

INFLUENCES ON ADOLESCENT JOB CHOICE: IMPLICATIONS FOR TEACHING CAREER AWARENESS IN AGRICULTURAL EDUCATION

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Abstract

This study compared students choosing agriculture as a career to those choosing other occupations. Previous research conducted by Conroy (1996) identified predictors of occupational choice among rural youth. An examination of those predictors, comparing the two groups of students, revealed that there were few differences between students whether they chose agriculture as a career option or some other career. Differences did exist, however, based on gender and father's occupation, a variable considered to be a proxy for socioeconomic status. Findings supported prior research which suggested that family interactions are keys to vocational identity development (Steinberg, 1989; Erikson, 1963, cited in Herr, 1972). Therefore, to be effective, career awareness and educational programs must not only provide factual information about careers, they must also provide activities to reduce stereotypes commonly held about certain occupations (Steinberg, 1989; Harter, 1990). Programs that do not do this may not achieve their goals of successfully recruiting students into agriculture.

Introduction

Historically, agricultural education provided an expanded educational experience. Successful agriculture programs have been characterized as rooted in communities with citizen ownership. They provided an effective approach to life-long learning and commitment to education of the "whole" student through leadership development, recreation, competition, and standards of integrity for program participants (NRC, 1988).

This interdisciplinary study, drawing from the fields of agricultural/vocational education, sociology, and demography, identified factors that influenced the occupational identity of rural adolescents. It specifically compared students choosing agriculture-related occupations with those selecting other occupations. Understanding factors that influence the occupational career choice of adolescents in the context of community could provide a basis for Tech-Prep and School-To-Work

programs in agriculture. These programs may not look like vocational agriculture of the past, but they would carry with them a rich heritage of community involvement, learning in context, and leadership development.

Theoretical Framework

Agriculture and related businesses continue to be a major force in national employment and productivity, but the actual number of individuals employed in production farming has declined dramatically (USDA, 1996). This decline should have led to drastic changes in the foci of secondary programming, but, as reported by the National Research Council (1988) in Understanding Agriculture: New Directions for Education the majority of secondary programs continue to have a production emphasis attracting fewer students. Recruitment into secondary agriculture programs, therefore, remains a key issue going into the 21st century. Scanlon, Hoover and Yoder (1994) and

others (Newsom-Stewart & Sutphin, 1993; Rossetti, 1989) investigated enrollment influences by gender, ethnicity, vocational image, and other characteristics, but no research has been conducted within the theoretical framework of career and adolescent identity development.

Influences on Career Choices

Choices made by young people-what courses to take in high school, whether to attend college, what to study once there-affect who they are and what they do (Adelman, 1994). Making the wrong choices, particularly those that limit educational attainment, will reduce an individual's possibilities for job success and/or upward mobility over the course of a lifetime (Topel & Ward, 1992) by limiting the career-line paths which emerge from the initial job placement (Spilerman, 1977). This educational limitation impacts not only the evolution of earnings and status, but also the ability to network, maximize job satisfaction, and exercise voluntary job mobility.

According to Super and Bohn (1970), a child develops ideas about what he/she can do, likes to do, and what others expect him/her to do at a very young age. Harter (1990) stated that an adolescent's sense of self is based upon performance in domains where success is important such as the school environment. Parents' education and occupations are indices of social class (Steinberg, 1989), but evolution of a vocational identity depends upon experiences within the family (Erickson 1963, cited in Herr, 1972). The higher socioeconomic family provides a career frame-of-reference based on values associated with the states of the family (Blau, 1992; Blau & Duncan, 1967). Biblartz and Raftery (1993) found that sons in nonintact families identified with the mother's occupation which is likely to be service or clerical in nature (Conroy, 1996).

Whitehead (1996) studied gender-related attitudes toward career choice in a study conducted

in England and Wales. She found that males were more likely to choose sex-stereotyped careers than females, and that males were much more biased in their subject choices toward masculine subjects and supported traditional sex roles for themselves. No such pattern was found for females. "Females therefore are not avoiding masculine subjects to the same degree as males are avoiding feminine ones, nor are they concentrated in subjects thought 'appropriate' for them, again unlike males" (p. 154). Whitehead made an interesting comment that it is not so much that "females are under-represented in mathematics and the physical science, but that males are greatly over-represented" (p. 155) due to males' choices away from feminine subjects. These results supported prior research by Donelan (1992) and others (Lokan & Fleming, 1994).

