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**ENGAGEMENT THROUGH COOPERATIVE EXTENSION: TOWARDS
UNDERSTANDING MEANING AND PRACTICE AMONG EDUCATORS IN
TWO STATE EXTENSION SYSTEMS**

A Dissertation in

Agricultural and Extension Education

by

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ABSTRACT

The Smith-Lever Act of 1914, which created Cooperative Extension, provided a connection between the land-grant universities and communities. Rural communities benefited from access to education and research that improved their lives, businesses, and communities. Cooperative Extension has changed as society has changed, increasing content that is provided and access to new audiences. The original model for program delivery for Cooperative Extension is the expert model, which is characterized as a top-down approach, where communication and expertise originate from the university and Extension relays resources determined to meet local needs. Cooperative Extension has been encouraged to adopt a more engaged model of program delivery since as early as the 1960's. An engaged model of program delivery is characterized by shared expertise and learning as the community and Extension work together to identify problems and solutions to challenging, complex issues. The calls for greater engagement in Cooperative Extension are echoed in higher education as it is challenged to connect with local communities.

This qualitative study explored the meaning of an engaged model in Cooperative Extension, including how and why Extension professionals apply the engaged model in their work. In addition, the study identified barriers that prevent and drivers that encourage the use of the engaged model in Extension, focusing particularly on two states. Findings from this study are intended to encourage greater adoption of the engaged model in Cooperative Extension. In addition, the study seeks to provide a mechanism

through which Cooperative Extension can provide leadership in guiding higher education to greater engagement.

The findings support use of both models in Cooperative Extension and in higher education, but suggest program development and implementation needs to be most closely aligned with the engaged model. Stronger relationships among professionals throughout higher education organizations, including those at local and campus locations will allow the higher education to build on the strong community connections maintained by Cooperative Extension. This will not only provide communities with increased access to resources that will help resolve the major challenges they are facing today but will also provide increased capacity in shaping their future. Engagement of higher education can successfully intertwine the three missions of the university: Extension, research and academic instruction.

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Chapter 1 - Introduction

The Smith-Lever Act of 1914 created the Cooperative Extension Service for the purpose of “diffusing among the people of the United States useful and practical information on subjects relating to agriculture, home economics, and rural energy” (Smith-Lever Act, 1914, p. 1). Cooperative Extension provided educational resources in practical applications to improve the lives of people in rural communities who were unlikely to participate in higher education. Sec. 2 of the Smith-Lever Act (1914, pp.1-2) defined the role of Cooperative Extension as follows:

That cooperative agricultural extension work shall consist of giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities and imparting to such persons information on said subjects through field demonstrations, publication and otherwise: and the work shall be carried on in such manner as may be mutually agreed upon by the Secretary of Agriculture and the State agricultural college or colleges receiving the benefits of this Act.

Over the years, the wording has changed and currently reads as follows from the 2002 amendment (Seevers & Graham, 2012, p. A5):

Cooperative agricultural extension work shall consist of the development of practical applications of research knowledge and giving of instruction and practical demonstrations of existing or improved practices or technologies in

agriculture, uses of solar energy with respect to agriculture, home economics, and rural energy, and subjects relating thereto to persons not attending or resident in said colleges in several communities and imparting information on said subjects through demonstrations, publications, and otherwise for the necessary printing and distribution of information in connection with the foregoing; and this work shall be carried on in such manner as may be mutually agreed upon by the Secretary of Agriculture and the State agricultural college or colleges or Territory or possession receiving the benefits of this Act.

The reference in this definition of the work as “and subjects thereto” has long been interpreted to mean the work of Cooperative Extension in meeting the needs of all people and the communities in which they reside (Seevers & Graham, 2012). In addition to improving the lives of individuals in agriculture and home economics, collective value was provided through improvement of rural communities in a broader range of subjects (Seevers & Graham, 2012).

Over the years, Cooperative Extension has been challenged to move from an expert to an engaged model of program delivery (Beaulieu & Cordes, 2014). An engaged model is recommended to make Extension more adept in adopting changing technology, structures and culture (Hibberd, Blomeke, & Lillard, 2013). In addition, this change is recommended to expand access to new audiences (King & Boehlje, 2013) and aid higher education in fulfilling its civic mission (Reed, Swanson, & Schlutt, 2015).

There have also been calls for greater engagement in Higher Education in past decades (Boyer, 2016; Byrne, 1998/2016 ; Rice, 2016) which continue today (Rikakis, 2015; Sandmann, Furco, & Adams, 2016; Sandmann, Saltmarsh, & KerryAnn, 2016). In 1999, The Kellogg Commission described a relationship between Land-grant Universities and communities based on two-way interaction as opposed to a model that emphasized a one-way transfer of knowledge. This report described engagement for the university that went “well beyond extension, conventional outreach, and even most conceptions of public service” (Kellogg Commission on the Future of State and Land Grant Universities, 1999, p. 10). The goals of this new model are to create greater synergy between the resident instruction, research, and Extension missions of the university for the sole purpose of providing “critical resources (knowledge and expertise)” to solve community problems (Kellogg Commission on the Future of State and Land Grant Universities, 1999, p. 10). The model of engagement used by agricultural research and Extension has been suggested as a model that might be followed by Higher Education (Byrne, 2016; Fessler, 1964). Byrne (2016) states that “engagement can address virtually any problem facing society.... Working as equal partners with local organizations, universities bring their expertise to address community educational, medical, environmental, academic, and infrastructural problems and needs” (p. 60).

The Association of Public and Land-grant Universities (APLU) appointed a planning team in November 2015 to outline plans for a task force to consider how public and land-grant universities can increase engagement with community partners to provide “transformational change in our communities and institutions” (APLU Task Force on The

New Engagement Planning Team, 2016, p. 4). One of the issues identified by the planning team for greater exploration by the task force is alignment. The report emphasizes the need for alignment within the university organization related to both their missions and organizational structure. They suggest the engagement or outreach mission is often considered after discovery and teaching missions have been addressed, but perhaps in the engaged institution this needs to be the starting point. With that approach, outreach would be used to identify areas for research and teaching rather than the opposite which has been the traditional pattern.

Cooperative Extension has a long history of engagement with local communities through a structure in which most land-grant institutions provide local offices at a county or regional level. Cooperative Extension can share what it has learned about local community involvement to provide guidance toward greater institutional alignment of engagement. To do this, we must identify and communicate existing strengths and areas of challenge in Extension that can be used moving engagement forward within our universities.

The need for the current research, the audiences that will benefit, the purpose for the study and research questions are provided in the following section. A conceptual framework for this study is developed based on the educational and theoretical approaches, as well as the normative traditions defining faculty work with society as relate to an engaged and expert model of program delivery for Cooperative Extension. This section concludes with definitions pertinent to this project.

Need for Current Research

Calls for Cooperative Extension to change to an engaged model and provide leadership in guiding higher education to do the same are documented as early as the 1960's. The 1961 Smith-Lever Act amendment provided \$700,000 annually to be used in "resource and community development work." (National Research Council, 1995) In the 1963 and 1964 issues, the *Journal of Extension* hosted two articles on how Extension might use these funds to secure its future in a changing society. The first article provided three alternatives Extension might follow to address changes in society (Vines, Watts, & Parks, 1963). The first two alternatives maintained Extension's leadership for "agriculture, home economics, forestry, and subjects related" in both rural and urban areas (p. 242). The second added an area of "educational leadership for community and resource development in rural areas" (p. 242). The third suggested that Extension's scope be expanded to "include *all informal* educational programs in both rural and urban areas and extend educational programs from all colleges of the university" (p. 242). Fessler (1964) analyzed these alternatives and recommended that Extension build on its ability to help people address needs in their local communities, focusing on "strengthening the democratic process (p. 172)."

Vines, Watts and Parks (1963) suggested that Extension should be responsible for all informal education in Universities. In response, Fessler (1964) recommended changes in training of Extension educators and educational approaches to organize people residing in rural communities "to recognize their needs, study the alternative solutions, and . . . carry on the needed educational programs to help attain their goals" (p. 171). Fessler

recommended these changes because he felt that urbanization and declining farm numbers might result in state legislatures placing greater emphasis on urban needs at the expense of rural needs. Fessler suggested that change in local communities demanded “a rethinking of Extension’s entire role and a willingness to make adjustments, no matter how drastic, to better fulfill the needs of all the people.” (p. 172) In addition, Fessler identified the need for the role of research to change to allow Extension to better serve the citizens in broadened subject matter areas. The call for organizational change resulting in greater engagement remains today as society continues to change (APLU Task Force on The New Engagement Planning Team, 2016; Henning, Buchholz, Steele, & Ramaswamy, 2014; Reed et al., 2015).

The Kellogg Commission (1999) referred to university engagement as “institutions that have redesigned their teaching, research, and extension and service functions to become even more sympathetically and productively involved with their communities, however community may be defined” (p.vii). They went on to specify that this engagement extended “beyond extension, conventional outreach, and even most conceptions of public service (p. vii)”. The Commission emphasized the role of partnerships, shared expertise and mutual gains being characteristics of engagement.

Engagement was introduced as a part of the Carnegie classification system for higher education institutions in 2008 (New England Resource Center for Higher Education, n.d.How Is "Community Engagement" Defined? section, paras. 1-2). Carnegie defines community engagement as follows.

Community engagement describes collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.

The purpose of community engagement is the partnership of college and university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity; enhance curriculum, teaching and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good.

The Task Force on The New Engagement commissioned by APLU is charged with providing both definition and justification for greater engagement within higher education (APLU Task Force on The New Engagement Planning Team, 2016). Their work is based on the Carnegie definition, emphasizing the importance of community-institutional partnerships that provide “mutually-beneficial research, teaching, and programs that elevate higher education’s public role (p. 5).”

Although there has long been interest in greater engagement within Cooperative Extension, there does not appear to be a clear definition of what engagement is and how it is achieved. Further, there is no indication of what Extension needs to do internally to make this move. This research was intended to explore how engagement is operationalized in Cooperative Extension at the local level to increase understanding and provide suggestions for future opportunities for greater adoption. Thus, Extension can

become a more active partner in assisting Land-grant universities in adopting greater engagement as well.

Audiences that Will Benefit from the Study

This research was used to develop an operationalized definition for engagement in Cooperative Extension, to identify how engagement is practiced in Cooperative Extension and to identify factors that encourage and discourage engaged practice. This information can be used to support greater engagement within Cooperative Extension, and to consider how this practice within Cooperative Extension might be used as a model to guide greater engagement throughout the University. This study also suggested areas in which resources may be used differently to provide greater efficacy to the Extension organization. Finally, communities will benefit as clientele interact in ongoing programming that solves community problems, strengthens relationships among those involved and increases community resiliency.

Engagement scholarship within higher education and Cooperative Extension will benefit from the study, as it provides a more complete description of how Extension functions to provide engagement for land-grant universities. This study identifies how and why Extension educators are using specific models to better inform Extension organizations as they consider how they might change to engage more effectively with their clientele and communities. This can be used to shape policy, hiring decisions and professional development within Cooperative Extension.

The findings from this study can be used to identify a role and mechanism by which Cooperative Extension can assist the rest of the university in increasing engagement. Cooperative Extension has long emphasized the engagement of stakeholders in providing local context for program delivery. This research is supportive in helping to define the progress and remaining gaps in the move toward greater engagement over the past decades. In addition, this study explores community alignment as related to the charge presented for the APLU Task Force on “The New Engagement” for public higher education (APLU Task Force on The New Engagement Planning Team, 2016). This planning task force was established in 2015 to set the stage for establishing an additional task force to renew interest in engagement through emphasis on “The New Engagement” of higher education. The planning team identified the charge for the future task force as follows.

Consistent with our commitment to achieve the public good through higher education and to more fully realize benefits for society, the Task Force will define and justify a call to action for the fully engaged institution.

This call will focus on a broad spectrum of engagement scholarship. Across the spectrum, engagement efforts target social and economic needs consistent with our public education mission. They engage APLU institutions with communities in mutually-beneficial research, teaching, and programs that elevate higher education’s public

role (APLU Task Force on The New Engagement Planning Team, 2016, p. 5).

Among the issues this task force hopes to explore in addition to alignment, are the progress and remaining gaps related to changes from the 1999 Kellogg report to today as well as how engagement has emerged and is institutionalized within our universities.

This study explored the status of Cooperative Extension relative to calls for greater engagement. The study defined engaged and expert models of program delivery from the perspective of Extension professionals at the local level. When, why, and how do these professionals employ these models in their work and which is most prevalent? Finally, this research provided a summary of the drivers that encourage change to an engaged model along with the barriers that prevent this change. These findings can be used to gain understanding related to engagement in Cooperative Extension to identify opportunities for incorporation of greater engagement throughout higher education.

Purpose

The purpose of this study was to define engagement within the context of a state Cooperative Extension organization, to increase understanding of how and why engagement is implemented by Extension educators at the local level, and to gain insight into barriers and drivers associated with the adoption of an engaged model for program delivery. This information will be useful to increase understanding of the engaged model of program delivery for Cooperative Extension. This information can be used to increase

engagement within Cooperative Extension and between higher education and local communities. This study was unique in that the primary emphasis was placed on engaged and expert models of program delivery at the local level, determining how and why each was used and developing recommendations for how organizational change might encourage or deter use of these models.

Research Questions

This research sought to increase understanding of how engaged and expert models of Cooperative Extension program delivery were implemented and why they are used.

Three specific research questions guided this study.

1. How is an engaged model of program delivery defined within Cooperative Extension?
2. How is engagement implemented and more specifically when and why is an engagement model used as opposed to an expert model?
3. Are there barriers and drivers associated with Extension's move towards a more engaged model?

Building a conceptual framework for engaged and expert models of program delivery for Cooperative Extension

This section combines the educational approaches, appropriate theory and normative traditions that define the work of faculty, including Extension professionals in society to develop a conceptual framework in which this research is situated.

Educational approaches.

Extension plays many roles in meeting community needs in a representative role for the university. There are activities associated with both the expert and engaged models that co-exist within our modern programs. Merrill Ewert, previous director of Cooperative Extension at Cornell University, developed a model that defined the educational approaches of Cooperative Extension in terms of content and process as diagrammed by Franz and Townsend (2008) (See Figure 1-1). These educational approaches provide a framework for the activities that are carried out by contemporary Extension programs.

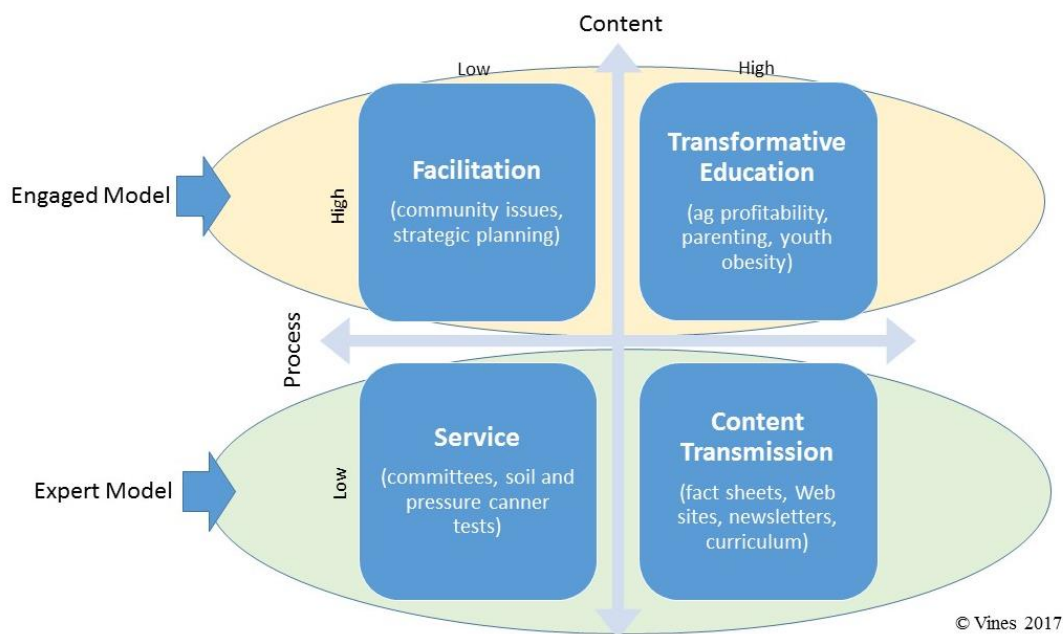


Figure 1-1. The educational approaches of Merrill Ewert as published by Franz and Townson (2008) adapted to include reference to the engaged and expert models of program delivery. Model used with permission.

Ewert's educational approaches demonstrate the multiple ways that a University, through Cooperative Extension, interacts with the local community. Defining

engagement as emphasizing process more than content, the educational approaches most prevalent in an engaged model of program delivery for Cooperative Extension are primarily those approaches that involve facilitation and transformative education. The educational approaches that are low in terms of process (service and content transmission) still provide means of interaction between the University and the community but do not require the same level of engagement, or two-way interaction between the community and the university. These methods, low in process, are most heavily used in the expert model of Extension program delivery.

Facilitation and transformative education are very closely related. Facilitation is considered an intervention that allows groups or communities to share a wide range of possible approaches in a contentious situation. The role of the facilitator is to create a comfortable environment so that all voices and perspectives are heard (Dillard, 2013; Franz & Townson, 2008). This is a role Extension educators often fill because of their close connection and respect in the community. The role of the Extension educator in facilitation is primarily focused on the process that allows them to gather as many perspectives as possible on the topic rather than providing educational content (Franz & Townson, 2008).

The objective of transformational learning is for people to change their perspectives. Perspectives are defined as either being related to knowledge, language or sense of well-being (Kitchenham, 2008). This is based on Mezirow's transformational learning theory (Franz, 2007; Kitchenham, 2008; Merriam, Caffarella, & Baumgartner, 2007). Mezirow's constructivist theory includes a series of processes individuals go

through to change their perspective. The process requires interaction with others and a willingness to consider their perspectives to replace previous beliefs.

Cooperative Extension has historically provided many services to clientele, (e.g. soil testing and pressure canner testing) (Franz & Townson, 2008). Franz and Townson also include Extension educator's service on local committees in this role. Lynton (1996) referred to the university as providing "many kinds of routinized services, from soil testing. . . and standard surveys . . . to the dissemination of informational material and training sessions in certain skills provided by a variety of units" delivered "either *pro bono* or on a fee-for-service basis" as non-scholarly means of conducting outreach (p. 38). Lynton (1996) classified this work as "valuable," but non-essential and mentions the opportunity for outsourcing some of the services that are more "repetitive" in nature (p. 38). In many cases, the services are based on technology that has been in place for decades and is stable and routine. Many of the services and the results they provide are mechanized.

