

Surveying for the Future: An Agriculture in the Classroom Trend Analysis

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Introduction/Need for Research: Following the decline in farm and rural populations during the first half of the twentieth century, a group of stakeholders became concerned that “Americans, as a whole, were at least two generations removed from the farm and did not understand even the most rudimentary of processes, challenges, and risks that farmers and the agricultural industry worked with and met head-on every day” (National Agriculture in the Classroom, 2011a, p. 1). In 1981 the United States Department of Agriculture (USDA) formed a task force to explore means of increasing education about agriculture. The task force recommended that the USDA coordinate the efforts of agricultural literacy and provide means for states to organize their own programs (USDA: Agriculture in the Classroom, 2011). The Agriculture in the Classroom (AITC) program was formally established in 1982 with a challenge to each state to form a committee responsible for organizing a state agricultural literacy program (National Agriculture in the Classroom, 2011b). In its 1988 report on agricultural education, the National Research Council stated, “Agriculture – broadly defined – is too important a topic to be taught only to the relatively small percentage of students considering careers in agriculture” (National Research Council, 1988, p. 8). As a result of these recommendations and the organized leadership efforts of the USDA, AITC programs were organized in most states in the early 1990s. The mission of AITC is accomplished through the development and diffusion of instructional materials in K-12 classrooms as well as through pre-service and in-service teacher instruction, and online information. Due to pressures placed on public school teachers to meet state and national standards, most resources provided by AITC programs are aligned with academic standards, increasing AITC program credibility with teachers and state educational agencies (National Agriculture in the Classroom, 2011a).

Conceptual/Theoretical Framework/Purpose: This research study is framed by Fullan’s (1982) theory of educational change. Fullan recognized participants at all levels of an educational program as potential change agents. The theory includes four broad phases in the change process including initiation, implementation, continuation, and outcome. Conceptually, this study provided an opportunity to collect baseline outcome data so future changes can be implemented. While state data has been collected and reported on the National AITC website for several years, this data has not been summarized, analyzed, or reported since 2003. A report of the 2001-2002 NAITC survey indicated that nearly 98,000 students were reached through AITC programs and 1,190 teachers were involved in AITC programs (Lesser, Newton, & Amer, 2003). The purpose of this study was to analyze and summarize the most recent five years of AITC program data.

Methodology: Annual AITC program report data is requested each year by NAITC. The instrument used to obtain the data was developed by the NAITC board and validated by the W1006 Agricultural Literacy Research Committee. The report, which is a reflection of the previous calendar year, is not mandatory unless the state is applying for a grant. As a result, some states do not report each year. Annual data was collected on 1) participant numbers and contact-time for pre-service teachers, in-service teachers, volunteers and students; 2) program budgets and grants; 3) resources developed and the frequency of alignment to educational

standards; and 4) program accomplishments and impacts. The data is reported via an online form and saved to a database for analysis. Because each state is unique in terms of structure, funding, and programming priorities, it is difficult to make meaningful comparisons without some stratification. Therefore, raw spreadsheet data from 2006-2010 was examined to determine which states had provided data for each of the five years. States not reporting each year were not included in further analyses. Responses to questions that were asked uniformly each year were organized into a spreadsheet and then comparisons were made by year using descriptive statistics and actual values.

Results/Findings: Thirty-five states reported consistently during the defined five-year period. The overall trend for contact-hours and number of teachers contacted and/or trained by AITC program staff increased, as did the number of students receiving agriculture instruction. Elementary students made up the largest number of students impacted but there was a modest increase in the number of secondary students reached. The number of volunteers assisting with AITC programs increased, as did the number of students reached by volunteers between 2006 and 2009, with a slight decrease in 2010. Overall, the number of pre-service teachers trained increased between 2006-2010; however, only 21 of the 35 states reporting conducted pre-service training. Funding for AITC programs reached its highest point in 2008, with a steep downward trend in total budget dollars available annually since that point. Finally, an upward trend was observed related to the development of materials designed to meet educational standards.

Conclusions: Significant increases in students and teachers reached through AITC programs were reported in comparison with the 2001-2002 report (Lesser et al., 2003). Overall, state AITC programs reached more pre-service teachers, in-service teachers, volunteers and their students, despite somewhat flat budgets. Progress can be observed through increased participant numbers and the increased emphasis states have placed on meeting educational standards. While participant trends are up, there is room for improvement, especially in the area of agricultural literacy training for pre-service teachers. All states worked with in-service teachers, however, only 60% conducted pre-service trainings.

Implications/Recommendations/Impact on Profession: It is in the Nation's best interest to prepare agricultural professionals and to develop individuals who understand the resources and systems involved to meet the basic needs of food, clothing, and shelter. It will take greater commitment and a concerted effort among state and national education organizations, researchers, and agricultural organizations to increase agricultural literacy, as outlined by the National Research Council (1988), among K-12 students and their teachers given the limits of the school day and the educational climate of accountability. Future program resources will need to be aligned with the Common Core Curriculum. State AITC programs need to make a greater effort to meet with undergraduate pre-service teachers at colleges and universities before they graduate. Additional funding avenues and partnerships need be explored. There are approximately 50 million school age children in the United States. AITC programs currently reach 5.3 million or 1% of the U.S. K-12 population, spending approximately \$1.50 (2010) for each student reached. AITC programs will need to find additional sources of funding, work more closely with allied partners, leverage dollars even more, perhaps by using technology to train teachers, and integrate program resources into existing school curriculum if the program mission and goals are to be achieved.

References

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