Orthel, Sorensen, Lierman & Riesenber, (1989) concluded that an overwhelmingly negative opinion of pursuing an agricultural career is really an expression of pursuing a career in farming and ranching. Students have not been exposed to factual information about the industry of agriculture and corresponding careers (Orthel et al., 1989). There is evidence to show that students' perceptions about agriculture are formed and subsequently influence enrollment decisions at or before the junior high level (Scanlon, Yoder and Hoover, 1989). Today's young adults are strongly influenced by expected economic rewards associated with career alternatives. Society's macro issues, changing lifestyles, and occupational images projected by the mass media have a major impact on career decisions of adolescents. Therefore, food and agriculture information and recruitment issues must deal with these megaforges.

In summary, an identification of factors that influence adolescent job choice can be a tool to assist program design in secondary agriculture, Tech-Prep, and School-To-Work Transition initiatives. Understanding these environmental and background factors which help shape how students view themselves in the "world of work" is a key to understanding their motivation for selection of

programming options at the secondary level.

Purpose and Objectives of the Study

The purpose of this study was to identify factors that influence occupational identity of rural adolescents, specifically to compare those choosing agriculture occupations to those selecting other occupations. Objectives were to

1. determine occupational aspirations of the rural youth participating in the study;
2. develop a demographic profile of the participants; and
3. determine which demographic and other factors were related to occupational aspirations of participants choosing agriculture vs. non-agriculture careers.

Methods and Procedures of the Study

The population consisted of 750 students enrolled in grades 7 through 12 in a rural school district that has not had a secondary school agriculture program for at least 15 years. Survey instrument data, collected on-site, provided information about students' attitudes, beliefs, and thoughts about jobs and careers, their self-esteem, and their perceived levels of family communications. Prior to use the instrument was reviewed by a panel of experts with backgrounds in psychology, rural sociology, and agriculture/vocational education to assure content and face validity. The special education coordinator for the participating school district also determined its appropriateness for use with special needs students. Data analyses reported in this paper are from several sections of the instrument. Due to time constraints the instrument was not pilot-tested. The scales were revised following inter-item reliability calculations and the final data analysis was based on the revised instrument.

Data were collected from a total of 612 students-the total student population less 80 students enrolled in the "Skills Classes" (formerly classified as trainable mentally retarded), three students who refused to participate, and approximately 50 who were absent on the day of the assessment. A total of 531 students provided ideal job choice data which were used to examine influences on occupational choice for students selecting agriculture (N=57, 11%) and those selecting other occupations (N=474, 89%).

Participants responded to 20 Likert-scaled items developed by the authors that represented factors associated with choosing a job and/or career as outlined in the literature on labor mobility. The responses for the items were coded from "1" (Not Important) to "4" (Very Important). A factor analysis identified two underlying constructs in the response patterns to the Likert-scaled items: 1) importance placed on stabilizing home and family environment ($\alpha=.72$) and 2) knowledge of a job and its opportunities ($\alpha=.75$). The other variable groupings were: 1) average earned grades, 2) gender, 3) family size, 4) fathers' occupations, 5) fathers' employment status, 6) students' self-esteem (based on Rosenberg, 1965, $\alpha=.85$), 7) family structure, 8) mothers' education, and 9) family communications focused on three areas identified through a second factor analysis-perceived levels of positive reinforcement from parents ($\alpha=.85$), encouragement of child autonomy ($\alpha=.85$), and discussions about jobs and the workplace of the future ($\alpha=.75$). The family communications section of the instrument was based on research conducted by Flanagan in 1994 (Flanagan, 1995) and consisted of 34 Likert-scaled statements to assess students' perceptions of the frequency of communications with their parents. Since the number of students selecting agriculture and related occupations was only 57, a decision was made to recode the intervally-scaled variables for use in contingency table analyses. An alpha level of .05 was set for all analyses.

Results and Discussion

Students were nearly equal regarding their average earned grades whether choosing an agriculture or a non-agriculture career. Participants choosing a non-agriculture career were nearly evenly divided by gender (49% male, 51% female) while more males than females chose an agriculture career (65% vs. 35%) (Table 1). The groups varied by social and economic indicators. More students choosing an agriculture career lived in homes with the father present than did those students choosing a non-agriculture career (86% vs. 75%) (Table 1). The analysis also showed that parents of students selecting an agriculture career were less likely to have a high school education than parents of students selecting a non-agriculture career.