Educational programming in Extension uses both pedagogical and andragogic approaches. Programming may occur in either face-to-face or online audiences. Content transmission, to respond to clientele questions or increase knowledge emphasizes the role of the expert in a central role using the pedagogical approach to education. Transformative education and facilitation emphasize a learner centered approach based in andragogy.

Theoretical approaches to Cooperative Extension program delivery.

The traditional theory used to describe the work of Cooperative Extension has been Rogers' 1995 theory for the diffusion of innovation (Foley, 2004; Franz, Piercy, Donaldson, Richard, & Westbrook, 2010; Seevers & Graham, 2012). This theory is based on the concept that education targets innovators to adopt innovations that improve processes or products (See Figure 1-2). Based on the success of the innovators, others that are more risk-adverse will either adopt or reject the change (Rogers, 1995). The success or failure of the innovators then drives adoption decisions by other members of the community. The other members of the communities are classified by stages of likely acceptance of innovations: early adopters, early majority, late majority, or laggards. Innovators may also participate in re-invention of the innovation to better meet local needs, which may in turn impact the adoption decisions of other community members. The end goal is easily evaluated through determination of how many people have adopted the innovation. Impact can be calculated based on the adoption and estimates of what value that adoption has on both an individual and societal level.

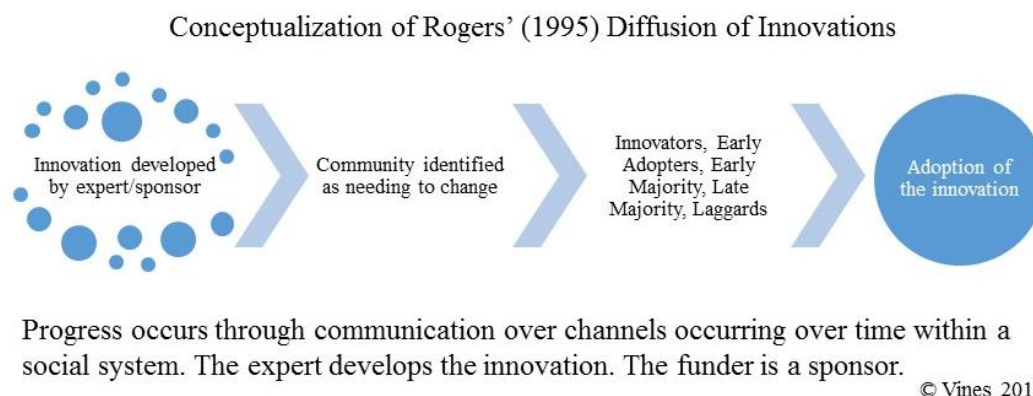


Figure 1-2. The expert model of program delivery based on Rogers' (1995) diffusion of innovations theory. In this model, Extension experts are involved in development of the innovation and in management of the communication channels.

In Rogers' (1995) model, he differentiates between centralized and non-centralized diffusion decisions. The centralized approach utilizes a hierarchy where decisions about technologies or innovations to be promoted are made in a top-down approach which in the case of Extension would begin at the university. The recommended change is then provided to a change agent or Extension educator, who works in the community to encourage adoption of the change. The decentralized diffusion system has a flat structure where a local unit determines the technology or innovation to be promoted. Then, local innovators interact directly with adopters to customize and enact adoption of the innovation. In the decentralized model, power is shared within the local system. Rogers defined diffusion in the decentralized system as being "spontaneous and unplanned." Rogers saw the decentralized diffusion system as being "most appropriate . . . for diffusing innovations that do not involve a high level of technical expertise, among a set of users with relatively heterogeneous conditions" (p. 369). The adoption of the innovation is based on what Rogers described as "a

convergence type of communication, in which participants create and share information with one another in order to reach a mutual understanding” (p. 370).

Rogers’ (1995) theory aligns well with an expert model of Extension program delivery. This model describes the role that Extension was designed to play in taking research and education from the University to the community. Rogers’ theory emphasizes the adoption of identified technologies and innovations. Focusing on technology and innovation works well when trying to resolve a simple challenge. Rogers’ model was developed to help describe how adoption could be achieved with cultural sensitivity. However, Rogers’ model does not take into consideration the unintended consequences that may occur because of adoption of the innovation.

The theory of collective impact has been used to describe work in adult education intended to strengthen communities as being consistent with engaged models of Cooperative Extension (Niewolny & Archibald, 2015). Collective impact is used to solve complex, social issues involving multiple parties and provides for social change that cannot be achieved by the limited activities of individual organizations (Figure 1-3). Five conditions are identified as being important for the achievement of collective impact. These include “a common agenda, shared measurement systems, mutually reinforcing activities, continuous communication, and backbone support organizations” (Kania & Kramer, 2011 The Five Conditions of Collective Success section, para 1). This theory better defines work using an engaged model. Strong local connections and networks of resources help communities develop solutions. Communities and the university, through Cooperative Extension, share responsibility for identifying both problem and the

solutions. The breadth of resources available from the University makes it a desirable partner in addressing any conceivable challenge.

Conceptualization of Collective Impact (Kania & Kramer, 2011)

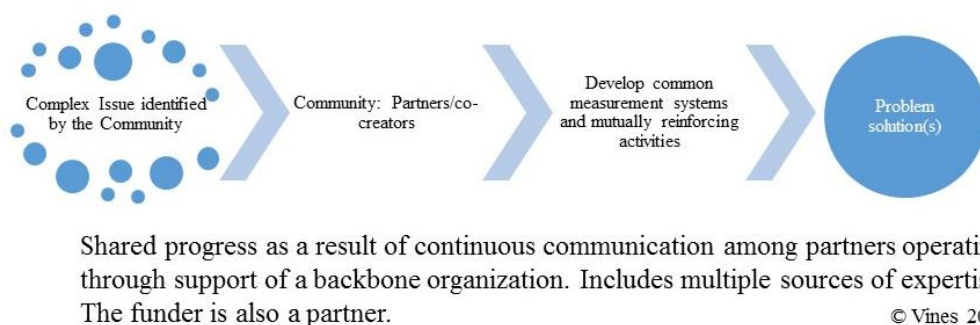


Figure 1-3. The engaged model of program delivery based on Kania and Kramer's collective impact theory. In this model, Extension serves as a backbone organization, supporting the processes and developing networks between community, the University and other partners.

Normative traditions for faculty work in society

Peters, Alter, and Schwartzbach (2010) identified the service intellectual as one of four normative traditions through which academics conduct their work in society. The primary role of the service intellectual is to respond to questions and provide services (Peters, Alter, & Schwartzbach, 2010). Peters, Alter, and Schwartzbach define the public role of faculty in this tradition as “limited to the provision of facts, knowledge, technical assistance, and technologies” (p. 52). The service intellectual tradition is consistent with the role of Extension professionals as change agents using the diffusion of innovations theory.

A second role identified was the action researcher/public scholar/educational organizer (AR/PS/EO) tradition (Peters et al., 2010). The AR/PS/EO tradition values shared expertise and two-way communication between the institution and local citizens in identifying needs, developing and implementing programming to address those needs and evaluating achievements (Peters et al., 2010). These attributes define engagement (Beaulieu & Cordes, 2014; Bridger & Alter, 2006b; Byrne, 1998/2016 ; Sandmann, Furco, et al., 2016). Their use in connecting the local community to the University exemplifies the use of an engaged model of program delivery and provides mutual benefits to all parties (Bridger & Alter, 2006b; Byrne, 1998/2016 ; Peters, Jordan, Alter, & Bridger, 2003; Sandmann, Furco, et al., 2016).

Rogers (1995) suggested that organizations may combine “elements” of the centralized and decentralized models of diffusion to create a hybrid diffusion system. In reality, Cooperative Extension goes beyond a hybrid diffusion system. Instead the modern Cooperative Extension model for educational program delivery is a mixture of both engaged and expert models, collective impact and diffusion of innovations, occurring simultaneously, depending on the skillset and inclination of the professional and the needs of the community. This variability creates a challenge in how we define and communicate the work of Cooperative Extension, including the resulting outcomes and impacts to Universities as they work to become more engaged.

The conceptual framework in which this research is situated

The educational approaches, theories and normative traditions are combined to provide a conceptual model for expert and engaged models of Extension program delivery. The concept for the expert model of program delivery (See Figure 1-4) emphasizes one-way communication as signified by the one-sided arrows through which communication is directed through specific channels to achieve the adoption of innovations (Rogers, 1995). Clientele are defined by their profession or position (i.e. crop producer, homemaker, 4-H member, 4-H volunteer, etc.). Motivation for participation is based on individual improvement, whether it is developing their skills or improving profitability/sustainability of a business (Franz & Townson, 2008). The participant's primary role in the educational process is adoption or re-invention of innovations based on their observation through program activities or demonstrations (Rogers, 1995). Support comes from governmental and non-governmental agencies interested in sponsoring the work. Measures of accountability come through feedback mechanisms related to clientele change, whether in terms of short, medium or long-term change. Impact is difficult to measure and is often calculated through extrapolation of findings and expected community change based on individual change. The normative tradition adopted by the faculty member provides them with an identity as the expert, delivering solutions that may or may not address identified needs of the individuals in the community (Peters et al., 2010). The research mission drives the development of innovation, which is then provided through service to clientele and education to students (APLU Task Force on The New Engagement Planning Team, 2016). The role of the local

Cooperative Extension educator is the visible representative of the expert University, managing the communication channels responsible for the adoption of the innovation (Rogers, 1995).

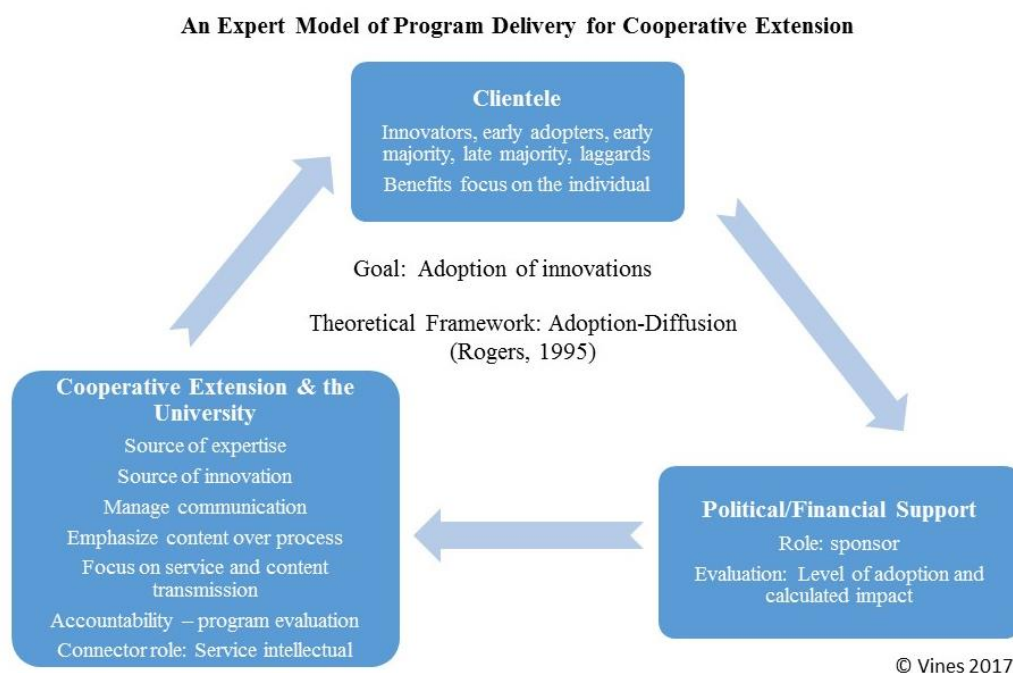


Figure 1-4. Conceptual framework for the expert model of program delivery for Cooperative Extension

The concept for the engaged model of program delivery (See Figure 1-5) emphasizes two-way communication as signified by the double-headed arrows through which communication continually flows as community members, funders and representatives of Cooperative Extension and the community work together to identify problems and develop solutions (Kania & Kramer, 2011). Clientele are communities composed of diverse individuals with common interest in solving complex societal issues (Franz & Townson, 2008). All participants are valued as sources of expertise (Peters et al., 2010). Funding and support come from individuals and organizations that serve as

partners and co-creators, sharing an interest in solving a common goal (Kania & Kramer, 2011). Impact at the community level is the primary focus of the model and participants work together to identify measures of success. The role adopted by the Extension professional allows them to provide support in bringing people together (Peters et al., 2010). In this model, the service mission drives the development of research goals that are identified at the local community level (APLU Task Force on The New Engagement Planning Team, 2016). Research, education, and service are combined to produce scholarship in which the community plays an integral role and achieves greater benefit. Students learn through their hands-on involvement in real life, real time experiences, both in and out of the classroom.

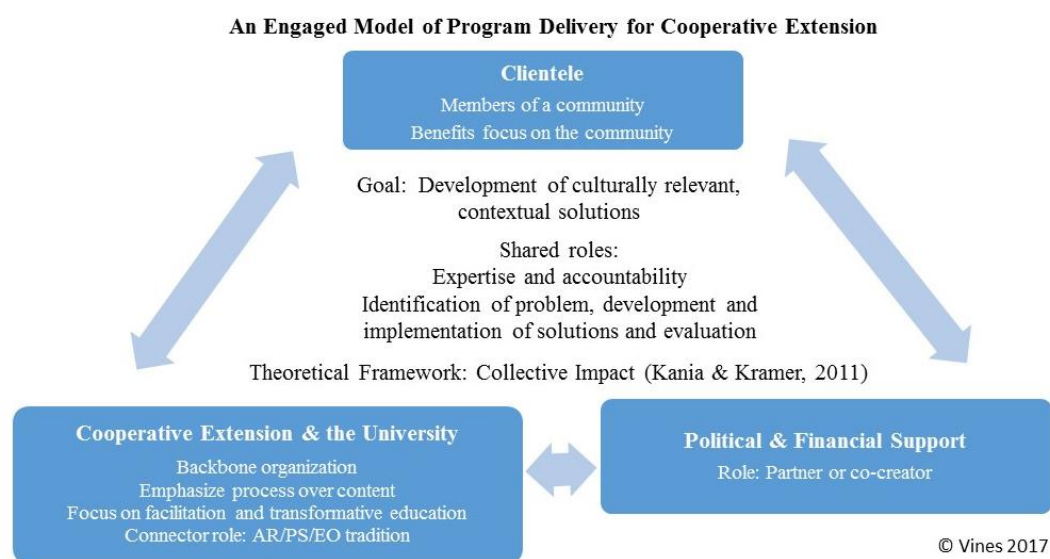


Figure 1-5. Conceptual framework for the engaged model of program delivery for Cooperative Extension

The primary areas in which these models have obvious difference are in communication direction, identification of expertise, definition of clientele, goals,

outcomes and impact measures, the roles of the Extension educators, clientele and funders, and the relationship between research, education and service within the University. These translate into Extension program characteristics that may be used to promote appropriate use of the models. Program characteristics differ based on program objectives or purpose, the roles of the community, Cooperative Extension and funders, and sources of expertise. These factors help to determine whether an engaged, process-focused or an expert, content-focused educational approach is necessary. These areas will be the primary focus in developing the definition of engaged and expert practice and confirming the use of these models at the local level. Semi-structured interviews with Extension educators at the local level will identify when, how and why these models are used as well as barriers and drivers to their use (See Figure 1-6).

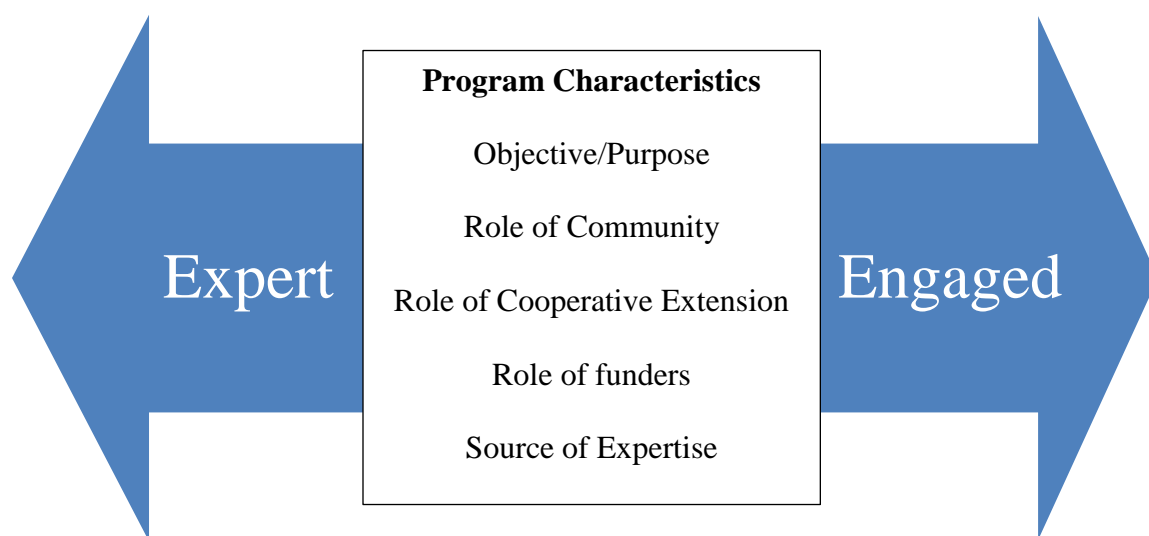


Figure 1-6. Conceptual framework identifying program characteristics that may determine use of either the expert or engaged model of program delivery

Definitions

Andragogic delivery methods - These methods are consistent with active learning approaches used in traditional classrooms and online environments that encourage discussion and experiential learning. The learner is the focus and educational programming is based on their experience and individual needs. Audience size may vary from one to an infinite number of people.

Community – A community is defined as either a place-based or virtual group of individuals that share common interests. They may convene in numerous ways, including face-to-face and online environments.

Delivery methods - Techniques and teaching approaches that an Extension educator or specialist may use to involve specific audiences in the process of learning. These may include pedagogical and andragogic approaches.

