



RESEARCH PROJECT OUTLINE

Research and Graduate Education ♦ College of Agricultural Sciences
The Pennsylvania State University ♦ University Park, Pennsylvania

Title: Developing a Model for Integrating Extension-Research Activities

Probable Duration: 60 months (October 1, 2007 through September 30, 2012)

Personnel:

Project Investigator(s)

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Justification, Relevance, and Expected Outcomes or Impacts:

Over the past few decades, U.S. extension systems and research systems have made an attempt to work together. However, these two systems remain and maintain separate cultural and organizational identities with varied, but linked missions (Bennett, 2000). Increased emphasis is being placed on the need for common understanding, expectation, and project language among research and extension faculty. Further, the need for accountability and documenting evidence of program impact continues to increase. Higher education institutions, like all public agencies, have seen an increased emphasis on program performance and accountability from local, state, and federal agencies

The 1998 Agricultural Research, Extension, and Education Reform Act (AREERA) emphasized the need for joint plans of work from land-grant institutions. Several states (Virginia, Tennessee, Hawaii, and Massachusetts) submitted joint plans of work in 1999. However, a majority of states did not submit joint plans of work. USDA has mandated that all states in the future submit joint plans of work to increase their efforts to integrate extension and research activities.

Further, the 1998 AREERA Act authorizes the United State Department of Agriculture to fund projects that integrate research, education and extension activities. Federal funding is available for integrated projects to be awarded competitively to researchers, extensionists, and teachers at selected universities. The rationale for integrating research, extension, and education is to have a common language to plan, discuss, implement and demonstrate program performance and accountability. In addition, it is believed that integration efforts will help 1) market extension programs and research activities to the general public, 2) show how the investment made in research and extension activities are benefiting federal, state and local programs and activities, and 3) provide a mechanism to effectively communicate and influence key stakeholders, and thereby help them to better understand and appreciate research and extension activities of land-grant universities. The above mentioned efforts will help bring to fruition the recommendations of Kellogg Foundation's Engaged University concept and public universities commitment to serve the needs of society.

Research and extension faculty currently hold partly similar and partly dissimilar views about integration efforts, especially in the areas of planning, implementing, and evaluating projects and programs (Bennett, 2000). Several questions need to be addressed to more effectively develop strategies for effective joint extension-research efforts. 1) How can university research and extension faculty work collaboratively to develop, implement, and evaluate projects and/or programs? 2) Do they share common views of what a project or program entails? 3) What mechanisms currently exist to encourage and support joint efforts among research and extension programs/activities at the university level? 4) What are the barriers that limit effective linkages among research and extension efforts both on campus and in the field? And 5) What strategies do extension and research faculty believe are good for effective integration between research and extension? Are there substantial benefits to joint research-extension work? If yes, then what do research and extension faculty identify as benefits? Answers to these questions will help 1) better understand the current status of

integrated extension and research efforts, 2) motivate faculty and researchers to engage and excel in collaborative extension-research projects, 3) systematically plan, develop, implement and evaluate extension-research programs/projects, and 4) document and showcase impact of Extension-research integration efforts to all stakeholders.

Previous Work (Background) and Present Outlook:

The concept of integrating extension and research dates back to the enactments of Morrill (1862) and Smith-Lever (1914) Acts. The rationale for this integration was that new research conducted in labs and other facilities at land-grant universities be transferred into practice via Cooperative Extension. Further, problems faced by farmers and the general public relative to a new technology or practice is conveyed to the researchers and laboratories so that corrections are made to the new technologies. As years passed, the integration efforts of extension and research has been questioned by faculty, researchers, program leaders, administrators, planners, and government, at both federal and state levels.

Warner, Hinrichs, Schneyer and Joyce (1998) examined challenges and limitations to involving Extension educators and researchers in research projects designed to test theory. According to Warner, et al, collaborations between researchers and Extension educators have traditionally been viewed as a division of labor which distances Extension agents from the research process and the researchers from Extension practice (p.4). They identified several challenges to Extension-research collaboration which include: 1) research design and methodology, 2) Extension practice 3) organizational style and culture.

Gorsuch (1999), a professor at Clemson University with over 25 years of experience alluded to the philosophy of Extension-research linkages by stating that they are supposed to be coordinated. Why, then there are no common codes for reporting in CRIS. He stated, “the public looks at the end result, not at whether research or Extension was the group that did it.” We must ask ourselves the question, what is the value of our (Extension-research) efforts to public good? Answers to this question will help position ourselves to address accountability issues and stakeholder engagement.