Students Choosing an Agriculture and Related Career

Nearly one-third of the students stated that their ideal jobs would be working as veterinarians (32.9%), an occupational goal not uncommon for many adolescents. Conroy (1996) found that over 60% of the students in a related study utilizing the

same population desired professional occupations, many which require graduate study or special licensing or certification. An additional 12.1% desire careers in other animal science fields. However, 22.4% also stated they wish to pursue production farming, with another 10.4% interested in forestry-related occupations, primarily in logging and sawmill operations (Table 2). An examination of Table 2 reveals that students are interested in science and technical careers in agriculture, many of which will require training beyond the secondary level. These decisions were made without the influence of a secondary agriculture program.

Choosing Agriculture vs. Non-Agriculture Occupations

Table 3 summarizes the significant relationships between occupational choice and two variables—gender and father's occupation. Males were more likely to select an agriculture occupation than females (64.7% vs. 35.3%), although the relationship was not a strong one ($\phi=.097$). Students were more likely to select an agriculture occupation if their fathers worked in a labor/service job or in farming, with only 15.6% of their father's

Table 1. Demographic Characteristics of Participants

	<u>Job Choice</u>	
	<u>Agriculture</u> %(N)	<u>Non-Agriculture</u> %(N)
Average Earned Grades		
Average or above	88% (50)	86% (475)
Below average	12% (7)	14% (65)
Gender		
Male	65% (33)	49% (208)
Female	35% (18)	51% (216)
Family Structure		
Father in home	86% (49)	75% (358)
Father absent	14% (8)	25% (117)
Father's employment		
Employed	97% (34)	93% (284)
Unemployed	29% (1)	7% (22)

Table 2. Ideal Job Choices of Students Aspiring to Careers in Agriculture

Job Category	N	%
Veterinarian	19	32.9
Production Farming	13	22.4
Other Animal Science	7	12.1
Forestry	6	10.4
Landscaping	5	8.6
Wildlife and Related	4	6.9
Other	4	6.9
TOTAL	58	100.0

involved in professional or other white collar occupations compared to 23.7% for fathers of students selecting non-agriculture jobs (Table 3). This relationship was much stronger ($v=.200$) than that based on gender.

Conclusions

Agricultural education has been continuously changing and adapting since its inception; this evolution produced several distinct changes not the least of which was the identification of agricultural education with vocational education. This identification produced several negative results. College became more accessible and desirable; students pursuing college educations selected distinctly different high school paths than those who expected to enter the workforce upon graduation. This resulted in science and academic skills being considered as “preparation for college,” and not as necessary—or a lower priority for vocational students (Rosenfeld, 1984; Warmbrod, 1962). Enrollments in secondary agriculture programs peaked during the 1970s. Subsequent school consolidation, increased accessibility of higher education, and several key pieces of federal legislation resulted in declining enrollments with less community ownership and support (Law, 1994).

All this is occurring at a time when employment opportunities in the agriculture industry remain high (USDA, 1996).

Based on the data analysis, several conclusions can be made:

Participating students selecting agricultural occupations were similar to those selecting non-agricultural occupations when comparing grades, levels of activity participation, family size, father’s employment status, self-esteem,

family structure, mother’s education, the importance they placed on stabilizing home and the family environment, the importance they placed on knowledge of a job and its opportunities, and their perceived levels of family communications.

1. Males in this study were more likely to select an agricultural occupation than females.
2. Students of lower socioeconomic status were more likely to select an agricultural occupation than those of higher socioeconomic status. Since socioeconomic status is positively correlated with achievement (Flanagan, 1993) there is concern that students with less

Table 3 Contingency Table Analyses Comparing Influences on Agriculture vs. Non Agriculture Job Choice