Educational activity – A one-time, individual activity intended to achieve short or medium-term outcomes. Educational activities are bundled together to create educational programs. These may use a mixture of delivery methods and may be offered in an online or face-to-face environment. An educational activity may also be referred to as a learning experience.

Extension educator – The term Extension educator is used to identify individuals working for Cooperative Extension at the local level. In some states these are referred to as agents and in other states they are referred to as Extension educators.

Engaged model of program delivery – The engaged model of program delivery, as defined at the outset of this project, is characterized by community involvement in all

aspects of program development, sharing in the identification of issues to be addressed, developing a process for implementation and development of knowledge and evaluation. Expertise and learning processes are shared.

Extension professional – This is a broad term that includes individuals from a local to a University level that have responsibility for educational programming through Cooperative Extension. This includes Extension educators or agents and specialists. It may also include program assistants and administrators, such as district or regional directors, depending on their responsibilities. Extension organizations differ on which of these are also considered University faculty.

Extension directors – Extension directors are the administrative heads of Cooperative Extension as administered through 1862 land-grant institutions. The administrative head for Cooperative Extension in 1890 land-grant institutions is referred to as the Extension administrator. For consistency, administrative heads for all types of Extension organizations are referred to as Extension directors throughout this study.

Extension program – An Extension program is a collection of activities intended to achieve an overarching educational goal associated with specific outcomes based on program objectives. Appropriate outcomes for the Extension program are long-term outcomes and impact.

Local level – The smallest unit of programming coverage is referred to here as the local level. This varies by state and often within states and is generally assigned through the Extension educator's job description. Possibilities for a local assignment for an Extension educator may be county, multi-county, regional, state, or multi-state.

Long-term outcomes or impact – Long-term outcomes or impact are associated with benefits achieved at the personal level and by society because of behavior changes associated with the program.

Medium-term outcomes – Medium-term outcomes are associated with behavior change at the individual level.

Pedagogical delivery methods – Pedagogical program delivery methods refer to the techniques and teaching approaches that an Extension educator or specialist may use to deliver content or information to specific audiences. In this approach, the focus is on the teacher. Content is developed and delivered based on the teacher's interpretation of what needs to be learned. The learner is responsible for applying the information to their specific situation. In the traditional classroom, these generally consist of lecture or recitation followed by a prescribed time in which questions may be presented and answered.

Program planning process – The program planning process consists of all activities from identification of needs through evaluation. The process is ongoing through the life of the Extension program.

Short-term outcomes – Short-term outcomes are associated with increases in knowledge, awareness, skills and aspirations as defined by Bennett and Rockwell (Radhakrishna & Bowen, 2010).

Specialist – A specialist is someone with a well-defined, narrow area of expertise. They are responsible for remaining current in that subject matter area and making their expertise available for use throughout their area of assignment.

Chapter 2 - Literature Review

Foundations of Cooperative Extension can be traced as far back as the Chautauqua movement originating from the University of Chicago in the 1870's offering adult education in a resort environment (Geiger, 2005). Seaman Knapp is credited with developing practical methods of instruction through demonstration work in agriculture at the Iowa State College in 1879 (Seevers & Graham, 2012). Correspondence courses emerged as a teaching method in 1883. Farmer's Institutes began developing in the 1890's, existing in all but three of the established states by 1899 (Seevers & Graham, 2012). Rutgers College offered their first agricultural Extension courses in 1890 and established their first agricultural extension program in 1891 (Seevers & Graham, 2012). By 1899, the Jessup Wagon was developed to take education to the people, carrying "farm machinery, seeds, dairy equipment and other materials to demonstrate improved methods of agriculture to Black farmers" (Seevers & Graham, 2012, p. 27). Today, Extension continues to use multiple methods of program delivery including newer technologies associated with social media and mobile devices (Gharis, Bardon, Evans, Hubbard, & Taylor, 2014; Vines, Blevins, & Raney, 2013; Vines, Jeannette, Eubanks, Lawrence, & Radhakrishna, 2016).

The early, expert model of information delivery for Cooperative Extension developed to provide non-biased, research-based information to rural citizens. This system was the result of several pieces of key legislation increasing access to both education and research to rural citizens. The original Land-Grant Act of 1862 provided federal funds to establish colleges "to elevate the practical and particularly agricultural,

education to the level of liberal, collegiate studies” (Geiger, 2000, p. 154). Applied agricultural research evolved from the 1887 Hatch Act through the development of Agricultural Experiment Stations (Geiger, 2004; Williams, 1991). The Land-Grant Act of 1890 provided regular appropriations for Land-Grant Colleges and expanded the programmatic focus to include arts and sciences on the condition that equal access was provided to all, regardless of race (Geiger, 2005; Seevers & Graham, 2012; Williams, 1991). The 1914 Smith-Lever Act created the Cooperative Extension Service and institutionalized a mechanism for the delivery of scientific findings derived from colleges of agriculture for practical application in everyday life to audiences who were unlikely to attend college.

Cooperative Extension arose from a history of agricultural societies, domestic associations and 4-H programs which preceded the passage of the Smith-Lever Act (Seevers & Graham, 2012; Sutphin & Hillison, 1999). Subsequent amendments of the Smith-Lever Act expanded the scope of subject matter which could be addressed and provided Hatch and Smith-Lever status to new U.S. states and territories to increase access for specific audiences with unique needs (Seevers & Graham, 2012; University of Florida, 2015). Since the passage of the 1914 Smith–Lever Act, Extension has evolved to meet the changing needs of people, communities and the society in which it exists. However, as Seevers and Graham (2012) state, “Extension has changed more in methodology than philosophy throughout its history” (p. 38). As early as 1963, concern was raised that with the reduction in the number of farmers and increasing urban influence on state legislatures, Cooperative Extension needed to identify new approaches

to better meet the needs of society as a whole (Fessler, 1964; Vines et al., 1963). Indeed, Oregon Cooperative Extension lost half of its traditional audience between 1986 and 2006 (King & Boehlje, 2013). The challenge remains - increasing access of Extension to all of society, in a manner that addresses a multitude of challenges and provides relevant and timely responses.

At its inception, the focus of Extension was on the development and delivery of “non-biased, research-based” information. This was appropriate since the primary purpose of the organization was providing research-based information to clients in rural communities. The goal was to improve agricultural productivity and the rural communities in which it occurred. The information being developed through research was previously non-existent and the clientele base to which it was provided did not have any other means of access. Today there is no shortage of information on a broad range of topics and people have many choices related to how they may access information.

Over time, Extension’s role has changed. Extension now serves a much wider audience in a much broader range of subjects. Today, Extension focuses as much or more of its efforts in helping communities address complex issues. While education is still a part of this effort, the delivery of education has become a shared responsibility between the communities and the Extension professional to gain understanding and develop solutions within a local context. These changes in expectations and clientele require more of a philosophical change as Cooperative Extension works to reach different audiences and provide different types of support than originally intended in 1914. This change is critical if Cooperative Extension is to remain relevant and provide viable solutions today.

Extension programming is typically organized into program areas. The original program areas were agriculture and domestic sciences, followed by youth. The emphasis on agriculture answered the need for new cropping methods to adapt to the westward expansion of the population, into areas with different cropping conditions as a result of the 1862 Homestead Act (Seevers & Graham, 2012). After originating in 1895 in Michigan, by 1903 fifteen states offered “domestic science associations” in conjunction with their Farmer’s institutes introducing Extension programming for women (Seevers & Graham, 2012; Sutphin & Hillison, 1999). These associations developed into “neighborhood study clubs, homemaker clubs, farm women clubs and home bureau” (Seevers & Graham, 2012, p. 33). Youth programming grew out of agricultural schools and was intended both for youth education and as a conduit to provide education for the parents of the participating youth (Seevers & Graham, 2012; Sutphin & Hillison, 1999). Primary topics for the youth programs included corn production, tomato production, and canning. Over the years, the agriculture program area has expanded to include different aspects of livestock and crop production in addition to home horticulture and other areas. Domestic sciences evolved into the program area of Consumer and Family Sciences, which covers everything related to food and nutrition to human development. 4-H and youth development programs provide educational programming emphasizing experiential learning covering a wide range of educational programs, development of life skills and Science, Technology, Engineering and Math (STEM) education along with leadership development. The program area of community development was recognized in 1955, based on the Country Life Commission report of 1909 chaired by Liberty Hyde Bailey

from Cornell (Beaulieu & Cordes, 2014). Natural resource programs developed in some places in conjunction with the agricultural program and in other places as a separate program area originating in the early 1990s (Fridgen, 1995). Each state determines the program areas encompassed by their programming as directed in the original legislation – “this work shall be carried on in such manner as may be mutually agreed upon by the Secretary of Agriculture and the State agricultural college or colleges . . .” (Smith-Lever Act, 1914).

Extension teaching methods employ both andragogy (Knowles, 1980) and pedagogy, depending on the clientele and purpose. There are four educational approaches or roles attributed to Extension: service, content transmission, facilitation and transformative education (Franz & Townson, 2008). Extension education often uses andragogy, favoring learner-centered approaches with the Extension professional serving the role of facilitator or guide as clients encounter challenges. The learner and teacher share responsibility for the learning, which is based on the learner’s previous experience and need for information for practical application. The learning experience itself contributes to the learner’s ability to use newly acquired knowledge. The need for the learner to gain information is often grounded in a current problem or need and emphasizes personal improvement. The teacher in this context provides scenarios and tools that the learner can use for their educational gain. From a pedagogical perspective, there are also many times that Extension may provide education or programming to an individual or group in a more teacher-centered approach.

The tradition of taking the University to the people has been a hallmark of Extension (Byrne, 2016). Most state Extension organizations have offices located in or near every county. Typically, there is a volunteer leadership structure that may serve in an advisory capacity or simply assist in program implementation. This structure allows Extension to be adaptable and responsive in addressing local needs. Local buy-in and ownership are critical in carrying out the work of Extension (Place, 2007).

Today's audience for Cooperative Extension can be interpreted as all of society without limitation to specific professions. The purpose for the organization has expanded beyond the individual to include collective success at the community, state, national or even international level. McDowell (2003) refers to the Land-grant principle, stating that it:

. . . asserted that no part of human life and labor is beneath the notice of the university or without its proper dignity. Both by virtue of the character of their scholarship and whom they would serve, the Land-Grant universities were established as people's universities (p. 33).

Collectively, the 1887 Hatch Act and the 1914 Smith-Lever Act “institutionalized an obligation in the land-grant system to directly connect the work of academic professionals to the work and interest of local constituencies and communities, individual states, and the nation as a whole” to achieve educational and democratic purposes (Peters et al., 2010, p. 39). Applying this principle today calls for change in the way Cooperative Extension identifies audiences and the type of outcomes it seeks to achieve. Expertise is found at all levels and from numerous sources within local communities. People are more

trustful and receptive of solutions they help to develop (Bandura, 1986; Bridger & Alter, 2006a). Cooperative Extension must redefine its role to become more effective in recognizing and connecting these sources of expertise in ways that address societal needs. To do this, many argue that Cooperative Extension must replace its expert model with a model of engagement (Beaulieu & Cordes, 2014; Hibberd et al., 2013; King & Boehlje, 2013; McDowell, 2003; Reed et al., 2015).

What Does Engagement Mean?

Engagement means moving from emphasis on distribution of information to emphasis on providing access to the learning process, from a system that focuses on supply to one that emphasizes demand (King & Boehlje, 2000; Reed et al., 2015). The need for change is echoed from a global perspective with emphasis on “developing networks, organizing producers, facilitating access to credit, inputs and output services, convening innovation platforms, promoting gender equality, facilitating knowledge management, supporting adaptation to climate change, and disseminating new knowledge through training and demonstrations” (Global Forum for Rural Advisory Services, 2013, p. 2). To accomplish this change, we must first focus on the needs of the consumer and community rather than on the areas in which we currently have expertise. Fessler (1964) called for the agricultural Extension service to follow the role identified in the Rural Areas Development program to organize “the people to recognize their needs, to carry on the needed education programs to help attain their goals . . . meeting the needs of the people wherever they live” (p. 171). In many states, Cooperative Extension has a

tradition of bringing local volunteers together to identify needs. Needs are identified and sent to the university where a program is developed to meet the needs.

What is different in the engagement model is that needs identification is not the only local responsibility. Once the needs are identified, those involved in identifying the need are also responsible for determining potential solutions, working to implement them and continually evaluating their progress in meeting the need. This is an approach that has been successfully demonstrated. Trained facilitators have worked to guide communities as they explore complex issues through use of participatory approaches that emphasize the importance of local connections and inclusion of diverse perspectives (Gillis & English, 2001; Peters et al., 2010).

Cooperative Extension can aid in strengthening the functioning of our democratic society (Beaulieu & Cordes, 2014; Bridger & Alter, 2006a, 2010; Reed et al., 2015). This is possible by embracing a role of encouraging inclusion of diversity in local communities and in providing preparation of clientele for civic engagement (Brennan, 2008). The expert model of delivering unbiased, research-based information emphasized delivery of information that was available and non-controversial or apolitical. There was a one-way exchange of information. Cooperative Extension in the expert model provided a one-size-fits all response; and it was left to the local client, possibly with the assistance of an Extension educator to decide what, if anything, the response contributed to their specific problem. The needs identified by clientele are increasingly more complex and multi-faceted, known as “wicked” problems (Bridger & Alter, 2010). With an engagement model, a two-way exchange replaces the one-way model focused on

information delivery in the expert model with the intention of bringing about community resolution to the problem (Bridger & Alter, 2006a; Byrne, 1998/2016). Instead of the university providing the solutions, they become one of many sources of expertise represented at the table (Brennan & Israel, 2008). There is no clear right or wrong solution, but the emphasis instead is on what solution works best for the individual community. A solution in one community often will not work in another community.

Harwood (2012) conducted a series of eleven focus groups in major U.S. cities. He reported that people find politics “largely irrelevant,” feel a loss of confidence in themselves, each other, and the country to identify and address community needs, are unable to identify leaders they can trust and feel the country suffers from a “broken moral compass” because of too much emphasis on financial profitability. To restore citizen’s confidence in themselves, others and society, Harwood suggested the need for the development of a “new path” which began with opportunities for interaction and development of trust among citizens as they took on local issues in an inclusive way, respectful of all involved and celebrated even small scale success. This sounds a lot like the “open and action-oriented relationships with communities,” which Reed et al. (2015) consider to “have been a century-long hallmark of Extension” (p. 3).

An engaged model of Cooperative Extension allows for greater connectedness across the three missions of the land-grant university: Extension, academic instruction and research. In his 1998 article calling for a culture change to provide greater engagement throughout Higher Education, Byrne (1998/2016) refers to engagement as both being “outreach and ‘inreach’ into the University” (p. 55). Rarely is engagement in

Extension mentioned without mentioning the benefits to be provided to students and research programs in higher education. Engagement in Extension provides opportunities for students to learn in real-time and real-life settings. Research becomes alive as community residents become actively involved in identifying the situation and possible solutions. Talk about “public scholarship” is not mainly about speaking to or writing for public audiences. “Rather, it is creative intellectual work that is conducted in the context of public settings and relationships, facilitating social learning and producing knowledge, theory, technologies, and other kinds of products that advance both public and academic interests and ends” (Peters & Alter, 2010, p. 255). In these relationships, everyone has a responsibility to ask questions and everyone gains knowledge and shares in the results (Byrne, 1998/2016).

Many suggest that the benefits of engagement with the Cooperative Extension system should also be extended and will provide great benefit through higher education as a whole (Kellogg Commission on the Future of State and Land Grant Universities, 1999; King & Boehlje, 2013; McDowell, 2003; Mitchell & Gillis, 2006; Peters & Alter, 2010; Reed et al., 2015). Fear & Sandmann (2016) call for a “second-wave movement” towards engagement in Higher Education. They suggest this effort will require greater institutional change and be driven more externally than internally. They state “We believe trauma in the system is too severe for modest change. Bold action will be required. The system is in crisis. Overhaul is needed” (p. 123). This change will focus more on the public benefit rather than institutional benefit and will integrate all missions of higher education as defined in the original land-grant universities.

This presents an opportunity for Extension to provide leadership in maintaining competitiveness and value of public universities and higher education in general (King & Boehlje, 2013; McDowell, 2003). This can be useful in expanding the types of expertise that may be incorporated into community discussions. For example, the *American Journal of Preventative Medicine* published an article in 2009 in which an administrator at the University of Kentucky expressed interest in the development of a “Cooperative Medical Extension Program” which would provide “medical care agents” in local Extension offices connecting community health practitioners to the academic medical school (Scutchfield, 2009). Scutchfield based his interest on his involvement with multi-disciplinary projects connecting the schools of medicine to other colleges in the land-grant university in which he worked. Community health issues are but one example of the areas in which greater engagement through Cooperative Extension and higher education can work with communities to provide long-term benefits.

The 1946 report on the Theory of General Education by the Harvard Committee provides a strong basis for civic engagement of higher education which it recommended be achieved through general education (The Harvard Committee, 1946). The report states that education in a democracy to prepare students for vocations is not sufficient and that general education is necessary to prepare for “the general art of the free man and the citizen (p. 54)” in self-governance with responsibility for the management of the community. The Kellogg Commission Report of 1999 emphasized the need for universities to go “well beyond conventional outreach, and even most conceptions of public service” (p. vii), providing two-way interaction between the University and

communities so that students are prepared for life and can work to provide solutions to community problems. Well-designed, service learning components of academic courses enhance learning and improve future civic engagement for students (Pascarella & Terenzini, 2005; Sax & Astin, 1997).

Skills and Attributes of the Professional in an Engaged Model

There has been much discussion on the changing roles of Extension professionals. The Extension Committee on Organization and Policy (ECOP) represents Cooperative Extension on the Association of Public and Land-grant Universities (APLU) Board on Agriculture Assembly (Association of Public and Land-grant Universities, 2014). In 2013, ECOP conducted a series of studies to identify the skills and attributes required for 21st Century Extension Professionals to be successful in an Extension changed by use of technology, changing venues, changed culture and organizational structure (Hibberd et al., 2013). The study used a mixed methods approach including a review of job postings, and a series of interviews with “successful Extension professionals” followed by a survey of Extension directors and administrators serving on ECOP. The committee differentiated skills as things that could be learned. Skills were identified as being organizational skills for program planning and possibly evaluation, knowledge base and subject matter skills, written and oral communication skills, team skills and effective teaching skills. Attributes were defined as innate abilities or qualities. The attributes that the committee identified as necessary were those of the engaging personality with good listening skills, being flexible, adaptable and willing to change, maintaining a positive outlook and being

optimistic about the future, having a passion for Extension and helping others, having a high personal standard of excellence and being able to operate with minimal guidance.