According to Daniel Decker, the Director of Cornell University Agricultural Experiment Station, the traditional model of Extension-research was simple and worked somewhat well. He called for a more “transactional” approach to Extension-research integration where engagement of researcher, educator, and stakeholders is meaningful and continuous. Key elements of the “transactional” approach include: 1) educational needs, and related new information required, are identified by engaging stakeholders, extension educators and researchers through dialogue and collaboration, 2) verification of the research agenda and priorities by Extension engaging stakeholders, extension educators and researchers, 3) extension educators and researchers work together during the research process, especially at local field sites, 4) researchers, working collaboratively with extension educators, identify and provide opportunities to share the purposes and progress of the research with the broad community of relevant stakeholders, and 5) research findings are integrated with existing knowledge and shared in meaningful terms with stakeholders who can put this knowledge to work.

Bruns (2005) of the Ohio State University, as cited in Rennekamp, Cummings, Feaster, Ladewig, Lambur, Newman, Price, Richard and Warner (n.d.) suggested the need for blending of all work that is being carried out so that all can learn from each other. She asked the question, we not do this (blending), then how are others going to be able to validate our work?

This AES project findings can be useful in determining the worth of Extension-research integration efforts. A strong research-Extension linkage will help in broader understanding of past and future benefits of the research and extension efforts to the public good. In addition, this linkage may also help to address issues of stakeholder involvement and accountability concerns.

Within the university systems, Extension-research integration will provide better clarity to all stakeholders in clearly describing and articulating the benefits of such efforts.

And third, Extension-research integration will help develop better institutional mechanisms for connecting innovations in research and new knowledge developed to a diverse public who are the consumers of that knowledge.

Objectives:

The overall purpose of this project is to document the current status of integrated extension-research efforts and offer recommendations on how to improve and strengthen the joint efforts. Objectives of the project include:

1. Identify facilitating factors and inhibiting barriers to joint extension-research-activities,
2. Document individual and institutional strategies and processes required to implement effective research-extension activities,
3. Identify at least one program in each of the five extension program areas to determine process and outcomes of joint extension-research activities, and
4. Showcase joint extension-research activities through scholarship, success stories, and best practices.

Procedures:

To successfully implement and complete the project, multiple procedures are planned. The procedures are presented under each of the project's major objectives. Both quantitative and qualitative approaches will be used to carry out the study and in accomplishing the objectives. The type of statistics to use will be determined based on the nature of data and level of measurement.

Objective 1: Identify facilitating factors and inhibiting barriers to joint extension-research-activities,

Several strategies will be used to accomplish objective one. In all, four groups of extension educators, regional directors, faculty, and administrators (research and extension deans, program leaders, department heads, and others) will be invited to participate in this project (see conceptual model). First, a total of 20 faculty with joint research and extension appointments will be identified. The intent will be to include at least four faculty (two with extension and two with research) for each of the planned program areas and CSREES newly established Knowledge Areas (KAs). Second, a total of 50 extension agents (at least 10 from each of the five program areas), and 10 CEDs (two each representing the six Extension regions) will also be identified. Third, all six regional directors for Penn State Cooperative Extension will be invited to participate in this project. Finally, input from administrators--both research and extension as well as department heads-- will be sought.

Mailed questionnaires and interviews will be used to identify facilitating and inhibiting factors to joint extension activities. Focus groups and individual interviews will be conducted to collect data to meet the project objectives. In all, seven focus groups—one each for extension and research faculty, and five focus groups with extension agents, will be conducted. In addition, interviews will be used to gather administrators' perspective on joint research-extension integration efforts.

Results from focus groups and interviews will lay the groundwork to develop and design a survey of stakeholders (identified in the model above) to address the relevance, capacity, and impact of joint research-extension efforts. In addition to results from focus groups and interviews, survey results will provide a broader perspective to continuously design, implement, and evaluate extension-research integration efforts.

Objective 2: Document individual and institutional strategies and processes required to implement effective research-extension activities

Two strategies will be used to address this objective. First, a detailed review of individual and institutional strategies and processes will be reviewed through literature and other documents. In addition, both extension and research websites of land-grant universities will be accessed for additional information. Extension specialists, research faculty, program leaders and administrators in research and extension will be interviewed using a structured interview protocol suggested by Krueger (1994).

