period.

It was believed by identifying characteristics of students who select vocational agriculture teacher education at a land grant university outcomes could offer insight to developing recruitment strategies for similar land grant universities across the nation. Perhaps some innovative recruitment strategies could be generated by understanding student characteristics which have not been identified in the past.

Objectives of the Study

The objective of this part of the overall study (Toby, 1983) was to identify those characteristics of students who had selected agricultural education as a major as compared to characteristics of students who had selected other secondary education, elementary education, or other vocational-technical programs as their majors. If unique characteristics existed among agricultural education majors the implication was that unique recruitment strategy designs may be needed in order to attract more agricultural education majors.

The variables to be considered for comparison of agricultural education, other secondary education, elementary education, and other vocational-technical education students were as follows: other college work, first interest in major, high school grade point average, marital status, sex, age, related work experience, source of financing for education, parents' education and/or teaching experiences, attitudinal and economic factors, and sources of influence.

Methodology

A stratified random sample was drawn which identified specific courses on the Oregon State University campus for inclusion in the study. All students in the randomly drawn courses were considered part of the study. The sample consisted of 315 vocational, practical arts, and non-vocational students at Oregon State University in sophomore, junior, and senior professional block education courses.

There were 34 agricultural education majors, 94 other secondary education majors, 69 elementary education majors, and 115 other vocational-technical education majors in the sample.

An instrument was developed for this study. A panel of experts consisting of four teacher educators, a college administrator and head advisor, three graduate students in the teacher education program, and two high school teachers was used to develop the instrument. The instrument was field tested on 20 randomly selected education majors who were not part of the final research sample. Final refinement was made to the instrument upon completion of the field test. Instrument validity was established by the teacher educators on the panel of experts and instrument reliability was established by the students who participated in the field test. Tests to determine instrument internal consistency were judged as inappropriate in this situation because of the independent nature of each item. The ANOVA statistic was used to identify when statistically significant differences occurred among the four groups. Scheffes' Multiple Comparison Test was used when differences occurred to identify their location.

Findings, Discussions, and Conclusions

Fifty percent of the agricultural education (AEd) majors had attended an Oregon community college as compared with 14% for other secondary education (SEd), 13% for elementary education (EEd), and 27% for other vocational-technical education (V-TEd) majors.

When asked if they had always been in their current major, the affirmative responses were as follows: 68% AEd, 34% SEd, 47% EEEd, and 25% V-TEd. Table 1 shows when undergraduates first became interested in their respective college majors.

The high school grade point average (GPA) for majors in the four categories of this study were as follows: AEd = 3.16, SEd = 3.36, EEEd = 3.38, V-TEd = 3.11. There was no statistically significant differences among the groups based on GPA. In general, however, students involved with vocational teacher preparation had slightly lower GPA's than students involved in non-vocational teacher preparation programs.

The V-TEd students in Table 2 were nearly equally divided on the basis of gender, except that Industrial Arts Education majors were nearly all male while Home Economics Education majors were nearly all female. Business Education majors had approximately the same percentages of females as Agricultural Education had males. Elementary education majors were nearly all female (93%) and other secondary education majors were mostly female (62%).

Vocational-Technical majors and AEd majors tended to be somewhat older than other education majors with AEd majors age \bar{x} = 24 years; SEd majors \bar{x} = 22 years, EEEd majors \bar{x} = 22 years, and V-

Table 1

First Interest in Major

Category	% AEd	% SEd	% EEd	% V-TEd
Prior to high school	0	9	33	8
Early high school (Fr, Soph, Jr.)	41	19	16	15
Late high school (Sr)	24	10	18	14
In community college	0	7	3	17
At other 4-year univ.	12	4	1	6
At OSU	9	39	20	25
In business	3	4	0	9
In military	3	1	0	2
Other	8	7	9	4
Total	100	100	100	100

Table 2

Gender of Respondents

Sex	% AEd	% SEd	% EEd	% V-TEd
Male	73	38	7	58
Female	27	62	93	42
Total	100	100	100	100

Table 3

Source of Financing Education

Major	% Parents	% Relatives	% Personal employment	% Scholarships	% Loans	Total
AEd	18	1	60	6	15	100
SEd	29	4	3	13	23	100
EEd	31	8	28	9	24	100
V-TEd	23	6	36	18	17	100

TEd majors $\bar{x} = 24$ years. This may have been a result of more work experience for the vocational education majors between high school and college years.

The AEd majors (4.8 years) and V-TEd majors (3.4 years) had considerably more work experience than either the SEd majors (0.9 years) or EEd majors (0.5 years).

By combining several of the preceding findings, it appears that AEd and V-TEd majors were somewhat older than other education majors. AEd and V-TEd majors were involved with more work experience perceived to be related to their educational field and their GPAs did not significantly differ from other education majors' GPAs. It may be possible to recruit agricultural education or vocational-technical education majors at work stations (jobs) related to the industry within which they would teach. Recruitment efforts might also focus on the nontraditional college student for AEd programs such as females, and students older than the average college age.

Agricultural education majors appear more likely to put themselves through college by working than other education majors. They were less frequently supported by parents, relatives, scholarships, and loans. Therefore, job opportunity information could be important in recruiting potential AEd majors. Table 3 presents information concerning the sources of financing of education for education majors.