In the ECOP study on 21st Century Extension professionals (Hibberd et al., 2013), focus groups with 33 highly effective Extension professionals prioritized skills or attributes most useful in conducting their work.

1. Effectively engages others
2. Adaptable to changing needs, circumstances, or opportunity
3. Good communicator/listener
4. Excellent organizing skills - ability to organize an event, program, learning environment, provide tools so that when people come in everything is ready and everything works
5. Positive outlook/optimistic outlook
6. Strong knowledge base/subject matter expertise
7. Passion for Extension and helping others

The results of a related survey with 49 Extension administrators are listed below, identifying the number of administrators that selected each item as important skills for Extension professionals.

1. Exhibits a high personal standard of excellence - 42
2. Effective written/oral communicator - 39
3. Builds and sustains strong interpersonal relationships - 37
4. Operates with minimal guidance - 34
5. Understands how to be an effective team player - 30
6. Effective teacher - 26
7. Can engage stakeholders, learners and decision-makers in meaningful conversations - 23

What was noted in this study was the relative unimportance of subject matter expertise for Extension professionals as compared with skills in attributes in areas that might be beneficial in operating in an engaged rather than an expert model of program delivery. Changing from an expert to an engaged model was not formally identified in the

study. However, during a webinar in which the results were presented, a participant mentioned this change (Hibberd et al., 2013). The participant posted in the chat pod,

I am curious about the use of the term ‘teacher’ which implies an expert model. Extension today is more of an engagement model -- helping people recognize vexing problems and offering the knowledge, motivation, and skills to make positive change.

Chuck Hibberd, Dean and Director of Extension at the University of Nebraska-Lincoln, who was facilitating the webinar agreed with the statement and encouraged the audience to think about effective teaching, not from an expert model where the teacher is in the front of the classroom, but more someone skilled in more modern teaching techniques that engage learners such as collaborative learning, group learning, and shared discovery. He emphasized the need for continuous engagement to create more rich and robust learning environments. When another participant suggested that teaching be changed to facilitation, Hibberd responded favorably if they emphasized active, rather than passive facilitation.

Interviews with administrators at Washington State emphasized the importance of “strategic hiring . . . carefully choosing employees based on a blend of skills, experience, and motivation” (Mitchell & Gillis, 2006). While the ECOP study emphasized skill in a subject matter area, the Washington State study emphasized value in hiring what they referred to as “Educational Generalists” or Extension educators that balance expertise in a subject area with the ability to facilitate “educational activities in areas beyond their specialization” (Mitchell & Gillis, 2006, p. 5). Reed et al. (2015) identified a separation

away from the role of Extension educators as content experts in the roles of 21st Century Extension professionals. Perhaps this reflected a shift toward the engagement model in which civic engagement goes beyond knowledge transfer (Peters & Alter, 2010).

The engaged Extension professional must embrace their role as providing the local connections for university engagement (Alter, Bridger, & Frumento, 2015; Bridger & Alter, 2006b; Fischer, 2009; Henning et al., 2014; Mitchell & Gillis, 2006; Peters, Alter, & Schwartzbach, 2008; Peters et al., 2003; Scutchfield, 2009). In addition, the professional also can provide the linkages between the university and the community for greater university engagement (Peters et al., 2003). Other descriptors of the 21st Century Extension professional include the inclusive facilitator (Mitchell & Gillis, 2006; Peters et al., 2003) and effective negotiator (Bridger & Alter, 2006a). In addition, this professional has responsibility for networking, “pooling information” to solve large problems (Hoag, 2005, p. 399) and convening “communities of interest” to “carefully weave partnerships to identify, create and apply knowledge” (Reed et al., 2015, p. 3). Similarly, others emphasize the role of Extension professionals as boundary spanners contributing to the development of knowledge networks to provide for experiential learning to achieve behavior change in participants at the local level (Lubell, Niles, & Hoffman, 2014). Communication (Hibberd et al., 2013; Reed et al., 2015) and marketing skills remain important along with “unbiased credibility” (Reed et al., 2015).

The 21st Century Extension Professional in an engaged model has great opportunity to support and encourage democratic civic action (Fischer, 2009; Harwood, 2012). Faculty must be civic minded (Fischer, 2009; Peters et al., 2008). Peters and Alter

(2010) recommend that 'civic engagement' be an integral part of the faculty role rather than being relegated as 'service.' They see engagement as being exhibited through relationships and products and found that it varies over the course of a faculty career. Peters and Alter (2010) identified a need for dialogue within higher education to better define how this work is carried out and further implications. They also expressed need for organizational support as university professionals move into more engaged roles (Peters et al., 2003).

The Extension educator generally serves as a local representative of the land-grant university. They play a key role in determining the role of the university in the community and often conduct their work in ways that either exemplifies their role as the expert or encourages community engagement. However, there has been limited research in this area. A survey of Family and Consumers Science (FCS) educators identified behaviors used by agents most frequently when leading community groups. The study considered three leadership behaviors of Extension educators (Continenza, 2009). These were classified as either supporting, relating or structuring. Supporting behaviors were more team-oriented, emphasizing shared knowledge, and creation of unified vision. Relating behaviors were more closely related to establishment of networks, seeking input, mentoring, delegating and persuading. Structuring behaviors were directive and connected to power, competition, and intrinsic reward for the agent. The study found that FCS Extension educators tended to use more supporting and relating leadership behaviors. When looking at behaviors by years of experience, the study found that over

the course of their career, the Extension educators balanced the use of all three behaviors. However, early career Extension educators used relating behavior more and then moved to use of supporting behaviors as they gained more experience.

Adaptive leadership has been recommended for higher education as it moves from the expert approach of providing technical expertise to greater engagement (Stephenson Jr., 2011). This leadership approach is suggested in working with communities to address problems where either the issue or possible solutions are not clearly defined. Stephenson Jr. (2011) describes the role of the faculty in this situation as needing to “design opportunities and strategies” that provide opportunity for community engagement. He described a process in which citizens would “reflect actively on their own values and cultural assumptions, a much more complex and long-lived task than simply providing a ‘fix’ for a technical problem (p. 100).” He summarizes this role as offering “a vision sufficient to bring the parties to focus on the claims before them without suggesting specifically how their search should be resolved (p. 100).” One of the challenges he notes is keeping the community involved in actively working towards a vision. In the example provided, the University identified the problem which is consistent with the expert model, although they worked to involve the community as they moved toward solution. Also, there is no indication that this example build on existing university connections in the community such as Cooperative Extension. This may account for some of the challenge in keeping people connected.

Continuous professional development of the new Extension professional is important. Mitchell and Gillis (2006) found it important that new employees possess a

commitment “to deepening their own skills and knowledge to the benefit of Extension and its stakeholders” (p. 5) and suggested that providing these opportunities are an important role of the organization in which the Extension educators are employed. This becomes increasingly important in an engaged organization, where Extension educators may need training to develop facilitation and active learning skills to convene groups and guide discussions in which there are many sources of expertise. Employees hired as experts in particular fields may require re-tooling to adapt to an engaged model.

Challenges of Relevance and Timeliness

Cooperative Extension is challenged to move to an engagement model to remain relevant. In this role, they serve as catalysts or brokers, building coalitions to address challenges of today’s society in a timely manner (Henning et al., 2014; King & Boehlje, 2000; McDowell, 2003; Mitchell & Gillis, 2006; Reed et al., 2015). The ability of Cooperative Extension to respond quickly to emerging needs has often been challenged (Hibberd et al., 2013). A shift to a more engaged model would help to improve the flexibility and response time of the organization as needs are identified at the local level and teams are developed that work with the local community to develop solutions using expertise that comes from many sources and areas. The types of needs or issues that can be addressed in this manner include the complex, “wicked” problems society is facing (Beaulieu & Cordes, 2014; Bridger & Alter, 2010; Holland, 2016). Many of the issues that Extension and higher education need to be addressing fit this definition (Beaulieu & Cordes, 2014; Hoag, 2005; McDowell, 2003; Peters & Alter, 2010; Reed et al., 2015).

These issues can be addressed through engagement at national and international levels (Byrne, 2016). These issues are very local in nature, providing opportunity for the renewal of civic interest and success through renewed strength and belief in self and community (Harwood, 2012) in addition to contributing to the development of a learning society (Byrne, 2016). Hoag (2005) suggests the types of issues that Extension should be addressing are those that “address externalities” and deal with “nonmarket concerns” (p. 399). Peters and Alter (2010) refer to these as “social issues facing rural America.” Examples of issue areas include use of natural resources, equitable information availability, risk reduction, pooling resources to address large problems, community health, environmental justice, inclusivity and equity, climate change and invasive species (Beaulieu & Cordes, 2014; Hoag, 2005; Peters & Alter, 2010). The issues in which Cooperative Extension and higher education can make a difference are those that are unlikely to be addressed by either the business or political sector.

A benefit of engagement of communities in determining solutions is the opportunity to reduce historic power structures that result in disenfranchisement by those who are powerless. An ideal situation for communities is one in which they experience authentic agency (Brennan & Israel, 2008). Brennan and Israel (2008) identify this as being ideal, but not common. In this scenario, citizens feel that they have choice and that their action will result in a positive outcome (Brennan & Israel, 2008). Critical in achieving this is the development of community through the process of ongoing communication and action of diverse local groups to achieve long-term outcomes or solutions (Brennan & Israel, 2008). The authors emphasize that the community develops

because of the continued interaction rather than because of attaining goals. Other benefits include increased capacity and sharing of power.

Extension traditionally has been charged with providing educational programs that helped to increase the awareness of citizens who needed to adopt a new technology or innovation. This connects to Rogers' diffusion of innovations theory used to describe expert program delivery. Rogers' system is a hierarchical system in nature with innovation decisions made at the highest level. Identified innovations are then delivered through a push model through the work of a change agent. This change agent serves as the conduit between the change agency that identified the innovation and the clientele who are asked to adopt the innovation. In the case of Cooperative Extension, the change agent is identified as the Extension educator at the local level.

Rogers (1995) identified seven roles for the change agent as:

- 1) to develop a need for change on the part of clients,
- 2) to establish an information-exchange relationship,
- 3) to diagnose problems,
- 4) to create an intent to change in the client,
- 5) to translate an intent into action,
- 6) to stabilize adoption and prevent discontinuance, and
- 7) to achieve a terminal relationship with clients.

Rogers (1995) defined multiple roles that are easily connected to other positions that exist within the Cooperative Extension system that aid in the adoption process in addition to that of the change agent. The change agency provides and promotes the

innovation and represents Cooperative Extension as the University's service arm. Within this change agency, Rogers defined the roles of change agents, opinion leaders and aides. The change agent would be consistent with the Extension educator or specialist and is the individual that introduces the innovation to the potential adopters. Opinion leaders are members of the local community that have influence over others in the target audience. In this model, these people are used to demonstrate or support adoption of the innovation by their influence. For Cooperative Extension, these are volunteers in leadership roles. Finally, aides are a part of the change organization, but also members of the community. They bridge these groups encouraging local adoption of the innovation. In Cooperative Extension, these individuals may be described in the role of program assistants.

Over time, Extension has implemented needs assessment processes that are used to help provide relevant programs at the local level that are delivered in the most appropriate manner (Mitchell & Gillis, 2006; Wooten Swanson, 2013). A logic model (University of Wisconsin - Extension, 2014) serves as a method of building on community needs to develop programs that provide short, medium and long-term outcomes that can be used to address the need. There are several challenges associated with use of the logic model. Too often, the Extension educator (or a team of Extension educators) develops the logic model without input from clientele beyond the needs assessment process. In addition, the model is too linear. Although part of the logic model process includes identifying the external factors that may affect program success, the logic model does not specifically guide the developer in determining what these impacts may be and methods of overcoming those challenges. A resulting difficulty is that while

logic models are good for identifying and developing ways to measure short and medium-term outcomes, users often find success in measuring long-term outcomes and impact limited.

Rogers' (1995) model provided for the identification of technologies and innovations by a local unit in a decentralized model. However, on a spectrum between centralized and de-centralized diffusion systems, he placed the Agricultural Extension System close to the centralized end of the spectrum. Today the decentralized model may be more descriptive of the role of Cooperative Extension because of the local unit's role in identifying the technology or innovation.

However, today's solutions are much more complex and dependent on context presented by diverse interests in the community. A model is needed that describes how Cooperative Extension works in the local community to help people identify challenges and solutions in this complex environment. The previous process of identifying needs and sending these to the university so they could develop appropriate programs to be delivered at the local level was limited in subject matter by the personnel available and was very time-intensive. In addition, the process overlooked the value of local expertise and context in the initial stages of program development requiring additional time for these to be addressed during program delivery, if they were addressed at all. The engaged model supports increased participation of local citizens throughout the program planning and evaluation process.

There are many factors contributing to the problems communities are facing and many different approaches that may yield acceptable solutions. In addition, there is

recognition of the importance of connecting these solutions to the context of the local community. The process of achieving collective impact addresses many of the challenges associated with logic models while emphasizing the development of solutions to problems rather than development of programs. Byrne (1998) spoke of the role of engagement in developing “learning societies” where

. . . lifelong learning for individuals is a reality and society has developed organized ways of raising its collective educational level, of gaining new knowledge, and of applying the new knowledge. Society itself becomes a learning entity which continually develops its ability to create new tools for collective improvement (p. 56).

Engagement emphasizes the use of participatory research which makes citizens active participants in identifying problems and processes to provide more meaningful outcomes (Franz et al., 2010). The research “is more community-based, reciprocal, and collaborative” (Rice, 2016, pp. 31-32). Lachapelle (2011) found increased community capacity because of leadership training and civic engagement in a program emphasizing community dialogue through study circles to look for ways to reduce poverty. McDowell (2003) emphasized the importance of providing value to the public through engagement when he specified that corporate funded research does not qualify because the benefits are not directly provided to the public.

Garnering Support on the Spectrum between the Expert and the Engaged Model

Byrne (1998, 2016) spoke of the need for culture change in higher education to attain greater engagement. He spoke of the challenges of seeing this change within the campus environment from students to parents and through the faculty ranks. For public universities, he also spoke of the role of state government in participating in this culture change. Particularly for land-grant institutions and other institutions receiving federal funding, the federal government is a partner as well. A primary concern of Byrne was that the culture change might not occur quickly enough to address the needs of society for greater engagement. The time required for change is exemplified when we consider the calls for change and engagement that encompassed both Extension and higher education that occurred in the 1960's and are still being repeated today. The time for change is well overdue.

Change towards an engaged model is supported and encouraged to increase Cooperative Extension's ability to meet the needs of new audiences and address different types of challenges to remain viable for the future. It is unreasonable to believe that an organization that has been in existence over one hundred years and interpreted uniquely at the local or state levels would change from one model to another overnight. Change within the university is challenging, requiring understanding and communication both internally and externally in order to be successful (Alter et al., 2015). Moving Cooperative Extension to an engaged model requires open discussions within the organization and with stakeholders. These provide opportunities to discuss benefits and challenges associated with the models along with developing a more inclusive and

transparent approach moving forward. This is often in contrast to traditional outreach approaches which emphasize the role of the scholar as an expert with sole responsibility for all aspects of the educational program development process from diagnosis to assessment for the purpose of addressing societal needs (Lynton, 1996, Reprint 2016).

Chapter 3 - Methodology

This chapter begins with an overview of the purpose, the research questions, and the theoretical basis for the study. This is followed by an explanation of the research design. A summary of the selection processes for the case studies, imbedded cases and key informants follows. The process for carrying out and analyzing the semi-structured interviews is highlighted. The trustworthiness of the study is evaluated on the bases of credibility, dependability, conformability and transferability. The chapter ends with a summary of study limitations.

Research Questions

The purpose of this research was to define the engaged model of program delivery in Cooperative Extension, increase understanding of why and how engaged and expert models of program delivery are used, and identify barriers and drivers related to use of the engaged model. The findings can be used by organizations to encourage appropriate use of the engaged model through increased understanding of what the models mean, when, where and why Extension educators use these models and the identification of barriers and drivers to the use of this model. In addition, the study explored similarities and differences in program areas and their use of the two delivery models.

Three specific research questions guided this study:

1. How is an engaged model of program delivery defined within Cooperative Extension?
2. How is engagement implemented and more specifically when and why is an engagement model used as opposed to an expert model?

3. Are there barriers and drivers associated with Extension's move towards a more engaged model?

In addition, Yin (2009) recommends that qualitative researchers develop theory on which to base the case study. For this project, there were three primary theories upon which these research questions were based:

1. Definitions of engaged and expert models of program delivery exist and are operationalized within Cooperative Extension.
2. Extension educators use both engaged and expert models of program delivery dependent on the situation they are trying to address.
3. There are organizational supports and barriers, beyond but including that of program area assignment, which may encourage use of one model over another.

Connections between the theoretical basis, the research questions and the data collection methods used to answer the research questions are indicated in Table 3-1.

Table 3-1. Connections between theoretical basis, research questions and data collection methods

Theoretical basis for research questions	Research questions	Data collection methods
Definitions of engaged and expert models of program delivery exist and are operationalized within Cooperative Extension.	How is an engaged model of program delivery defined within Cooperative Extension?	Panel of experts' online survey questions related to the definitions. Semi-structured interview questions related to the definitions.
Extension educators use both engaged and expert models of program delivery dependent on the situation they are trying to address.	How is engagement implemented and more specifically when and why is an engagement model used as opposed to an expert model?	Semi-structured interview questions related to the interviewees' preferred model, their frequency of use of this model, circumstances, processes and reasons for using this model and their alternate model.

Theoretical basis for research questions	Research questions	Data collection methods
There are organizational supports and barriers, beyond but including that of program area assignment, which may encourage use of one model over another.	Are there barriers and drivers associated with Extension's move towards a more engaged model?	<p>Panel of experts' online survey questions related to the traditional program areas that use the engaged and expert models of program delivery most frequently.</p> <p>Semi-structured interview questions identifying what encourages and prevents use of the engaged model.</p> <p>Feedback from directors related to findings and review of additional documents.</p>

Research Design

The purpose of the study was to gain greater insight and understanding related to the definitions and application of engaged and expert models as well as barriers and drivers to their use in Cooperative Extension. The exploratory nature of the study was consistent with a qualitative research approach. The research project used an embedded case study to describe the phenomena of engaged versus expert models of Extension program delivery within the context of the individual, situation, program area, and state. The states and program areas used in the study were selected based on survey responses from the panel of experts.