	Agriculture		Job Choice Non-Agriculture		Coefficient ^a
Gender	51	100.0%	424	100.0%	.097*
Male	33	64.7	208	49.1	
Female	18	35.5	216	50.9	
Father's Occ	51	100.0%	396	100.0%	.200*
Prof	4	7.8	38	9.6	
Wh. Collar	4	7.8	56	14.1	
Clerical	0	0	5	1.3	
Skill Trade	19	37.3	177	44.7	
Labor	15	29.4	104	26.3	
Farming	9	17.6	16	4.0	
Activities	57		475		.082
Average Grades	57		474		.013
Family Size	57		424		.058
Father's status	35		306		.052
Self-Esteem	52		467		.084
Family Structure	57		475		.077
Mom's educ	53		456		.084
Importance-home & family	57		475		.056
Importance-job knowledge	57		475		.088
Positive reinforcement	55		475		.067
Encourage autonomy	55		475		.031
Discussions about future job	55		475		.037

^a ϕ reported for 2 x 2 table; Cramer's v reported for 2 x R table

* $p \leq 0.05$

ability are choosing careers in agriculture at a time when technological demands of the industry are increasing.

Socioeconomic status, through the father's occupation, has long been regarded as the key indicator of labor mobility potential for an adolescent (Blau & Duncan, 1967). In one sense occupational choice based on the father's

occupation can be regarded as the "default" occupation if alternative information about jobs and careers is not available.

Recommendations

Conroy (1996) found that family communication about future work was a significant predictor of what jobs students expected to hold five years after

completion of formal schooling. Her findings supported prior research that suggested that family interactions are keys to vocational identity development (Steinberg, 1989; Erikson, 1963, cited in Herr, 1972). Results of this study, when combined with prior research, lead to the following recommendations:

Effective career education programs must not only provide factual information about agricultural careers, they must also contribute to the formation of students' occupational identity by challenging stereotypic notions of probable success, particularly those that result from socialization of gender and socioeconomic status. Individual barriers to accessing and processing information must be identified in an effort to compensate for selectivity of information delivery such as that which results when socialization occurs (Steinberg, 1989; Harter, 1990). Programs that do not do this may not achieve their goals of successfully recruiting students into agriculture.

Implications for Agricultural Education

Many benefits exist for any community-the school or the more broad population-that supports an agriculture program. Current educational reforms that emphasize the integration of academic and vocational subject matter, work experience and apprenticeship, and work readiness provide the perfect venue for agricultural educators to capitalize on their rich experiential and applied learning base. Resulting occupational experiences would positively impact on student perceptions of potential for success in agricultural careers. The fundamental importance of agriculture to our culture, history, and economy, and the increasing awareness of the scientific nature of agricultural technology, make agriculture the premier content vehicle to tie academic disciplines together. Interdisciplinary inquiry such as that conducted as part of this study is necessary if programs and courses are to be designed that meet both industry and students' needs and occupational interests.

Production agriculture is no longer the largest employer in rural areas. Routine manufacturing such as plants that process raw materials, light assembly plants, and branch plants of national firms tend to now be the largest employers (Huang & Howley, 1991). Economic development initiatives in rural areas could capitalize on these trends by focusing on attracting new investments and development within the agriculture sector. Potential employment opportunities include food processing, warehousing and distribution, landscaping, light equipment manufacturing and repair, wood products, organic gardening and "niche" farming, and specialty agriculture products. However, an educationally and socially disadvantaged labor force in rural communities is not likely to attract either investment or launch economic development efforts (Huang & Howley, 1991).

A secondary agriculture program can be a vital part of a community economic development effort. Nationally, the industry continues to have an increased need for persons skilled in research and development, marketing, distributions, and communications and other non-production areas. Agricultural education programs that shift emphasis from production to broad knowledge and skills in agricultural occupations beyond production can prepare students to work in locally based specialty agriculture or related firms. Yet, the success of these programs will continue to depend on recruitment efforts that can be influenced by traditionally held stereotypes about agriculture.

In New York State, one rural school district is taking the lead in the development of a K-12 agricultural program that includes: a) agricultural literacy through graduation, b) introduction to career and technology through applied activities in the agricultural sciences, and c) a Tech-Prep initiative to prepare students for postsecondary study in the food and fiber sciences. The insight of the administrators into the benefits of using agricultural content as the "common" thread that weaves through their entire curriculum is a pioneering effort to serve students. At the same

time they will be preparing young people for productive futures and meeting the needs of an industry that becomes more diverse and technical over time. A key to the success of this new program will be an agricultural literacy program for parents and their involvement in the planning process-no program can be successful without motivated and capable students and adequate information for them to make the best career decision.

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