Table 4

Attitudinal and Economic Factors of AEd Majors

Item	\bar{x} Score
Enjoy working with youth.	4.6
Want to help youth prepare for employment.	4.3
Jobs were available to graduates.	4.3
I see education as a means of achieving social change and wanted to work toward that end.	3.8
Steady character of the teaching job as opposed to on and off nature of agriculture.	3.1
I would rather teach agriculture than do something outside of agriculture.	3.1
Working conditions for teachers of vocational agriculture.	3.0
Not satisfied with previous work conditions.	2.8
Not satisfied with previous work.	2.7
Salary for teachers of vocational agriculture.	2.5
Enrolled for a degree; I do not intend to teach.	1.8
Jobs were not available in agriculture.	1.7

Note. Scale based on: 5=strongly agree, 4=agree, 3=neither agree nor disagree, 2=disagree, 1=strongly disagree.

Educational attainment of fathers and mothers and the percentage of fathers and mothers who chose teaching as an occupation for AEd majors as compared to other education majors were not statistically significant in this study. Approximately 60% of the nonvocational students' fathers had attained baccalaureate degrees. Significantly fewer fathers of vocational subjects (29.6%) had earned at least a baccalaureate degree. It is possible that the desire of parents to see a son or daughter achieve a baccalaureate degree was a positive incentive for vocational teacher preparation majors. Agricultural education majors' responses to attitudinal and economic factors which impact their decision as rated on a one to five scale are provided in Table 4.

The most important attitudinal and economic considerations of agricultural education majors were that a) they enjoyed working with youth, b) jobs were available to graduates of AEd programs, and c) they wanted to help youth prepare for work. It could be assumed that an emphasis on these three criteria in a recruitment program would be beneficial.

Sources of influence to become a major in agricultural education are listed in Table 5. The person having the highest degree of influence on the potential AEd major was the high school teacher. This is consistent with the early selection concept identified on Table 1 for AEd majors. It seems appropriate that college recruiters inform high school teachers, especially the vocational agriculture teacher, of job opportunities for AEd majors and help identify those high school students who enjoy working with youth.

Other sources of influence were university professors, parents, membership in community organizations or youth groups, college students of the same major, and being a teacher's aide in the high school. Various kinds of counselors, the military service, and radio and television appear to have had little influence on potential AEd majors.

The people to reach with a recruitment program for potential AEd majors are the high school teachers, other university professors, parents, and people who work with agricultural youth organizations.

Implications and Recommendations

Recruitment for agricultural education majors should focus on high school sophomores and juniors. For those students attending a community college before attending the four-year university, contact should be maintained through the community college system. High school, community college, and university staff should be made aware of job opportunities for graduates of agricultural education.

Agricultural education majors were somewhat older than traditional college students. They had several years of agriculturally related work experience and generally worked to support their educa-

Table 5

Source of Influence for AEd Majors

Source of Influence	\bar{x} Score
Teachers, high school	2.0
University professors or courses	1.9
Parents	1.7
Membership in community organizations or youth groups	1.6
Teaching in high school	1.5
College students, same major	1.4
University counselors	1.2
Male friends in work place	1.1
Full-time civilian work experience	1.0
Male friends, high school	1.0
Sibling	0.9
Female friends, high school	0.9
Other college students	0.9
Teaching in community college	0.9
Other teaching experiences	0.9
Female friends in work place	0.9
Counselor, high school	0.8
Membership in professional organization	0.8
Other relatives	0.7
Spouse	0.6
Films	0.6
Newspapers and magazines	0.6
Church ministers	0.6
Radio and television	0.5
Teaching in military service	0.3
Camp counselors	0.2
Full-time occupational work experience in military	0.1
Rehabilitation counselors	0.1

Note. Scale based on: 3=high influence, 2=moderate influence, 1=minimal influence, 0=no influence.

tion. Therefore, when recruiting agricultural education majors, jobs or work experience stations should be identified for students thus allowing the student to earn the money for their education. Also, it may be possible to recruit some potential agricultural education majors at agricultural work sites. Nontraditional recruitment groups which should receive attention include females, and students older than the average college age.

The most important of the attitudinal and economic factors were that agricultural education majors enjoyed working with youth, jobs were available, and they wanted to help youth prepare for work. The implications and recommendations for recruitment from this variable includes: a) encourage vocational agriculture teachers to allow

potential agricultural education majors to be teacher aides and/or 4-H junior leaders and leaders, b) keep vocational agriculture teachers abreast of job availability for agricultural education majors, and c) show vocational agriculture teachers working with youth in recruitment materials.

Sources of influence to potential agricultural education majors were primarily the vocational agriculture teacher, parents, and college professors. The implications and recommendations which arise out of these findings include: a) establish positive working relations with vocational agriculture teachers and solicit their help in recruiting for agricultural education, b) keep parents informed of opportunities for graduates in agricultural education through direct mailings to parents of students who do well in high school vocational agriculture programs (i.e., state farmer degree recipients, state officer candidates, etc.), c) agricultural education staff should inform vocational agriculture teachers they want to visit with potential recruits when supervising student teachers, and d) university staff who teach College of Agriculture and Education courses must be made aware of job opportunities for agricultural education majors.

A final recommendation would be that students in other agricultural majors at college should be informed of labor market trends and favorable job potential for vocational agriculture teachers by majors in agricultural education. In other words, keep the agricultural education majors informed of the job opportunities and activities of vocational agriculture teachers and allow them to recruit for the agricultural education department.

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