Yin (2009) defined a case study as an “empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (p. 18). The

program delivery model within Cooperative Extension is a contemporary phenomenon as indicated by literature over the years emphasizing the need for change or return to a more engaged model. There is great variety in the ways in which models of program delivery are expressed, often dependent on the state, program area and even the professional assigned responsibility for local implementation. These provide multiple contexts for consideration in exploration of this issue. Yin (2009) states that case studies are most effective in providing generalization to theory rather than to specific populations. The findings will be used to provide direction and shape policy while also developing additional questions for further inquiry related to the adoption of program delivery models in Cooperative Extension.

This study involved two states that were identified as using an engaged programming model by the ECOP Executive Directors and Administrators Team. Using multiple cases allowed greater insight into how states differ and how program areas within the two states vary. Although there is great variety from state to state in Extension programming, selection of these states is justified because of the similarities that also exist from state to state so that the selected states may be considered to be typical (Yin, 2009). The states for these case studies were carefully selected to provide meaningful data related to the phenomenon of program delivery models. Yin (2009) identified a failure of an embedded case study when evaluation of subunits does not connect to the unit in which they are contained. Although the study of the program areas was imbedded within the case study of the state, attention was given to connect the findings back to the states through analysis of data and reporting of findings. In addition, each of the state

Extension directors provide reactions and responses to the preliminary findings for their state. This study was approved by the Pennsylvania State University Institutional Review Board (STUDY00005225).

Preliminary study using panel of experts.

ECOP represents Cooperative Extension on the Cooperative Extension Section of the Board on Agriculture Assembly and the Association of Public and Land-grant Universities (Association of Public and Land-grant Universities, 2014). Their primary mission is “to strengthen Cooperative Extension at regional, state and local levels” (Association of Public and Land-grant Universities, 2014, p. 2). The vision for the organization is “to provide guidance and leadership in order to maintain and enhance CES as the most effective and dynamic educational outreach and engagement network in the world” (Association of Public and Land-grant Universities, 2014, p. 2). The organization seeks to accomplish this through annual action plans related to longer term goals. Membership is comprised of three Extension Directors and Administrators elected from each of the five Extension regions. There are four geographic regions including the northeast, western, north central and southern regions. The fifth region is composed of the 1890 Land-Grant Institutions. Many partnering organizations and programs are also represented on ECOP as non-voting liaisons. The Executive Directors and Administrators Team coordinate activities across states within their respective regions under the oversight of the Cooperative Extension/ECOP Executive Director.

The panel of experts for this study included five members of the Extension Directors and Administrators team and one Extension Director who learned of the project because of his role as a member of Executive Committee of ECOP and asked to participate. They were asked to respond via email to a survey (See [Appendix A](#)) developed in Qualtrics™ following the recommendations for online surveys by Dillman, Smyth, and Christian (2009). The questions were developed with review and feedback provided by my doctoral committee.

The chair of ECOP granted permission to proceed with the study prior to email invitations to the panel. The invitation included a link to the survey and indicated the close date for the survey, which was two weeks following the date of the invitation. Non-respondents were sent a reminder one week following the initial invitation. The survey was available between August 23, 2016 and September 7, 2016.

Use of this panel provided insight into the perspectives of Extension programming from a group of individuals with extensive experience in Cooperative Extension, and a high level of awareness of Extension programming at the regional and national level. This panel contributed to the analysis of research question one regarding the existence of accepted definitions for engaged and expert models in Cooperative Extension. In addition, they identified states and the program area that served as the exemplars for the engaged and expert models of program delivery in Extension.

State and program area selection

The states were selected using critical case sampling. This method of sampling is used when the findings from a single case can be used to generalize findings for similar cases (Patton, 2015). The panel of experts was asked to identify states that came to mind related to either engaged or expert models of Extension program delivery through the online survey. In the survey, there were a total of 14 states identified as being engaged. A total of five states were specified as expert, with three respondents indicating that all states were effective in using the expert model of program delivery. One state was identified specifically on both lists. Two states were mentioned by members of the panel of experts twice as using an engaged model and a third state was mentioned three times. The panel of experts identified State1 (as used in this study) three times as being engaged while State2 (as used in this study) was identified two times. Neither of these states were designated as using primarily the expert model on any of the panelist's lists.

The panel of experts was also asked to identify program areas that most frequently used the engaged model and program areas that most frequently used the expert models of program delivery. The goal was to identify subjects from program areas that would represent a broad perspective around the issue of program models being employed. Program area options provided in the survey for the panel of experts were: "4-H/Youth Development", "Agriculture", "Community Development", "Family & Consumer Sciences", "Natural Resources", "All use equally", and "None use". The last two options were not selected by any of the participants. Five of the respondents identified the same program area as most frequently using the expert model and none

selected it as using an engaged model. This program area was chosen to represent the expert model and was referred to as the expert program area.

One of the program areas was selected by four of the respondents as most frequently using the engaged model of program delivery, although this program area was selected by another person as most frequently using the expert model. Two other program areas were also selected as most frequently using the engaged model. Since there appeared to be variability in selection for the engaged model, all program areas other than the program area used to represent the expert model were considered collectively as representative of the engaged model. They were referred to as the “other” program area.

The Extension Directors for the states identified by the panel of experts were contacted and gave permission for use of their states for this study. In keeping with Institutional Review Board (IRB) approval (#STUDY00005225), the state identities are not revealed. States were identified as State1 and State2. The identity of participants was also kept anonymous through use of pseudonyms selected by the participants at the time of the interview.

Both states selected for the study have a long history in Extension, dating back prior to the passage of the Smith-Lever Act. According to the American FactFinder website (<http://factfinder.census.gov>), the population of the two states differs greatly with State2 having a population a little over six times that of State1 (U.S. Census Bureau, n.d.). However, based upon the numbers provided by the Extension Directors, the number of Extension employees and the amount of the budget provided by the county government in State2 is less than two times that of State1. The median age for the two

states ranges from the mid to late thirties. State2 has a higher percentage of Black/African Americans by a magnitude of 3.1. State1 has a higher percentage of American Indian/Alaskan natives by a magnitude of 4.5. The agriculture, forestry, fishing and hunting and mining industry in State1 employs 4.2 times as many people as in State2. From an agricultural perspective, State1 has greater average income per farm, number of farms and farm acres than State2 by magnitudes of 2.7, 4.9 and 3.2, respectively (USDA-NASS, 2015). The top commodity group based on value of sales for State1 is in the livestock area and for State2 is in the crop area. State2 has 2.5 times as many farms with sales value less than \$10,000 than State1. Number of farms with sales value of \$500,000 or more for State1 is 1.9 times that of State2.

Semi-structured Extension educator interviews

This section details the process of conducting pilot interviews, the selection of Extension educators to participate in the semi-structured interviews, the coding processes, the development of thematic concepts, and the feedback obtained from the state Extension directors.

Pilot interviews

Pilot testing was used to evaluate the ability of the interview protocol to obtain the necessary information to answer the research questions and to review the process for coding and analysis of data. Subjects for the pilot test included two Extension educators

from a state not selected for the case study. Interviewees represented the “expert” and the “other” program areas. Data from the pilot test were collected and member checking was conducted as in the research project, but none of the data were included in the findings.

Following each pilot interview, the data were compared to the research questions in this study. Interview questions were revised as necessary to reflect changes that were implemented during the interview or that were needed to collect the necessary data. Data obtained through pilot testing was also used to test the proposed process for analysis. Revisions based on the pilot testing included the addition of warm-up questions that provide insight into the individual’s career and their responses and changes to questions 2.d. and 2.e. to include both local and organizational influences. Because questions 2.a. through 2.c. were about how the Extension educator operated in a local context, the final two questions in this section were changed to specify the organizational context to identify barriers and drivers that exist at this level. These changes are reflected in the interview protocol included in [Appendix B](#).

Selection of Extension educators for semi-structured interviews

Purposeful, random sampling was used to select a minimum of eight Extension educators per program category (Expert or Other) from each of the two states to participate in semi-structured interviews. Extension educators in the selected program areas were listed by district and program area and assigned a number using a random number generator in Microsoft® Excel. Potential interviewees were contacted by email (See [Appendix C](#)) in the order in which they were placed based on random selection. The

invitation included an attachment providing information regarding consent (See [Appendix D](#)).

In State1, the state leadership team provided a list, as requested, of Extension educators they considered to be “progressive and successful.” Extension educators were divided into the program areas of “Expert” and “Other”, as identified by the panel of experts. Eight Extension educators were randomly selected from each program area. Potential participants were notified by their state Extension Director about the possibility that they may be contacted for an interview. Everybody agreed to participate. One Extension educator contacted me and asked to participate in the interviews when she received the email from the Extension Director. Her name was included although she had not been originally selected. This resulted in a total of 17 interviewees in State1.

In State2, District/Regional directors were identified by the Extension director. They were then contacted by email and asked to provide names of individuals in their district/region by program area that they considered to be “progressive and successful” in their professional roles. Several districts did not have Extension educators assigned in one of the program areas. Instead, the program leader for that program area provided a list of potential participants. The identified Extension educators were categorized as either “Expert” or “Other” based on the program areas identified by the panel of experts. Eight individuals were randomly selected from each category. Initially the response rate was poor, so additional Extension educators were randomly selected by category. Some of the Extension educators that did not respond originally responded later and interviews were scheduled. Thus, there were a total of 18 interviewees in State2.

Selected Extension educators were invited to participate in interviews following the protocol identified in [Appendix B](#). Interviews were scheduled depending on availability in the order in which the requests were received. Interview invitations were sent to participants in State1 on November 3; interviews began on November 11 and concluded on December 5. Interview invitations were sent to participants in State2 on November 20; interviews began on November 29 and concluded on December 22.

The intentional selection of “successful and progressive” Extension educators was used to identify Extension educators who had positive experience in operating in their professional roles. This purposive sampling was used to increase the transferability of the study (Eisenhardt, 1989; Patton, 2015). The depth of experience provided by the Extension educator perspectives based on their lived experience also contributed to the external validity of the study (Eisenhardt, 1989). The revised interview protocol included in Appendix B was used to provide consistency across the interviews. In addition, the research questions and primary theory were used to provide guidance in the development of probing questions on an impromptu basis as necessary.

Development of open and axial codes

Primary codes were identified based on the research and interview questions. Axial codes were identified through review of the first fourteen interviews from State1. These were used to organize the data. A summary of the codes used for data analysis is included in [Appendix E](#).

Coding process of interview data

Transcripts were prepared following the interview using a professional transcription service. I then reviewed the transcripts to ensure accuracy. Transcripts were then provided to the interviewees for member-checking within one week of the interview. Approved transcripts were loaded into Atlas.ti© for coding.

Data from the interviews were coded and analyzed using a modified constant comparative approach. Transcripts were reviewed at least three times with coding beginning on the third time through the documents and continuing through all interviews. Cross checking was carried out by a colleague with 36 years of experience in Extension. His experience included roles from Extension educator to administrator and at the county and state levels. Initially, Coder2 was provided a copy of the first two interviews, the theoretical and conceptual framework section of this document and a list of codes. Coder2 was instructed to code the documents using the codes provided and additional codes that were necessary. Discussion of similarities and differences between the researcher and Coder2 occurred following the first two interviews. Because of the great diversity included in the interviews, it was determined to continue to work as a team, coding and then discussing the interviews to provide greater consistency across all the interviews. Interrater reliability was calculated for each interview and is included in Appendix F.

Development of thematic concepts

Interviews from the two states and their respective program areas were analyzed independently and collectively to compare findings between the two groups. The results provided a substantial contribution to the understanding of the state. Data obtained through the expert panel and the director of Extension were used to support and strengthen the interview data in development of a more thorough description of what was occurring related to programming models within the state.

Unstructured feedback from state Extension directors

Findings for each state were developed independently and provided to the Extension Directors from State1 and State2. A follow-up phone call was used to gather their reactions and observations. Prior to the phone call, they were sent questions to help guide the discussion. These were not followed verbatim. The questions used to guide these discussions are provided in [Appendix G](#).

Trustworthiness of data

In this section, the credibility, dependability, conformability and transferability of the study are presented.

Credibility

Patton (2015) identified four types of triangulation to be used to provide credibility for qualitative research: (1) use of multiple qualitative sources, (2) comparison of qualitative and quantitative data, (3) including multiple analysts in data review, and (4) including multiple theories or perspectives for data interpretation. This study used all four of these types of triangulation to enhance the credibility of the findings. In addition, member-checking and peer checking were used.

Throughout the research project, data previously obtained from multiple sources were constantly being reviewed and compared to more recent findings. Triangulation was obtained by using different methodologies and then comparing the data. In addition to responding to open-ended questions, Extension educators also identified a preferred model of program delivery and estimated a percentage of time they used each model. Comparison of this quantitative measure with the qualitative data contributed to triangulation. Interview data was compared to documents associated with the state Extension program as well as to the reaction of the state Extension director to the preliminary findings. Data were compared across program areas to identify similarities and differences that existed across cases. In addition, comparisons were made within the program areas.

Member checking with interviewees was used to confirm that the general understanding associated with the interviews was accurate. Two coders with an average of more than thirty years of experience in Extension coded data independently and then discussed their coding, contributing to enhanced understanding from multiple

perspectives. Interrater reliability was calculated based on the initial coding and again on the subsequent coding following discussion.

Dependability

Dependability refers to the reliability of the study. Approaches used to increase reliability include use of an audit trail, providing a thorough description of research methods so that the study can be replicated, triangulation of information, peer checking and using code-recode procedures. I used a research journal to log field notes and identify data storage sites and general observations as I moved through data collection and analysis. This included the source of the data for interviews and documentation. Interview notes for each interview provided the general reaction of the interviewee to the interview process in addition to questions and any external occurrences that may have affected understanding of the data.

The research process was carefully tracked and described so that another researcher could easily follow the process and obtain similar results, varying only by the specific case and point in time in which the process is carried out. In addition, throughout the project, a constant comparative approach was used in analyzing the data. The peer checking and adjustments made to coding based on these results also contributed to the dependability of the study.

Conformability

Conformability refers to the objectivity of the study. Use of the audit trail as documented in the research journal, triangulation of methodologies and sources and use of reflection in the research journal increased the conformability of study. Bracketing was also used to provide objectivity.

Yin (2009) defines the required skills of the case study researcher as being “able to ask good questions – and interpret the answers”, “be a good listener”, “be adaptive and flexible”, see opportunity rather than threat in new discoveries, “have a firm grasp of the issues being studied,” and be “unbiased by preconceived notions” (p.69). My many years, in multiple roles and states, in the Extension organization contribute to the lens through which I conduct this research. This allowed me to interact more comfortably with the interviewees and probe deeply to achieve greater understanding.

Transferability.

Transferability in qualitative research is consistent with external validity in quantitative studies. This indicates the possibility that the findings will relate to similar populations as those represented in the study. Use of appropriate sampling approaches increase transferability of the study.

The states selected for this study represented critical cases in which we were most likely to find evidence of the engaged model of program delivery. The states were selected by asking the panel of experts to identify state Extension organizations that came

to mind when considering an engaged model of program delivery. As a cross check, the panel of experts was also asked to identify organizations that came to mind when considering an expert model of program delivery. Priority to the states on the engaged list was based upon the number of times a state was identified by the panel. To finalize selection of the state, the Extension directors of the most frequently identified states were contacted to obtain permission to use their states as cases for the study. Through their acceptance, the presence of the engaged model of Extension program delivery was directly acknowledged.

The sampling strategy used to select the program areas is a matched comparison method. Patton (2015) recommends use of this method to study and compare “cases that differ significantly on some dimension of interest to understand what factors explain the difference” (p. 267). In this study, the program areas differ in the subject matter focus offered and target audiences of the Extension educator. Using program areas that generally used a more engaged approach in contrast with a program area that used a more expert approach within the same state organization helped to highlight differences associated with these program areas, providing greater breadth to the findings. The program areas used for matched comparisons imbedded within the state case were selected to obtain greatest variety in responses by having the panel select program areas that most frequently used each of the models. The responses were tallied and Program Area 2 (See Table 3.2) received five out of six of the responses, representing the program most frequently using the expert model. Program Area 2 is identified as the “Expert” program area for the study. This program area was not identified as frequently using an

engaged model by any of the panel members (See Table 3.2). Program Area 3 received four out of six of the responses as most frequently using the engaged model. Program Area 1 and Program Area 4 were also identified by one member of the panel as most frequently using the engaged model. Program Area 1, Program Area 3, and Program Area 4 were pooled to represent the “Other” program area for the study. There were no responses to indicate that all program areas used either model equally or that none of the program areas used either model.

Table 3-2. Panel of expert selection of program areas to represent expert and engaged models of Extension program delivery

Field (n=6)	Program area 1	Program area 2	Program area 3	Program area 4	Program area 5
Most frequently uses and engaged model	1	0	4	1	0
Most frequently uses an expert model	0	5	1	0	0

Purposeful random sampling was used to identify interview participants. Extension leadership was asked to identify Extension educators who were “successful and progressive.” The criteria for this selection were left to the discretion of the individual administrators. The objective was to identify Extension educators that were respected for their work within the organization. Within the program areas, the identified Extension educators were randomly selected to obtain a sample size of eight Extension educators in each of the two program areas.

Email invitations (See [Appendix C](#)) were sent to local Extension educators along with a copy of HRP-590 – ORP Consent Guidance for Exempt Research (See [Appendix D](#)). A list of possible dates was provided and they were asked to respond with their

preferred date, time of interview and method of interview (WebEx or phone) by a specified date if they were willing to participate. As responses were received, they were entered into a calendar. The interview protocol (See [Appendix B](#)) was sent with a reminder that included date, time and details related to method of interview in addition to a second copy of the consent document at least one week prior to the interview.

Limitations of this study

There are several limitations associated with this study. The study intentionally selected for state Extension organizations that were recognized as being more engaged than other Extension organizations in the country. Also, the request for Extension educators sought to identify those who were very successful in their career. These approaches were useful in answering the research question for this study. However, they also introduce bias so that the findings of this study are not generalizable to all state Extension organizations. In addition, the findings are not consistent with what might be observed if Extension educators performing at different levels within the states that were studied were included in the study.

