

# NATIONAL RESEARCH AGENDA

American Association *for* Agricultural Education  
 2011- 2015 Research Priority Areas

## Efficient & Effective Programs

### Efficient and Effective Agricultural Education Programs

**Key Outcome:** *Highly effective educational programs will meet the academic, career, and developmental needs of diverse learners in all settings and at all levels.*

**Key Outcome:** *Accurate and reliable data that describe the quality and impact of educational programs and outreach efforts at all levels will be distributed to respective decision groups (e.g. students, parents, administration, industry, policy makers).*

Informed Choices

### Background

At the start of the 20th century high school agricultural education programs were dominated with production agriculture content. These programs were designed to assist young men to prepare for a career in production agriculture. Just as the agriculture industry evolved over the past century, agricultural education programs have also changed. The objectives have shifted from preparing students for a career in production agriculture to preparing students for a career that requires knowledge of agriculture. The expanded mission of agriculture education has led to a more diverse group of learners and information stakeholder including females, minority populations, and urban residents.

As we enter the 21st century, education is faced with numerous issues including limited resources and skyrocketing drop-out rates (CNN, 2010). Low performing schools and programs became news stories as well as political platforms, all which has led to new relationships with education and its customers. And within this shift, choice has become a key word in this discussion (Biesta, 2004). This use of the word choice is about the behavior of the consumer in a market where their aim is to satisfy their needs. In the K-12 system, this is about choices for what is best for their child. This can include choices about the educational environment (public, private or home schooled) or the rigor of the courses (e.g. regular instruction or advance placement) not to mention the possible career clusters that are available to each child.

Satisfying consumer needs is not limited to K-12 education system. Adult education and training programs, especially those outside of higher education, have been leaders in multiple methods for and levels of program evaluation for more than half a century. Authors such as Kirkpatrick (1998) contend that we needed to evaluate training programs at the reaction (customer satisfaction), learning (knowledge, skills, and attitudes), behavioral change, and final results (e.g. increased production, decreased costs, improved quality levels). Additional authors such as Phillips (1997) have called for a fifth level that documents the return on investment from training programs. As such, demands to demonstrate the

effectiveness and efficiency of educational efforts is not a new phenomenon. Rather, this is a trend that has been growing with the passage of time fueled by the growing demands of customers for a product (or process or system) that meets their changing needs. In this information age, the arguably natural outcome of this trend is an information-based accountability system that allows the customer to comparison shop.

However, accountability is not a single concept. Rather, it has been described by Heim (1995) as multi-faceted involving responsibility, authority, evaluation, and control and that some of the challenges with conceptualizing accountability is related to its fluid and pervasive nature.

### Challenges

Although the difficulty of the educational task may vary greatly from school to school, from classroom to classroom, and from student to student, and although all the factors contributing to successful learning may not be fully controlled or even fully understood, the most basic compact between the schools and the public is that the public school and its teachers must make a difference in the lives of children and youth. School accountability for student outcomes, then, must highlight the ways and extent to which the school has contributed to making a difference. Information that shows student status in terms of performance standards at a point in time is useful, but information that shows growth or improvement over time is essential. (Heim, 1995, School/Classroom Accountability for Student Outcomes section, para. 3)

While recent state and federal efforts have attempted to create systems for comparison framed in standards, performance measures, and accreditation programs, we have yet to achieve an outcome that is satisfactory to all stakeholders including the customer. As such, efforts continue to determine what processes and measures can best document educational program effectiveness, efficiency, and impact.

Agricultural education programs will not be an exception. In order to provide evidence of program effectiveness, agricultural education programs must collect and maintain accurate data that describes

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the quality and impact of its programs and outreach efforts at all levels. The data must be summarized and reported to all respective decision groups (e.g. students, parents, administration, industry, policy makers).

The need for program efficiency, effectiveness, and impact is not limited to the K-12 educational system. Traditional adult education systems such as Extension and high education are also being pressured to document the outcomes of their efforts including at the cost-effectiveness or return-on-investment levels. Recent budgetary decision to reduce or eliminate adult-level educational programming and structures may be an indication that such research is already too late.

## Opportunities to Respond

Learning is the single most significant element molding our being. It is the driving force that combines with our experiences, our needs, and our desires to make us what we are while influencing the social structures to which we belong. The outcome of every learning situation and educational program is that the person is changed.

The work of our discipline and its sub-dimensions occurs within a network of cultural, social, institutional, and psychological forces. Research that clearly illustrates the factors that influence learning efficiency and effectiveness is critical to responding to our changing global environment and advancing our future education, research, and outreach efforts.

In addition, graduates of our programs must be equipped with the understanding and tools necessary to be successful educators in this customer-driven, life-long learning age.

Learning is the single most significant element molding our being. It is the driving force that combines with our experiences, our needs, and our desires to make us what we are while influencing the social structures to which we belong. Highly effective educational programs will meet the academic, career, and developmental needs of diverse learners in all settings and at all levels. Further, accurate and reliable data that describes the quality and impact of educational programs and outreach efforts at all levels must be distributed to respective decision groups. Our areas of scientific focus should include:

- » Define the characteristics of effective agricultural education programs and teachers and the means to correctly access the current state of these characteristics.
- » Demonstrate the effective integration of STEM (science, technology, engineering and math) into agricultural education programs.
- » Determine the means to effectively and efficiently document the outcomes and impact of agricultural education programs on an individual, community, industry, and societal levels.

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## ADDITIONS