

FY01 Mini-Research Project Report

**Impacts of Curricular Changes on Illinois Agricultural Education
Programs**

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Introduction

The primary purpose of this proposed project was to investigate the impacts of the curriculum changes the past ten years in Illinois relative to agricultural education programs. This project provides information to determine if the changes in agricultural education curricula have had significant impacts upon programs with respect to enrollments, student characteristics and involvement.

This research project identified curriculum changes that have occurred in Illinois Agricultural Education programs over the past decade or so. The identified curriculum changes were compared with variables associated with local program success. These variables include but are not limited to enrollment patterns, selected student and teacher characteristics and the involvement of student and teachers in agricultural education programs. The overall goal of this research project was to provide information about the relative success of recent curricular changes and also to provide possible directions for future curriculum changes.

The research methods and approaches of this proposed investigation utilized a variety of data collection strategies in order to determine the relative impacts of the curricular changes. Existing database information was correlated with selected variables. Data analysis and data collection techniques were used to determine the relative impacts of the curricular changes in Illinois Agricultural Education programs.

Objectives

The overall goal of this research project was to provide information about the relative success of recent curricular changes and also to provide possible directions for future curriculum changes. The specific objectives of the research project were:

1. To determine the nature and scope of curriculum changes in Agricultural Education programs in Illinois over the past ten years or so.
2. To determine significant impacts that curriculum changes have had on aspects of Agricultural Education programs in Illinois with respect to variables associated with student enrollments, scheduling, student activities and student achievement.
3. To explore future curriculum issues and changes for Agricultural Education programs in Illinois.

Procedures

This project examined existing databases and information to identify curricular changes and agricultural education program impacts. The second stage was to ascertain the expected measurable outcomes for programs of Agricultural Education in Illinois. The final stage was to develop a series of curricular recommendations for Agricultural Education programs in Illinois utilizing systematic strategies for assessing Agricultural Education curriculum changes and program impacts

Findings

Enrollments

During the past decade increase in student enrollments in Agricultural Education in Illinois have been impressive. In the 1989-1990 school year the enrollment was

11,867 students and in the 1997-1998 school year enrollments increased to 17,898. This represented an increase of 6,031 students, or an increase of approximately 51 percent. Over the nine-year period this increase represents an average annual increase of approximately 5.6 percent. If this annual rate of increase is projected to the 2000-2001 school year, the expected enrollment would be 21,076 students.

The total public school enrollment in Illinois increase over the ten-year period from 1990 through 2000 was at a rate of 12 percent. The total school enrollment is just over two million students. Secondary public school enrollment was 567,674 students in the 1999-2000 school year. The rate of growth of agriculture education enrollment has increase by over four times the State enrollment rate. However, the enrollment in agricultural education represents approximately one percent of the total public school and 4.4 percent of the secondary public school enrollment in Illinois.

Since the 1998-1999 school year enrollment data has been reported as self-reported data from the agriculture education teachers. The self-reported enrollment during the 1989-1999 school year was 24,230 students and increased to 24,765 students enrolled during the 2000-2001 school year. This rather modest increase of 535 students over a three-year period represents less than one percent annual increase. The use of self-reported data is somewhat suspect as a reliable measure. Otherwise, one would conclude that the increases in agriculture education enrollments have discontinued over the past three years. Such a pattern would indicate that the curriculum changes made over the past the years have had their relative impact and new innovations are warranted in order to re-establish the previous growth rate of approximately five percent.

Demographics

Traditionally agriculture education programs have been housed in rural schools. Over the past ten years efforts have been made to promote agriculture education in suburban and urban schools. The FCAE school report indicates that 54.6 percent of the agriculture education students in Illinois are “urban”, 27.9 percent “rural non-farm” and 17.5 percent classified as “rural farm”. These classifications are self-reported data based upon the Census classifications of “urban” representing designated metropolitan areas of more than 2,500 residents.