Extension organizations and society, in general, are constantly in a state of flux. Extension educators are continually evolving, learning from previous experiences and trying new approaches. Some interviewees mentioned that the process of participating in the interviews forced them to think about how they conduct their work. Therefore, findings determined at a different point in time are likely to be different than those presented in this study.

Chapter 4 - Findings

This section begins with an overview of the respondent characteristics for the panel of experts and semi-structured interviews. This is followed by a summary of the findings. The data include survey responses from the panel of experts, nearly sixteen hours of conversations with 35 Extension educators, and comments from the two state's Extension directors.

This section is organized based on the research questions and the research theories. The first section describes the characteristics of the respondents. This is followed by findings related to the definition for the engaged and expert models of program delivery for Cooperative Extension as well as emergent findings related to a mixed or hybrid model. The next section details why and how the Extension educators use the engaged, expert, and hybrid models of Extension program delivery in practice. The final section identifies barriers and drivers that the Extension educators experience related to their use of the engaged and expert models of program delivery.

Respondent Characteristics

Panel of experts

Respondents for the panel of experts reported an average of 29 years of experience in Extension, ranging from 22 to 37 years, as well as 16.67 years of experience in administrative roles in Extension, ranging from six to 25. Four of the respondents had experience as an Extension specialist; three each had experience as

associate dean, Extension director, Extension district or regional director, research faculty and teaching faculty. Two each also had experience as associate Extension director, Extension educator, Extension dean, and university vice provost. Individuals had also served in roles as university associate vice president and vice chancellor, USDA-NIFA National Program Leader, and Cooperative Extension executive director. The only possible responses provided in the survey question that were not selected were academic department head and university vice president.

Semi-structured interview participants

Participants in the semi-structured interviews reported an average of 19.3 years of experience in Extension, ranging from six months to 36 years. During the interviews, Extension educators were asked to indicate whether they preferred the engaged or expert model of program delivery. Some Extension educators reported that they used a mixed or hybrid Extension program delivery model. Table 4-1 includes a summary of model preferences, program area and tenure for the Extension educators participating in the semi-structured interviews.

Table 4-1. Extension educator tenure and program area based on model preference

Preferred model	State1 (#)	State2 (#)	Program Area		Avg. tenure –years (SD)	Tenure range
			Expert	Other		
Engaged	8	12	10	10	17.9 (9.4)	0.5 – 36
Expert	3	3	5	2	22.2 (10.6)	4.5 – 33
Hybrid	6	2	4	4	20.1 (11.7)	5.5 – 35
All	17	18	19	16	19.3 (10.0)	0.5 - 36

During the interviews, Extension educators were asked to estimate the percentage of time that they spend using the engaged and expert models, though some participants did not provide this information (See Table 4-2). Participants in the semi-structured interviews included Extension educators in the 4-H, Agriculture and Natural Resources (ANR), Community Development (CD), and Family and Consumer Sciences (FCS) program areas.

Table 4-2. Participant estimates of how often they use either the engaged or expert model reported by their preferred model of program delivery

Preferred model	# Extension educators	Percent time in model	
		Engaged (SD)	Expert (SD)
Engaged	19	75.88 (10.08)	24.12 (10.08)
Expert	7	26.19 (10.08)	73.81 (10.08)
Hybrid	6	62.50 (13.32)	37.50 (13.32)
All	32	62.50 (22.69)	37.50 (22.69)

Defining and Operationalizing the Engaged, Expert and a Hybrid or Mixed Model of Program Delivery in Cooperative Extension

Research question one explored how the engaged model of program delivery is defined within Cooperative Extension. The theoretical basis for this question within this research is that there are operationalized definitions of engaged and expert models of program delivery within Cooperative Extension.

While setting up the survey for the panel of experts, I was directed by the Executive Director at ECOP to the Carnegie community engagement classification shared in the previous section. When asked if this definition had been readily accepted within Extension, The Executive Director indicated that it was not. The Carnegie definition is

broad in nature and covers universities as a whole. Because Cooperative Extension has a long history working with local communities to meet local needs and provide access to the resources of the university. Therefore, it makes sense that it would have an operationalized definition of engagement and how it performs this work in the university. The definition of engagement for Cooperative Extension would be expected to reflect the unique role of Cooperative Extension within the University, as it has evolved over time. Therefore, for the purposes of this study, it was important to determine how Cooperative Extension defines and carries out both the engaged and expert models of educational program delivery.

As a starting point for discussion to work towards developing these definitions for Cooperative Extension, draft definitions for the engaged and expert models of program delivery were developed based on a priori investigation. These definitions were shared with the panel of experts through an online survey. They were asked to respond with “yes”, “no”, or “maybe” to indicate their level of comfort with the proposed definitions. If they responded “no” or “maybe”, they were then asked to identify how they suggested the definitions be modified. The wording of the definitions was changed to improve clarity based upon their responses.

Interviewees from the selected states were provided the revised definitions of engaged and expert models of delivery for Cooperative Extension during the semi-structured interviews with the Extension educators. They were asked how they would define these models, if they defined them differently than the definition provided. The

Extension directors included reflection on the definitions in their feedback to their state reports as well.

Emergent in the discussions with the Extension educators and directors were the idea of a mixed or hybrid model and the concept of these models on either end of a continuum. The findings related to the engaged, expert and the concept of a mixed or hybrid Extension program delivery models are summarized here.

The engaged model

Findings from the panel of experts, semi-structured interview and Extension director feedback related to an operationalized definition of the engaged model of program delivery for Cooperative Extension are included in this section.

Panel of experts

The engaged model of Extension delivery was defined for the panel of experts as follows:

Engaged model of Extension delivery occurs when community involvement exists in all aspects of program development, from identification of community needs, development of a process to resolve the issues and evaluation. Expertise and learning processes are shared through a two-way exchange of information.

Four of the six panel members agreed with this definition. The responses “no” and “maybe” were each selected once. The primary points of contention appeared to be the absence of a universally accepted definition and the incorporation of both models in Extension practice.

The panel member that did not agree with the definitions responded: “I agree with the points in your definition. However, not all Extension Systems [state organizations] define it this way, often blurring the lines between ‘outreach’ and ‘engagement’ with Cooperative Extension community learning.” The individual responding “maybe” specified that in Extension, there are both engagement and “outreach” under the umbrella of Extension education. This individual shared, “Co-creation often is a term associated with engagement.” This individual said “outreach” used the expert model. The respondent suggested that the topic being addressed determines whether an outreach or engagement approach is used. In their response, they indicated an engaged approach would be used when discussing “wind turbines in populated areas.” The respondent went on to summarize that, “Outreach means taking the answer to the people while engagement means coming home with the answers.”

Semi-structured interviews

The definition of the engaged model of program delivery provided to the participants in the semi-structured interviews was as follows:

The engaged model of program delivery is characterized by community involvement in all aspects of program development, sharing in the identification of issues to be addressed, developing a process for implementation and development of knowledge and evaluation. Expertise and learning processes are shared.

Extension educators were asked to provide their definition of the engaged model, if it was different than mine. Emerging concepts for both states included suggestions for framing the definition, model fluidity, the need for multiple touches/interactions in an engaged program, an emphasis on two-way communication, and the types of learning experiences to be provided. Findings are provided as categorized by components of the definition: (1) community involvement, (2) aspects of program development, (3) shared expertise, and (4) shared learning. This section concludes with concepts that emerged during the interviews.

Community involvement

In State1, Extension educators indicated that everyone may not identify community in the same way. These Extension educators also said that their presence at the local level encouraged them to be more engaged than their colleagues in other parts of the university. In State2, the Extension educators agreed with the concept of community involvement in the engaged model of program delivery and provided examples of what this means in their programs.

In State1, community in the engaged definition was defined to include everything from individual clientele to groups at the local, regional or state level. One Extension

educator shared that “the engaged model is everyone.” This may sometimes be uncomfortable in a small community, as one Extension educator from State1 shared:

I think also in a rural area the engaged model is everyone. Everyone knows where your house is, everyone knows your car, everyone knows-- they know you when you go shopping, they scope out what's in your shopping cart. You just have to be aware of that. And I don't know that the organization really can do anything about that. For trick or treat for instance - I'm kind of in a circle drive thing and all of a sudden, these three cars pull up and it's all these high school kids trick or treating. They call you by name and you're like, ‘I think I should know you but I can't quite - because you're dressed up.’ You're like, ‘yeah this is where I live.’ They'll say ‘That’s Dr. Suzie. This is your house?’ ‘Well, that's what usually happens when you ring a door bell, you get the people that live there to answer it.’ And so, it can be uncomfortable in some ways because you're living out loud.

Another Extension educator suggested that the community might be much narrower, including only those participants or audiences that receive the program.

Extension educators in State1 suggested that use of the engaged model of program delivery was particularly relevant to them because of their location at the county level. This permitted them to be developing relationships and support with local clientele by “rubbing shoulders,” or through social media. One Extension educator who preferred the hybrid model stated:

Well, I would not define it [the engaged model] very much differently. I would say that those of us who work at the county level, and have worked there for a number of years, really find ourselves in that position to operate in that engaged learner model. And I say that because we're basically front-line with local clientele. We're boots on the ground. We interact with them on a daily basis and we have that opportunity, and particularly in informal ways, to collaborate and partner with the very people that we're supposedly serving, whether it's on a community basis or a group basis or a state group basis. I mean, there's all kinds of collaborators involved.

So, I guess that's the way I would describe our engaged model situation. The other part in that is most Extension educators that are based out of county offices have an ongoing relationship with a variety of different organizations and partners in whatever programming area they're in, and by way of that, at least we get some input into what our program should look like and how it should be delivered and who should be involved. So, I would say that that's probably how we approach the engaged model.

The Extension educators in State2 described their community involvement as coming from advisory committees, program committees, clients, unspecified committees, and volunteers. One Extension educator said that community for her included “people at all levels of the community.” Another suggested that her “community” may be defined by

the community boards on which she served. Yet another Extension educator expanded on her role indicating that she is not only working with the community but is serving as a conduit between the community and specialists at the university. She defined it in this way:

I think your definition is really good. I think the only thing that I would add is that-- I guess when I think of an engaged model, I'm thinking of a really two-way street. So, I'm thinking of not just involving the community in my program development, but also informing my state specialists that are faculty at the university of what's important to my community if that makes sense. So, it's information coming down from the state specialists in response to what we're doing at the community level. Does that make sense?

All aspects of program development

In the proposed definition, all aspects of program development were defined to include needs assessment, implementation, knowledge development and evaluation. Implementation was not mentioned by the interviewees. Extension educators indicated that they did not see evaluation as a shared activity. An additional area to be added to the definition that emerged through the interviews in State1 was securing funding through grant-writing. State1 Extension educators generally agreed with this part of the definition. One of the Extension educators said:

You know, we have a big emphasis on on-farm research where growers and university people are working together. You know, the grower is as much involved in it as the university people, you know. And so, that's a real engaged learning fashion I think.

Needs assessment

Extension educators were generally in agreement with the concept of including community in needs assessment. One State1 Extension educator said that through engagement the community helped to identify “what the problem is.” Another said that her “ongoing relationships” in the community provided her “input into what our program should look like and how it should be delivered and who should be involved.”

In State2, many Extension educators spoke about community involvement in needs assessment or their work in meeting community needs, in general. One Extension educator said:

I don't disagree with any of the components that you have down there - that series that you have. For me, it's definitely always trying to be need-driven and relevant to our clientele. In an engaged model, you always have to be-- you get better engagement when the programs you're doing, the research you're doing, the approach you take, is seeking input from clientele.

Another Extension educator in State 2 talked about “developing needs.” He felt part of his role was interpreting what the community said to determine what they really needed. He said:

Well, I think an engaged model, I mean, I think it's pretty close to right on is the idea that you're engaged. I mean, going back, my philosophy on Extension is, life is about relationships. And it leads yourself right to what you talked about as an engaged model. Sometimes though, you need to be seen in the room as an expert. But you're still engaging the community, developing those-- either needs or felt needs. Sometimes the community doesn't understand what the real need is. They think it's one thing but it's really another. But without that engagement you really can't assess that. . . it's a little bit above what you talked about was engaged and expert. A lot of times you ask me what I mean, and I will give you an answer. But I'm not so sure that's exactly what I mean. It's probably what I think I mean. But if you're an expert in that type of area, you can say, ‘Well what you really are talking about is this.’ And so, I think you need a combination of the two. But like I said before, I'm a firm believer in life in general is about relationships and this idea of engagement.

Another Extension educator described the questions that he asks as he goes about doing needs assessment. He said:

I think it's very similar. I look at an engaged model as that two-way communication between working with clients, working with committees, again, working with volunteers—of what the needs are within a community, what the needs are within a program, what needs to be changed, what needs to be added and implemented. . . . just kind of looking at, ‘Okay. Where are we at? Where's the county at? What do we need to do?’ And it's not just me making those decisions. It's bringing along the volunteers, bringing along the committees to help make those decisions and look at the bigger picture of where we need to go.

Yet another Extension educator in State 2 defined her job as doing “needs assessment with people at all levels of the community.”

Knowledge development

There was agreement in State1 with knowledge development being included in the definition, with the added benefit that this may contribute to the research and education missions of the university. One Extension educator said:

In terms of helping them identify the issue or having them help us identify the issue, developing a process for education or implementation, I agree with that. I also agree with the development of knowledge in terms of knowledge exchange, identifying where there may be an opportunity to do additional research or demonstration. I would agree that those are all part of the engaged model.

In State 2, one Extension educator questioned the meaning of knowledge development. He said:

I had a little bit of a question, I guess, as far as what that development of knowledge might mean within your example. If that meant that that was the community also providing the knowledge, or if that was two different things. So, I guess I wasn't quite sure what you meant as far as the development of knowledge within that model.

I responded:

Really what I was thinking about there is, if we have shared knowledge, so we're all kind of learning together, sometimes as a result of that, we may uncover things that neither of us had noticed originally, independently. So, I guess that's what I'm talking about as far as discovery of new knowledge.

He responded then that he agreed with that as a part of the definition.

Evaluation

The role of evaluation in the engaged model was an area where Extension educators indicated there may be room for development. One Extension educator from State1 suggested there be more consideration given to what evaluation should look like in an engaged model. He said:

I think part of the engaged model from an evaluation standpoint, I think it's challenging for us, because I have not come across a very good way to

do it yet, where we actually have the person who's part of the model, who's not part of the extension, part of the evaluation process. I may need to reconsider that thought process. Usually we're thinking about our effectiveness in terms of being engaged with them. So, having them be part of that, I have not, I guess, identified as being a need.

Several Extension educators from State2 also indicated that they did not consider evaluation to be a role for community involvement in the engaged model. One Extension educator who preferred the engaged model shared:

It [your definition] sounds pretty similar to the one that I use. The engaged model for ours is working through program committees and allowing the program committees to help, and work, and guide the program that they need. I think the only difference there is they have lesser-- and I don't know if it's-- my interpretation is, in ours, they have less of a role on the evaluation side of it. That becomes more expert delivered.

Another Extension educator said that shared evaluation was not part of his normal practice, but that it has happened at times. He said:

I don't know that it [my definition] would be a whole lot different, other than I probably look at the engaged model as, yeah, using the community involvement or advisory committees to guide the program development process. I'm not sure-- I guess I haven't thought about maybe the all way through evaluation. Although, I guess that's certainly happened at times.

Another Extension educator spoke of using the engaged model in writing and delivering grants. She shared:

I also have used this model even with writing and delivering grants. Most of the time, my grants are with multiple people. It's not just me. And so, it's more engaging, trying to get the community involvement, see what they need with that grant and how that grant can help them.

Shared Expertise

State1 Extension educators were comfortable with including shared expertise in the definition of the engaged model. The difference between engaged and expert approaches was highlighted by an Extension educator who preferred the expert approach when he emphasized the value of getting to know clientele so he could answer their questions.

Other Extension educators provided more explanation regarding the definition indicating that participants each have unique expertise to share. One Extension educator from State1 stated:

I've been thinking that over. I think that at times the expertise might be a different type of expertise on the part of Extension and clients. For example, an Extension person might have access to the latest data for a certain situation, but the clientele might have the best sense of which delivery way was best, or what type of words or images would be the most effective in delivering that information. So, that is one of the words that

kind of bother me - the expertise - the part about the shared expertise, that I think that it needs to be stressed that it may be different types of expertise that is being shared.

Another Extension educator suggested how this might work when she stated:

You know, you've got this base of input from those people that are your intended audience and then you've got that research base behind you at the university, and it really is a nice coming together, at least from my point of view.

In State2, expertise that was mentioned generally was in the hands of the Extension educator and not shared. One example is the earlier statement about needs assessment where the Extension educator talked about his role as the expert in helping people interpret what they really need instead of what they say they need. The role of the Extension educator as a guide came up a couple of times. One Extension educator spoke of work with youth when he said:

I guess, for me, the way I've heard it explained, especially with youth-type programming, is instead of being the sage on the stage, being the guide on the side. And that we're not here to necessarily just spit out the answers but ask the right questions that help engage them in learning, help them learn how to inquire and come to the right answer and come to the completion of the project through guided assistance.

Another Extension educator shared:

And so, with the engaged model, you become more of a facilitator of the process than a facilitator of the knowledge. And in a way, we become the local Google. To where Google doesn't create the information, they just find a way to bring the information in a concise format to the person who's looking, and so we're doing that. With the engaged model, you're doing that with learners as you're helping them get access to the knowledge, even though you may not be that expert there.

Another Extension educator from State2 expressed the importance of listening to the different perspectives of people in the community in addition to using her own expertise. She said:

It does involve using my perspective and my own judgment as I work through everything to determine whether the solutions or the projects will truly have impact based on the desired goals. That's important, but I've learned again, through working for many people, some of them, very small businesses that are led by one person, that when you've got somebody who doesn't really listen to the boots on the ground and in this case, in Extension, the boots on the ground are the people that are living in the community. And you can live there too, but your perspective is completely impacted by your filters as everybody else's is. So, if you look at everything from your perspective and you don't listen to the other

perspectives, that are just as relevant as yours, you're going to miss something.

Shared Learning

Shared learning as a part of the definition was not mentioned in the interviews in State2. In State1, shared learning was also referred to as co-learning and two-way learning and the engaged model was described as creating a co-learning environment. One Extension educator from State1 expounded on who would be involved and how co-learning might occur in his practice as he said:

I think I have the gist of what you shared. The engaged is more of a co-learning, you know, with clientele. In my case, you know it would be the growers, farmers, people, listening, learning, sharing, of course, I would have some expertise to add, but there is a lot of value in listening to them as well and their understanding and you know I think we have as much to learn from them as we have to share with them.

