Research

What Influences Middle School Agricultural Education Students to Enroll in a High School Agricultural Education Program in Georgia

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Introduction

Middle school agricultural education programs provide students with a variety of outlets to put their knowledge to the test, combining agricultural concepts learned in the classroom with academic content. Currently agricultural education is only serving a fraction of the students who could be part of an educational program of this capacity (Myers, Dyer, & Breja, 2003). However, according to Hillison (1994) "in recent years, the middle/junior high school program has become a popular one and represents the fastest growing area of agricultural education" (p.4). This increase should motivate teachers and educational researchers to discover the experiences at the middle school level leading to high school enrollment, thus establishing an increase in the number of students who will benefit from agricultural education (Cupp & Weaver, 1994; Herren & Denham, 1990). The need for increasing enrollments in school-based agricultural education (SBAE) is among the priorities of the agricultural education profession (Doerfert, 2011).

Conceptual Framework

This study is based on cognitive and social psychology, involvement, and experiential learning theories. Cognitive and social psychology supports the link between student attitudes and beliefs (Bandura, 1986; Vygotsky, 1962; Dewey, 1938) that could result in student enrollment in agricultural education programs. Positive experiences in the middle school program could lead to enrollment in high school (Cheek, Arrington, Carter, & Randall, 1994). The conceptual model for this study included four factors affecting student enrollment decision in high school: classroom/lab instruction, SAE, FFA/leadership development, and attitude. A paucity of recent research exists that specifically pertains to middle school experiences in agricultural education and how they may influence ninth-grade SBAE program enrollment decisions. If middle school students are expected to continue their study in SBAE, then it is important to identify middle school experiences that may be related to high school enrollment (Silverberg, Warner, Fong, & Goodwin, 2004; Hughes & Barrick, 1993; Phipps, Osborne, Dyer, & Ball, 2008; Knight, 1987; Sutphin and Newsom-Stewart, 1995; Reis & Kahler, 1997).

Methodology

The purpose of this study was to describe the experiences of middle school agricultural education students who subsequently enrolled in a 9th grade SBAE program in Georgia. The research objectives included: 1. Determine the background and experiences of 9th grade agricultural education students who had been enrolled in middle school agricultural education; and 2. Determine to what extent middle school experiences in agricultural education influence a student's decision of enrollment in a 9th grade agricultural education course.

Population and Sample. The population for this study was all 9th grade students enrolled in an agricultural education course in Georgia. A purposive sample was utilized to select one high school program from each of the six geographic areas of Georgia from the list on the Georgia Agricultural Education website. The research was conducted by surveying 9th grade students in the six counties that had both middle school and high school agricultural education programs.

Instrumentation, Data Collection, and Data Analysis. The Dillman, Smyth, and Christian (2009) five-step process for the administration of group questionnaires guided the instrumentation and data collection process. The instrument included a list of experiences identified as components of the middle school agricultural education program in the Georgia middle school exploring

agricultural education curriculum and the leadership opportunities outlined by the [State] agricultural education program. The instrument was pilot tested with a similar group of students and reviewed by agricultural education faculty for reliability and validity, respectively; no needed changes were identified. Selected demographic information was also collected. The study was approved by the Institutional Review Board at the University of Florida.

Findings

Objective One: Of the students (N=108) who completed the instrument, 53 (49%) were male and 55 (51%) were female, and ranged in age from 14 to 16 years of age, with most (44%) being 15. The participants reported diverse backgrounds, with 33 (30%) being from a rural/farm area, 47 (44%) from a rural/non-farm area, and 28 (26%) from an urban area. Most (60%) reported a family member with a career in agriculture, and most (76%) had been enrolled in one or two years of SBAE. Participants had a variety of SAE programs: 42 (39%) entrepreneurship; 27 (25%) placement; 35 (32%) research, and 4 (4%) exploratory.

Objective Two: Students indicated the level of influence that 46 middle school experiences had on their enrollment in high school agricultural education, utilizing the following scale: (1) negative influence, (2) slightly negative influence, (3) no influence, (4) slightly positive influence, and (5) positive influence. For Classroom and Lab Experience, students rated hands-on learning as the biggest influence, followed by learning about FFA opportunities, and learning how agriculture affects life. Learning about the horticulture industry, forestry and natural resources, and plant science were rated the least positive influences. For FFA/Leadership Development, students indicated being an FFA member was the biggest influence, followed by participating in animal science career development events (CDEs), and attending chapter meetings. Serving as a chapter officer, participating in agricultural mechanics CDEs, and attending National FFA convention were rated the least positive influences. For SAE, students indicated that hands-on learning through SAE was the biggest influence, followed by [my] SAE program, and learning recordkeeping skills. Receiving recognition for [my] SAE, showing livestock, and entering [my] SAE in the agriscience fair were rated the least positive influences.

Conclusions

Georgia students currently enrolled in high school SBAE indicated the 10 middle school experiences that had the most influence upon their enrollment decision. Six of the top ten were from classroom, three were from SAE, and one was from FFA/leadership. Six of the top ten experiences are process experiences (how to learn) and the other four content experiences (what to learn). Middle school agricultural educators need to provide educational opportunities that will help the student learn how to learn while also learning about agriculture.

Implications/Recommendations

These results provide a better understanding of the experiences with the greatest influence on a student's enrollment decision. As noted by Cupp and Weaver (1994), Herren and Denham (1990), and Hedrich (1985), these results help to clarify and emphasize the importance of middle school agricultural education in increasing enrollments in high school agricultural education. Middle school agricultural educators should utilize this list to better understand what experience provides the most influence upon their students to continue enrollment as they enter high school. State staff and teacher educators could utilize these results to gain a better understanding of the experiences each student should have during involvement in middle school agricultural education. Future research should be conducted to determine other factors that contribute to enrollment decisions and sustained enrollment for multiple years and to investigate why students choose *not* to enroll in high school agricultural education.

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