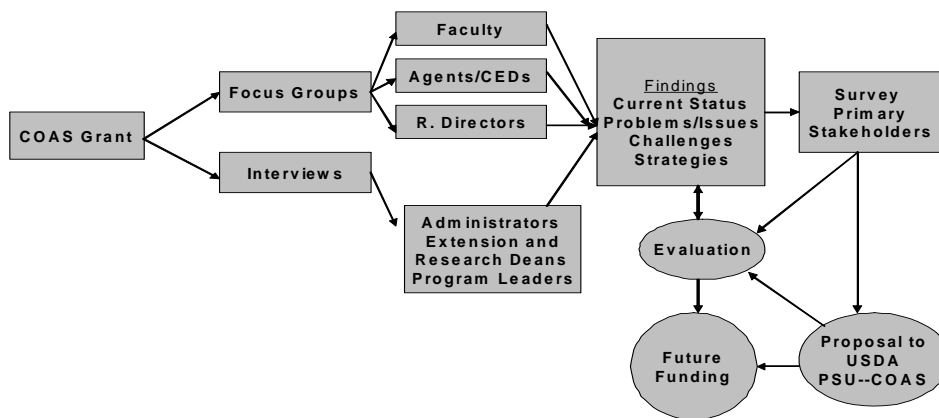
Objective 3: Identify at least one program in each of the five extension program areas to determine process and outcomes of joint extension-research activities

Based on the information obtained in objectives one and two, specific extension programs and projects in the five goal areas will be identified. Plans of work and evaluation data, if any, will be collected from the selected joint extension-research projects. Extension educators and research faculty will be contacted to provide data for this objective. Both quantitative (short survey) and qualitative (interviews and focus groups) will be utilized to collect data

Objective 4: Showcase joint extension-research activities through scholarship, success stories, and best practices.

Based on the information collected in objectives one through three, outcomes will be documented and translated into publications. These publications will show case the efforts and/or impact of joint extension-research activities. Publications such as papers, posters, brochures, etc. generated from this project will be documented and disseminated via scholarly outlets.

A Model for Integrated Research-Extension Efforts



Triangulation, a multiple data collection strategy, will be employed. Three types of triangulation— data, methodological, and theory--will be used to collect data. Data triangulation refers to collecting data from multiple sources on the same subject or topic; methodological triangulation deals with using different methods—surveys (Dillman, 2000), interviews, (Krueger, 1994) observation, etc.; and theory of triangulation provides a basis for different status positions interpreting the same data. Triangulation increases the strength and rigor of an evaluation (Denzin and Lincoln, 1994). Project findings will be described quantitatively and qualitatively with respect to project goals and outcomes.

Three evaluation criteria will be used to assess joint research-extension efforts. These include relevance, capacity, and impact. Relevance refers to the appropriateness/applicability of programs and/or projects to address the critical issues facing the Commonwealth of Pennsylvania. Capacity is the ability of both extension and research faculty to develop, implement and evaluate collaborative research-extension projects. Finally, impact refers to the effectiveness of integrated efforts in accomplishing the goals.

Stakeholder Engagement:

Extension specialists/educators, research scientists, administrators, program leaders and select clientele of Extension will help in understanding the nature and extent of Extension-research integration efforts. These stakeholders will immensely benefit from the findings of this study to address planning and accountability and impact issues. Additionally, stakeholders will benefit from the findings of this study through developing Best Practices that integrate Extension and research and link this to the larger university system, embracing the “Engaged University” concept.

Scope of Impact:

The scope of impact of this study is potentially unlimited. However, this project will systematically document the current status of joint research-extension efforts in Pennsylvania. Such documentation will help design strategies to address issues relative to research-extension integration efforts. Outcomes may also provide a basis for assessing long-term benefits of integrated efforts. In addition, the outcomes of this project can be benchmarked against the expectations of USDA-CSREES and serve as a model to other states. In addition, the outcomes may also help broaden the scope of Extension-research in other disciplines and university outreach. As indicated earlier, the United State Department of Agriculture funds projects that integrate research and extension activities in land-grant universities. The outcomes may also help to develop and submit a proposal to USDA-CSREES for additional long-term funding.

Extension-research facilitates the integration of a deep understanding of science and technology (through research) with practical knowledge, a hands-on orientation (through Extension), and experimental skills and insights (Extension-research integration).

Integrated Activities:

This project makes an attempt to link research and extension programs/projects and their impact on communities. Such an effort will help assess what the needs of communities are and how those needs are met. Additionally, this integrated effort may also help meet needs of stakeholder groups.

Milestones:

The anticipated milestones of the project include the following. First, a joint meeting of research faculty and Extension specialists/educators will assess the status of integration efforts. Second, facilitating and inhibiting factors for research-Extension integration will be identified. Third, focus groups with research and Extension faculty/educators and administrators for potential solutions will be conducted. Fourth, the data obtained from the first three milestones will help develop a model for Extension-research integration activities. Finally, the Best Practices for integrating Extension-research will be showcased through publications/presentations and through scholarship

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