Another Extension educator related this to one of his specific programs, suggesting that the interaction and learning continues beyond the confines of what may be defined as the program. He said:

And it's [the audience] small so we can interact and have that two-way learning. We learn as much from them because they have experiences with their system. It's a good learning experience, interacting with them. And we interact after they graduate. We still interact with them.

One State1 Extension educator shared that she emphasized shared learning to build relationships through established trust and respect when she was beginning her career. She said:

When I started out, . . . I felt like it [the engaged model] was one way to gain more trust and respect. If I set about with the desire that I don't know everything, because I don't. And there's a lot of experience and expertise that the farmers and the ag industry people I work with also have. And that for me, personally, a better way for me to gain respect, to gain trust in my programming, would be to work together in a co-learning environment. And so, that's really part of the reason why I set about this approach for myself. And it's really worked well for me in all my programming that I do, whether it's-- pretty much all the programming I do with presentations.

Emerging Concepts

The Extension educators suggested other areas to be included in an operationalized definition of engaged program delivery in Cooperative Extension. These include considering the way in which the definition is framed. Multiple touches or interactions, two-way communication, and emphasis on quality learning experiences.

Framing the definition - One Extension educator in State1 emphasized his agreement with the definition, specifically because he felt it clearly defined this model as being very different from the expert model. Another emphasized that the engaged model was something much bigger than learner engagement. She said, "I had to take a step back and realize that we're talking about even something bigger than just learner engagement

with this piece.” Yet another educator suggested that the engaged model is a “network sort of model.”

Multiple touches/interactions – Some Extension educators in State1 that prefer use of the engaged model indicated that multiple touches should be included in the definition. One Extension educator said:

But I think it's more also than just one or two times, that I think it's important to be in the definition that it is a interaction back and forth, back and forth. And it may change on the subject matter. It may change to something else, but they're still engaged. They still want more. They still want to be part of what you are doing.

Another Extension educator emphasized use of multiple touches specifically in complex situations.

Two-way communication – The “back and forth” of two-way communication was also emphasized in State1. Ongoing communication, two-way communication, and communication of impact were mentioned in State2. An Extension educator in State2 also suggested formal and informal communication with stakeholders as a “complement” to the definition. An Extension educator in State1 said:

I don't like to be the expert and just having it from me, the one-way communication from me to the team. Instead, I think teams are more successful if they collaborate and it goes back and forth, the

communications, to help develop and identify whatever the team needs to do and complete.

Emphasis on quality learning experiences – One Extension educator in State1 emphasized the importance of providing “deep, robust, rich, learning experiences.” Another Extension educator who prefers the expert model referred to Knowles’ andragogy in suggesting that engagement is “. . . really relying upon experiences that have been proven to be effective and valid throughout the existing experiential base of the learners and then tweaking, modifying, adding to, [and] challenging, some of those as you move along.” In State2, one Extension educator specified the use of andragogy for engaged program delivery as opposed to pedagogy for expert program delivery. Other Extension educators in State1 spoke about meeting learners where they are and providing “learner-centered” educational experiences.

Extension educators re-emphasized community involvement in identifying the problem and in the back and forth of on-going relationships. In speaking about using andragogic approaches in the engaged model, one Extension educator suggested that being able to “get students where they want to be” was the result of “excellent facilitation.” Finally, another Extension educator in State1 emphasized that educational programs may be provided in both formal and informal ways depending on the needs of the learner.

Extension director feedback

The Extension Director in State2 was “pleasantly surprised” to learn that Extension educators were thinking about engaged models. However, he observed different levels of understanding around the meaning of the engaged model. He observed that many people talked about needs assessment as a means of engagement and did not talk about including clientele in program planning and through evaluation.

I asked the Extension Director in State1 about Extension educators feeling that they needed to interpret what people said they needed. He said that sometimes a farmer may need help framing a solution. Sometimes they are looking at the problem only from their experience and the Extension educator can help put the problem and the solution in a broader context. He said the “deep listening – seeking to understand” of the engaged approach may identify underlying issues that help frame the problem and solution that might be missed by the expert approach.

Both Extension Directors spoke about the concept of shared expertise. The Extension Director in State2 spoke of Extension educators connecting the expertise of the university in a broad range of topics to the community. He spoke about the value of our “inreach” possibly being more important than our “outreach.” He also specified that sometimes the expertise that Extension provides is in the process.

The Extension Director from State1 emphasized that sharing expertise does not mean you are giving up your expertise. He quoted another Extension Director in saying that in shared expertise, Extension contributes its research basis while others bring their real-life experience. The research basis helps to strengthen the conclusion.

The expert model

Findings are summarized here related to definitions of the expert model as provided by the panel of experts, the semi-structured interviews and the Extension director feedback.

Panel of experts

The expert model of Extension delivery was defined for the panel of experts as follows.

Expert model of Extension delivery emphasizes a one-way flow of information. The University through Extension serves as the expert and provides guidance and responds to questions. Program needs may be identified locally or at the university level. Program planning, implementation and evaluation are internal activities, managed primarily by the University.

As stated previously, the panel generally agreed with this and the engaged definition. However, one respondent identified the outreach component of education through Cooperative Extension to use the expert model. This person shared that issues addressed through the Extension Disaster Education Network (EDEN) are an example of outreach. The respondent further specified that outreach “means taking the answer to the people.”

Semi-structured interviews

The definition of the expert model of program delivery as provided to the interviewees was as follows:

The expert model of program delivery emphasizes a one-way flow of information. The University through Extension serves as the expert and provides guidance and responds to questions. Program needs are identified and program planning, implementation and evaluation are internal activities.

There was a lot of agreement of the interviewees with the definition as it was presented. Basic components included: (1) the one-way flow of information, (2) the singular source of expertise, (3) the role of the expert in providing guidance and responding to questions, and (4) the internal processes associated with program planning, implementation, and evaluation. The interviewees in State1 did suggest that an additional role of the expert in this model is in providing information. The definition is worded so that it is not clear who identifies the needs, creating opportunity for discussion. The findings are summarized here.

One-way flow of information

Extension educators agreed with this part of the definition in general. One Extension educator from State1 responded that with this model we have “the expert not really looking for a lot of input.” Another defined this model as being “where someone stands up and says, ‘This is what it is, here’s a problem, this is how we went about trying

to solve the problem, here are the results and we thank you for coming.”” Another Extension educator referred to the expert model as a “bucket-filler” approach where “you’re just giving information out to a person in a one-way flow.” Yet another Extension educator referred to it as a “top-down approach rather than a grassroots or front-line staff on up issues . . . identified as a need.”

One Extension educator from State2 responded to the definition suggesting that although the flow of information may be one-way, there still can be two-way interaction with clientele. He said, “I mean, I know you said the emphasis, the one-way flow of information. I guess that's true, although I would say within that model there's always room for discussions and questions and feedback as well.”

Extension educators from both states indicated the one-way flow of information to them was synonymous with top-down programming. They see this in mandated programs and in some of the planning that originates from the University. One Extension educator from State2 said:

Yeah, I guess I wouldn't really say it's different, but I think a lot of these mandated programs that we have to do is a good example of expert model. In [this state] we're big on-- and really in Virginia too, the water quality issues are huge. So, a lot of the clientele do not see that as an issue, but we have to really employ an expert model where we come in and say, ‘Well, this is what you need because of xyz.’

Another Extension educator shared:

I guess I would define it as more a top-down charge for programming. So, that one-way flow of communications would be a little bit. So, in our institution, we have focus points, or themes, or whatever they decide to call it from one year to the next. And so, there is that top-down charge with emphasis in particular programs. And so, in our state, one would be water quality. Another one along with that would be fertility, . . . Healthy living probably would be another one. Even though everybody knows they're supposed to live healthy. But that's a charge that I don't know if many of us in Extension wouldn't just grab ahold and do that. But because of the emphasis in that area, that would be an example. But that's kind of where I'm coming from with that, I guess.

An Extension educator from State1 also suggested that the expert may not listen, even if input or feedback were provided. Finally, another Extension educator from State1 suggested that one-way communication may be appropriate when providing time-sensitive, seasonal, safety information.

Source of Expertise

In the definition of the expert model, the source of expertise is defined as being from the university. One Extension educator from State1 said the definition “sort of assumes I know more than them and I’m going to impart my knowledge to them.”

Another Extension educator from State1 responded:

I also think that we use that model as well, but surely that is that person who has developed their information base, they know that issue or that

content very well, and they go to a group of people and say, 'I know about this. Would that be helpful for you? I will schedule this class, or this program, or this coming together so that we can discuss it. Let me give you some information that will help.'

One Extension educator from State2 agreed as she said, "I think that your definition is right. Yeah, I think that your definition is correct, that the university would be positioning itself as the expert in all areas." Another Extension educator explained that this is how we separate ourselves from other sources of information. He said:

Well, I think that is pretty accurate. I think that's often how we describe ourselves, as being the non-biased, research-based information, and that differs us from a Google answer or from the blogger who just is putting up an answer. That our answers should be different because we bring an expertise to a specific topic.

Other Extension educators suggested that the expertise referred to individuals in the specialist role at the university. One even specified that this is often the case in the agriculture program area. Another Extension educator said:

I don't know that I would define it differently, as much as it just seems more like a-- almost like a state specialist type position, where they have their research and the knowledge and they're disseminating it to the public or to the learners, versus that two-way that you get with the engaged model.

Another Extension educator spoke of a team that he works on that collectively plays the role of the expert. He shared:

No, that's kind of about it. And we don't use it like a sole expert. It's more for us-- what's worked for us is that we're a team-based, because we're as far away from the university as we can. There's four counties that work together, and we're almost like a engaged model as the experts, if that makes sense.

Expertise can be given to others as indicated by one interviewee. In this case, selection of the right expert is important. He said:

Sure. So, it boils down to a specialist that either we, internally, in Extension have known that this person is either scholarly achieved in that area - they've studied it, have degrees, and maybe a Master's thesis or a Ph.D. that's kind of related to those areas - and we know that that person comes with the credentials to really care enough to be informative or an expert in that area. Or we've observed them in the extension system that they've either written, published, researched, whatever, they've been identified as a person that has spent enough hours to be considered that expert. I've heard one time that there was a quote that it takes a person 10,000 hours - I'm not sure if that's right or not - ten-thousand hours to be considered an expert in a field. Whether that's training, teaching, education, it's just 10,000 hours on the job to be good, really, a

specialization at something. So, those are the kinds of experts that we would look for to place at the front of the room or to teach in those areas when we know we have a clientele that is probably delegating that educational trust into the expert. Now, if I do a poor job of selecting that expert, and my clientele feel that they've placed their trust improperly, then the credibility of Extension starts to deteriorate pretty rapidly. So, finding the right expert is always good.

Finally, another Extension educator from State2 indicated that there is room for some sharing of expertise with clientele, even in an expert model. She said:

I guess I'm not sure this is what you're looking for, but I think that an expert model would still include maybe some stakeholder involvement to help guide not just solely maybe what that expert thinks, but having a stakeholder policy group that guides them in some of their decisions.

Roles of the expert

The roles of the expert in this definition include providing guidance and responding to questions. Based on the interviews, the roles have now been expanded to include providing information. An Extension educator from State1 said this suggests the expert is “coming in with recommendations and guidelines and advice.” Another Extension educator said:

For example, there might be a topic that's an informational topic that a lecture - a one-way communication - might be acceptable. They come to a

meeting, they want to hear something about a topic, and then they go home, and that's the one contact we have with them. There might be an individual who's not really interested in solving complex issues, not really interested in a sustained relationship. They come in with a bug. They want it identified, and how do you get rid of it? And so there are probably times that that works well.

One of the Extension educators from State1 who preferred to use the expert model shared his description of the expert model as mimicking the research, science-based instruction at the university in a community where the audience is often comprised of adult learners. He said, "So it's a research-based discovery of truth through unbiased double blind and statistically significant discovery that extended to the citizenry that ultimately pays for the research." Another Extension educator from State1 suggested that an expert may proactively provide information. She said:

But I think the expert also may see a need to proactively get information out on something. However, their way of doing that may be one way, especially if there's a very time sensitive element on that. Like, if it's around Thanksgiving, and I had heard there was some food safety problem with turkeys, I wouldn't wait until a client asked me about this. I would proactively get out information. Though that may be one-way model, it may then turn into engagement if I send something out on Twitter, or Facebook or something, and it leads to further questions and engagement.

An Extension educator from State2 suggested that guidance may benefit the community in securing a better future. He said:

There may be situations where, if we're really looking ahead and we see a situation coming that we can try to shape the future, so to speak, with good programming or education or providing something for the producers.

There may not even be an awareness that this is going to be a need yet.

We're doing more, I guess, preventive types of programming, so then that engaged model may not be the right one because it may not be something the community would perceive as a need yet, and by the time they would perceive it as a need, now you're reacting and maybe you haven't-- you're in a corrective phase rather than trying to, I guess, make a better future for a lack of other words.

Program development processes

The discussion around program development processes revolved around whether or not there is room for input from clientele in the expert model, especially in the process of needs assessment. An Extension educator in State2 said:

I would call that your gut feel programming. To me, it's a gut feel. It's - maybe there are issues that are identifiable based on your experience and being in the community, and feeling, and reacting, and hearing what they're not saying, and then developing programs tailored

specifically to those needs and it's-- maybe identify needs that they don't even know are needs.

Some Extension educators said that even when Cooperative Extension operates using an expert model, it usually does encourage input into the process of defining community needs. One Extension educator from the engaged prospective shared:

That's kind of a little bit harder because when I think of the expert model, I'm thinking, in Extension we had used that model quite a bit. But I think we have also included with that model, what do the clientele want? And that is where we have done surveys - we've gone out and asked - we've communicated with them in different ways - to really know what our programs should be and what they really needed.

Another Extension educator, who prefers the hybrid model said:

I think the expert model you have identified emphasizes a one-way flow of information. I think that's, in general, true. However, I would observe that many times experts are asking for input - ideas, seeking to identify where information is needed and also research is needed. So, I think the expertise or expert model that you give is a little bit narrow in terms of what I actually see be implemented and utilized.

Another Extension educator from State1 disagreed suggesting that the expert model does not allow for input into any of the program development process, including needs assessment. She said:

I think the other way that I think about an expert model, or when I think about that type of model, is that there basically, in my opinion, is no input at all into the entire process. So, no real input regarding the needs assessment. The person delivering the program is the one who basically comes across as having all the answers. Even during the program, or presentation, or the process, perhaps doesn't seek input. Or if it's provided, perhaps doesn't listen, or encourage the input, or the differing viewpoints.

Finally, an Extension educator from State1 suggested that experts may tend to work around their needs to an extreme rather than considering the needs of the clients. Coming from the perspective of an Extension educator who prefers the engaged model, she sees this as potentially having a negative impact on Extension programs. She said:

And with an expert model, we'd be, 'Hey, it's not convenient for me to do it at this time or be there till 5:30 or whatever. So, that's what I'm going to do.' If we kind of dig in our heels with an expert model, we're the only giver of the information, we're the knowledge holders, the expert model, and therefore you will do it when I want you to do it. People aren't going to be as engaged in learning about things if you're not really aware of what their needs are as well.

Extension director feedback

Extension educator comment about using the expert model to respond to people who just want answers came up in my discussion with one of the state Extension directors. He shared that sometimes this is the case. He said we often think of the noble approach of teaching people to fish rather than giving them the fish. He said that sometimes we need the discernment to realize that people do “just want answers” so that we don’t waste our resources, time, and their time trying to teach them to fish.

A mixed or hybrid model

The concept of a mixed, or hybrid, model emerged through the semi-structured interviews. It was not evaluated by the panel of experts. Responses from the semi-structured interviews with the Extension educators who identified with this model are included here. Also included is discussion with the Extension directors around this concept.

Semi-structured interviews

There were a few concepts that emerged in reviewing the definitions and examples provided by Extension educators who felt there was a hybrid or mixed model of program delivery. This may be expressed in many ways. Primary examples of the hybrid model that were shared included (1) using parts of the different models at different stages of the program delivery process, (2) extending the role of expert to incorporate partnering

organizations, (3) including more back and forth in the answering of client's questions and requests, (4) considering the roles of Extension at the county and state level, and (5) using an example that is used by other Extension educators to describe engaged practice. The Extension educators' comments suggesting each of these are included here.

Using parts of the different models at different stages of the program delivery process

One Extension educator in State1 emphasized that the Extension program delivery model is fluid. She said:

I think it's a pretty good definition and if I was going to change anything on that I might-- to me, I think that engaged model, sometimes it's fluid; sometimes it might expand and sometimes it might contract. So, to me, it's kind of a fluid model as well.

An Extension educator from State1 suggested a model "between the engaged and what you defined as an expert model," referred to as a hybrid. She said the difference in this model would be that "you have key involvement in identifying issues, perhaps even on the development of those programs to address those issues, and lean towards more maybe the expert side then when it is implemented and developed and evaluated." An Extension educator from State2 shared that in a hybrid model, the engaged model might be used for program planning followed by more expert delivery methods. She said:

I think the most of the time there's a little bit of both. I think that there's a lot of the engagement model used during the program planning process,

but then during the program a lot of times it is more of a lecture than a-- not necessarily a lecture but it's more of the expert model during the program.

Another Extension educator shared examples of how she used a hybrid approach in face-to-face programming working in partnership with a local medical center. She said:

For example, every year I give this big program with a local medical center. And during this program, that we ask in part of the evaluation what would you like to have next year? So, I get some ideas for things of what might be possibilities for the next year. And then I review those with the medical center and get their input of what they would like. At that point, I review all the research and become the expert, at the same time, getting input from colleagues and support staff on which parts would be of most interest to an audience. While I'm not creating every minute of this with somebody, I am collecting information from others and using additional data I have from clientele.

In another example, she talks of gathering input for programs online and from reviewers:

I look at Google Analytics to see which pages are the most popular. What are people interested in? What is drawing them? Is that something I should be doing more of? I have feedback systems on everything, on whether it was helpful to them, the opportunity for comments to get more things

back. We have our email addresses on every page of our website, so if people want to interact with that author and ask questions they have that opportunity. And there's an opportunity to ask a question on every page of our website. Google Analytics also tells us what people are searching for. I hear the word engagement a lot, and I try to always get feedback from people and interact with them in various ways. For example, I get a lot of feedback from reviewers and end-users when I develop a PowerPoint so we're co-creating the final thing. But we're not starting out with the plain piece of scratch paper ourselves.