The Illinois State Board of Education (ISBE) classifies school districts into three community-based categories: rural, suburban, and urban. It appears as though the ISBE community classification system may be more appropriate as a system of classification. Within Illinois 38 percent of the students are enrolled in urban schools, 49 percent in suburban schools and 13 percent in rural schools (1996-1997 ISBE data). During the past ten years the relative percentage of students enrolled in rural schools has declined. Suburban school student numbers have increased significantly. The number of schools classified as rural have decreased as well, (5 percent decrease over 10 years) while the number of schools classified as suburban has increased (5 percent increase). The total number of schools has been somewhat steady. The conclusion is that suburban schools in Illinois represent the significant area of growth when compared to rural and urban schools.

The number of programs of agriculture education in Illinois has grown over the past ten years to 318 programs in 2001. A random sample of 50 agriculture education programs in Illinois indicated that more than 60 percent of the schools are in rural

classified school districts, approximately 10 percent in suburban, and 20 percent in urban community areas. This pattern of growth for agriculture education has been in both rural and urban areas. It appears as though the area of greatest potential growth is in school districts classified as suburban.

Agricultural education programs in Illinois have an enrollment of 6.9 percent racial minority students. The state of Illinois has a total enrollment classification 60.7 percent “White, non-Hispanic”, 21.3 percent “Black, non-Hispanic”, 14.6 percent “Hispanic” and the 3.3 percent other groups. These percentages are somewhat related to the number of students enrolled in rural, suburban, and urban schools.

Curriculum

During the past ten years two primary areas of curriculum changes have occurred in agriculture education programs in Illinois. First, efforts have been made to develop science-based agriculture education curricula and second, the development of Horticulture curriculum. Both of these curriculum enhancements have been instrumental in the increase in the number of students enrolled in agriculture education in Illinois. As of 2001, thirty percent of the agriculture education programs offered an approved course in either the Biological Science Applications in Agriculture or the Physical Science Applications in Agriculture curricula. Also, seventy-three percent of programs offer science credit courses in agriculture education. The findings of this study appear to indicate that these two curriculum changes have been the primary factors contributing to the increase in agriculture education student enrollment numbers in Illinois over the past ten years.

Recommendations

Based upon the findings of this study, the following recommendations are suggested. First, the findings indicated that future growth of school programs in Illinois will be in suburban areas. The number of rural schools has been decreasing and indications are they will continue to do so. Also, agriculture education curriculum should be developed and enhanced to reflect the changes in Illinois school demographics. Efforts should be continued to develop curricula in agricultural education that has appeal for suburban schools. While not conclusive from this study, areas such as food science, biotechnology, as well as further developments in Horticulture seem to be significant areas of interest and potential growth. Such efforts would also provide attention to addressing concerns relative to student diversity.

The emphasis on science-based and science credit classes has been successful and should be further developed. Such curricular changes will not only appeal to a broader range of students and schools, but also have significant appeal to traditional populations of agriculture education students.

Another area presented by this data analysis investigation is the “leveling” of student enrollment numbers in agriculture education in Illinois. As reported, these numbers may be a product of the nature of self-reported data. However, if in fact the rather modest increase over the past three years is a true trend, then it could be concluded that the curricular changes of the early 1990’s have “run their course”. This would indicate that there is the potential need for another significant set of curriculum enhancements in order to appeal to the changes of demographics in Illinois schools. Such enhancements need to be provided before the “leveling” trend becomes a decreasing trend.

The basis for this project was to assess impacts of curriculum changes. It appears as though any conclusions can be based upon a varying set of criteria. It seems appropriate to have a set of measurable objective-based criteria from the onset of curriculum changes. For example, if a goal is to provide curriculum that appeals to suburban students, then prior to the implementation of the curriculum, specific criteria for assessing the impact should be established such as a “50 percent increase in suburban student enrollments in a three year span” should be part of the curriculum development process. Such criteria would validate the relative impacts of curriculum changes rather than implementing a “post hoc” approach to assess impact. This strategy would provide more significant means for effective program assessment.