Another Extension educator from State2 used part of the expert model to identify needs and initiate programming with a part of the engaged approach being used after clientele become more involved. The Extension educator described this as follows:

Well, I think sometimes clientele don't always know what they need. And so, having that expert model maybe to start initiating some kind of program. From that, then, what we or what I've tried to do over time in my years of Extension time is in those expert model roles initiated, but then maybe the following year or in ongoing projects where programs around that idea start pulling in some engaged involvement to make it fit better to the community, or the surrounding, or the clientele that I'm dealing with.

Another Extension educator emphasized her program delivery style within engaged planning when sharing her hybrid approach. She said:

I'd like to say it's more towards the engaged model from the standpoint that I seek input for what are the needs, and work with a group of people in order to put together a program, put together a demonstration, and so forth to address those needs. When I present, I'm one who, from the very beginning, has never wanted to be seen as the expert, but to be in a process of learning with the attendees in my program. So even though I may be the one upfront, how I like to present is more asking a lot of questions, having a lot of engagement, so it's a co-learning experience. But I am the one who usually develops the evaluations versus asking for input into the evaluation.

Extending the role of expert to incorporate partnering organizations

The second type of description for a hybrid model seems to support the concept of shared expertise of the engaged model with greater emphasis on implementation by Extension. In this example, expertise is shared by all the participants planning an event. The Extension educator from State1 shared:

So here are the definitions I put in that you had for the engaged model, another one for the expert model, and I kind of thought it would end up being kind of a mix. I would say, I'd characterize it-- it's a primary flow of the information from the university through Extension. But there's numerous organized stakeholder groups and unorganized stakeholders that provide programs, suggestions, alternative plans and even best ways to implement some of our programs. So, for example, commodity groups that

I work a lot with - corn and soybean check-off or commodity groups.

Often, our funding partners are key partners where we actually do implement and plan some things together, but a bulk of the load in terms of actually implementing or organizing the event is still on Extension. . . .

And so, I would say university and key partners, concerted experts, so not just the university but sometimes the key partners that are also experts and provide guidance and respond to questions, as well as program planning is based on both stakeholder comments and feedback. But like I said, implementation is still largely by Extension, not by our partners. And evaluation of the program is both external stakeholders as well as ourselves internally evaluating it. So, I think it's kind of a mix of both. But I would say it generally leans a little bit more towards the expert side, yeah, within that model.

Including more back and forth in the answering of client's questions and requests

In the third situation, the Extension educator describes how he might address a homeowner question through a more interactive approach. He shared:

Even like in home and lawn and garden questions, I'll ask a lot of questions, so that I maybe clearly try to clearly understand what is going on, you know. If it's a lawn issue, it's like, 'Well, what's happened to your lawn? Have you fertilized? Have you treated with anything? What's your watering scenario?' So, I'll ask a lot of questions. And answers aren't always cut and dried. You know, it's like you aren't absolutely positive so

I would come across in more suggestive ways. Like, ‘This is probably what’s going on, and you know you can try this, or this might help you.’ And they’re really coming to me for answers but I do a lot of questioning to get the background information on the situation. So, you know, that’s kind of a blended model. If it turns out to be white grubs in a lawn and I look it over and check it out and I lift up the lawn and there’s the white grub, then I will give them a very affirmative answer and an affirmative solution of what to treat it with and when to treat it, if they so choose.

Through this discussion, the Extension educator is drawing upon the “expertise” of the client. In the end, there is a single diagnosis and recommendation for treatment that comes from the Extension educator. But the client determines how the recommendation is implemented.

Considering the roles of Extension at the county and state level

An Extension educator from State2 suggested blending the two models with the expert model being based at the university and providing programmatic focus while the engaged model could be used to customize the programming at the local level. She said:

I think a blending of the two. There needs to be state-- a state can identify some teams that are-- or trends that it would be good for everyone to focus on. And they have research. And they know maybe the best way for people to reach out. But then, every community is a little different. And so, what works in [one large city] isn't probably going to work where I live which is kind of a medium sized community. And what works in my

community, is probably not going to work in one of our tiny communities.

Because you have different partners sitting at the table.

Using an example that is used by other Extension educators to describe engaged practice

The fifth example of a hybrid model provided was that of the On-Farm Research project which is discussed further throughout this paper as an example of an engaged model of program delivery. Here is the example;

Let me give you an example, and then you can decide if it's different. One of the projects I initiated back in 1989 was a project at the time entitled [the state] Soybean and Feed Grains Profitability Project. Today the name of it is [state] On-Farm Research Network.

In '89, or in the 80s, I realized farmers were making production decisions based on, in some cases, not all cases, but in some cases, based on bad information. What they were doing is they were making comparisons in the field and not using appropriate design to manage the inherent variability in the field. Essentially what they were doing was they were planting treatment A on the left half of the field and treatment B on the right half of the field. They were looking at the two yield results and saying 'this one's better than the other,' when in fact it may not have been the case because they weren't partitioning. They weren't able to deal with the variability that existed in the field. So, we started the On-Farm

Research Program . . . and it has evolved over time to now where it's called the [State] On-Farm Research Network.

But this is a project where we--a program, where we work with farmers and they come to us oftentimes and say, 'You know, I just don't feel I have my feet on the ground or I have a good handle on this production practice in growing corn and soybeans.' And I'm wondering if I would look at this process of growing corn and soybeans, or this method of growing corn and soybeans if it would enhance profitability. And so, we sit down and with growers, we talk about it and we talk about the science behind it, so forth. We talk about the issues associated with this new production practice. And in short what we do is, we develop a design where they can use their own farm equipment and their own brain and lay out, usually they're field length strips, where we have treatment A versus treatment B, and in some cases when they have treatment A, B, and C, and D. Also, studies that's looking at A versus B. We've talked to-- we've shared with them the importance of replication and randomization and in short, they turn over the raw yield data, most times they're just interested in yield because that's what they get paid for at the elevator. We did a statistical analysis on it, we write it up, put it in a book, and then we go across the state in the month of February and we share the results of all the studies that we've conducted with growers across [the state].

Now, when we started this project it was confined to the county that I worked in. I had 12 growers in a pilot project, it soon blossomed to surrounding counties but today it's a statewide program. The engagement is the grower is engaged with us in sharing a concern they have, and also to talk about the impact results might have in the profitability of their farming operation. That's a description of it in short. That short description.

Extension director feedback

The Extension Directors had different thoughts regarding how we define the engaged and expert models and whether a definition was needed for the hybrid model. Both agreed that there may be times when you use all or parts of each model, so there is a degree of fluidity as suggested by the Extension educators. The State1 Extension Director supports using the hybrid model to explain situations where people interchange the models. The State2 Extension Director suggests the models are on either end of a continuum and depending on numerous criteria such as the presented need or even the career stage of the individual, they may move along that continuum towards either end of the spectrum.

Implementation of Engaged, Expert and Hybrid Models of Program Delivery

The purpose of this section is to define how engagement is implemented at the local level. More specifically, when or why is the engaged model used as compared with use of the expert model? In addition, what are the specific types of programs in which the engaged model is being used? Who are partners in these programs? And finally, how is an engaged model of program delivery implemented?

The research question being addressed in this section is: How is engagement implemented and more specifically when and why is an engagement model used as opposed to an expert model? The theoretical research assumption upon which this research question is based is that Extension educators use both engaged and expert models of program delivery in their practice and that their use of the chosen model is dependent on the situation they are trying to address.

Implementing the engaged model of program delivery

Findings presented here are from the survey of the panel of experts, the semi-structured interviews with the Extension educators, and the discussion with the state Extension directors.

Panel of experts

When asked to define the engaged model, members of the panel of experts suggested that the engaged model of program delivery is used for purposes of co-creation around topics such as use of wind turbines in populated areas.

Semi-structured interviews

To gather insight into why and how the engaged model was used, interviewees were asked to identify the situations in which they used this model. They were then asked to identify the processes they used to implement the model. Findings indicate why or when the engaged model is used as well as how this model is used. This section begins with findings related to when and why Extension educators use the engaged model of program delivery. This is followed by an overview of the findings related to the programs and partners associated with engaged program delivery. Finally, the findings related to the processes of using the engaged model of delivery are presented within the context of the components of the definition of the engaged model.

Why engage?

Extension educators in the semi-structured interviews were asked why they used the engaged model of program delivery. One Extension educator from State2 responded:

I think that's just the way I work. I like to work with people. In a 4-H program, in all Extension programming, we can't do it ourselves. So, we have to bring people along. And especially when volunteers implement so

much of the program, and they're such a key factor, it's easy for-- if an Extension professional comes in and makes a lot of changes, usually they're doing that quickly. Many of those changes they're making on their own without bringing the people along. So, that's probably more of an expert model, or maybe it's just what they want to do. But we have to engage people as we move along.

Emerging themes derived from the Extension educator's responses in both states are grouped here in six categories. Extension educators indicated that they used the engaged model: (1) to develop solutions in complex situations, (2) to address specific types of topics, (3) to build and strengthen relationships and social networks, (4) to provide customized learning experiences that meet the needs of specific audiences, (5) to develop and improve program support, (6) to achieve better learning outcomes and sustainability of solutions, and (7) to meet needs based on Extension's role. A summary of the Extension educator's responses in each of these categories is included here.

Why engage? To develop solutions in complex situations

Respondents reported using the engaged model of program delivery in situations where there were unsolved questions, complex situations, and dynamic situations such as emerging issues. In addition, there is a wide array of types of topics that Extension educators described as being conducive to an engaged model of program delivery. These include community-wide issues, industry-specific issues, and on-farm research. In addition, topics where there may be multiple solutions, or where change is possible were included.

One Extension educator from State1 shared how he uses the engaged model to interact with growers and industry in on-farm research to find answers to production challenges and provide shared learning experiences in complex situations where nobody knows the answers. These situations provide a good opportunity to gather people with different types of expertise around problems to learn together and develop possible solutions. He said:

You know, if I'm going out, literally, some of my projects - I, or the grower, or industry really doesn't know the answers yet. So, everybody's interested, you know everybody. The grower will throw in their expertise. Industry would throw in their expertise. I would throw in my expertise. And then we would go forward with a - like an on-farm research project, which I do a number of and we will all be learning together. I mean, I'm going to handle the data; I'm going to analyze the data. But we're going to come back together and discuss that data. And you know, come to some conclusions or some strong leanings. You know, if we can do multiple years of research and come up with the same answers, the same trends, you know we get more firmer, stronger on our conclusions, we're sort of in that scenario all becoming more experts together, with questions that none of us totally know to begin with, the answers yet.

An Extension educator from State2 also spoke of using the engaged model in on-farm research. He shared:

I think I'm encouraged because when I involve people in a program - and this isn't just a meeting with tables and chairs, this could be an on-farm research project where somebody comes to me or a group of people say, 'We have this problem with corn production', or 'We're observing this kind of insect', or 'We should be getting protection from this strategy', and so on. 'We're just not seeing the protection that's maybe advertised or should be.' And so, when we engage them in the process and then we get to the end result, and they, themselves, find results from their own farm, from their own experiences, with data that they helped me collect or they collected in cooperating with me in either a group of producers. And to hear them talk about the results that Extension helped them find and hear their conversations about the value of what that allowed them to do and not do. That's very encouraging of that process. Because they couldn't have felt the need any more than what they did, and they felt it. They had that problem - they felt it enough to speak about it and ask the question for us to be engaged in helping them find a solution or a direction to head in - that's encouraging.

Another Extension educator from State1 spoke about the use of the engaged model in addressing ongoing, complex issues of national importance. He said:

Some of the different areas that are more engaging than others, where we're looking at different issues that there's a lot of unknowns there. Agriculture's always changing, and there's you know issues with the

environment and technology, and concerns as well, the climate. All these are different issues that are coming up and we're looking at how we can be the most sustainable as we move forward and as a state, a nation, and the world. These are things we're looking at all the time and engage as much input as we can from the people we serve. And sometimes it's something where we're learning together and actually there are many times that there are grants that really promote this. So, there's opportunities there to get some funding to do this type of programming in this area. And we've done some of that in the last few years.

Some Extension educators spoke of using the engaged model when dealing with emerging topics or when planning new programs. One Extension educator in State2 shared about his experience in working with producers in developing a new program for a fruit school. He will rely on the expertise from the clients in different ways depending on his familiarity with the topic. He said:

Certainly, in new programs, because that new program was derived from a felt need within a clientele. That said, well we ought to offer-- I mean take this to our fruit school, for example, this year. It's a one-day conference that felt like we received a few clientele that said, 'Well, why don't you offer this? Or why don't you offer that?' So, that's a new program. So anytime there's a new program, I would lean on the engaged model more to get input from peers or clientele. The areas where I'm not an expert, I use the engaged model. So outside of agronomy and farm management,

are my specializations, I would work hard to use that engaged model. But even in program areas or specialization areas where I feel comfortable and confident, you're always trying to seek input and advice on how to help clientele more. So, yeah. New programs in areas-- the short answer is new programs in areas outside of my expertise.

Community-wide issues were another area of emphasis for use of the engaged model of program delivery in State2. One Extension educator spoke about working with communities to improve their economic situation through business retention and expansion. She said:

Typically, when there's a need that the community wants to address and they reach out to us, and then we basically come to the table and work hand-in-hand with the community on what it is they need and how, any kind of structural program that meets their needs, and then go about working with them hand-in-hand in delivering it. For instance, an example might be a business retention and expansion program where they've decided that they want this service or they need our help. We sit down together and decide what businesses they might want to target, and we put together a survey instrument based on their direct input, and implementation is-- typically involves them almost exclusively.

Sometimes we don't even get involved in the actual implementation. We help them design the program, but oftentimes they actually deliver it. So, that might be an example.

Another example of using the engaged model to develop a solution in a complex situation was that of the Extension educator working with schools, parents, and the health department to provide healthier food options in schools. This Extension educator shared how she identified a complex issue through interaction with various parts of the community and how that has led to the establishment of a team to work together to develop a solution. She said:

Well, success of past programs that have done that [encouraged use of the engaged model], common sense. Let's see. I am blessed to work in a community that for the most part, works really well together. So, one example is that I have two program assistants that go in and teach nutrition education in the elementary school. And they're hearing from the teachers that the school breakfast need to be healthier. That they're filled with too much sugar right now. And then they're trying to teach these kids. I'm also hearing the same thing from parents. 'My kid eats a healthy breakfast at home, and then they have to go to school and they're presented with this breakfast whether they need it or not' because everyone gets the breakfast. So, parents are frustrated, teachers are frustrated, and of course, a lot of it goes against what my program assistants are trying to do. Well, at the same time, our community health assessment headed up by our health department was identifying obesity as a top priority to work on.

So, I approached the health department director and I said, 'I would really love to work on something with-- healthier options in the

schools.’ And that came out to be one of the action steps. So, we’re just in the process of forming the group now to tackle that, to work with the school and the menus and trying to see what we can do. And even classroom management, so if it’s a classroom party or to just to have healthier snacks or no food. You don’t have to have food to have a party. . . that would be an example of kind of hearing the needs from a variety of sources, and then working with others in the community to address it.

Why engage? To address specific types of topics

The engaged model of program delivery is used to address specific types of topics. Examples provided by the Extension educators included areas in which they do not have a knowledge base, subject matter that supports peer-to-peer or co-learning, and topics that may be more open to personal interpretation. Some Extension educators responded in general that they used this model for programming that was not mandated. One specific topic area identified for use of the engaged model was local foods and food security.

In an earlier example, an Extension educator talked about how he uses this model in areas where he has less expertise to learn more about the topic from clientele. Other Extension educators in State2 also said that they turn to the engaged model when they lack the knowledge. One Extension educator said, “I think when I lack the knowledge base in the area to be presented or [do not] have the ability to identify the problem to be solved is when I use that [engaged model] the most.”

Why engage? To build and strengthen relationships and social networks

The engaged model of Extension program delivery is also seen as ideal for development of long-term relationships through improved interaction and shared learning. Relationships are built through the process of solving complex issues and can be sustained over time. Extension educators used this model to develop communities of shared interest in which relationships developed not only with them but also among the clientele and in online as well as face-to-face environments.

One Extension educator spoke of using the engaged model to provide community connection and build trust when working with an Amish community. He said:

I've got one committee, for example that I work with, with an Amish population here. They very much want to make sure that they're using other farmers and other people from their community. So, I'm helping to facilitate that, but we're using that engaged model to make sure. That might be the best way of reaching that particular audience.

Another Extension educator in State1 suggested that working through the engaged model with shared expertise set the stage for him to move forward in “a more relational, positive way” when interacting with clientele. He said he used this model because:

Quite frankly because, I or the universities aren't ye of all knowledge. We don't know it all. And if you go into something thinking that you kind of know it all, first of all, you can be, you know there are umpteenth personalities, but it can kind of come across a little bit arrogant. These

guys kind, sort of, think they know it all. And it's foolish because when you think you know it all, a lot of times you end up being wrong. I just think it's a more relational, positive way to go forth. Learning together, not assuming, you know, I, we, know everything. Knowing as well that these growers, these guys have been working the land for, you know, three, four generations. They really know something as well. And probably they know more - they do - they know more than I do, in many ways, of the practical things. I can come in with some good suggestions. And some things that might help them, but they know it. They know a lot.

An Extension educator from State1 talked about using the engaged model early in her career to establish relationships, but then continued to use it in her programming and presentation. The increased trust and respect provided credibility to her and her work. Another Extension educator from State2 shared that the engaged model of Extension program delivery is the best way to develop "long-term relationships." She said:

Well, I think it's probably the best way to develop relations, long-term relationships that will result in a continual program development kind of model. We work through that engaged approach with like Farm Credit [geographic region]. We worked on a program together with them last year. And then it's a continual piece where they're continually coming to me, asking me to develop programming. So, I think it does create for some long-term relationships on program development.

Another Extension educator mentioned seeing a difference in how industry responded when they were partners, valued for their expertise, rather than just sponsors in the engaged model. She said:

I think the industry people become much more engaged when we work with them in that kind of a model, as we ask them to be at the table versus being just a sponsor when we bring someone in. And they're part of the development of problems to be solved and solutions presented. They can be much more engaged.

An Extension educator from State2 specified the importance of being trusted by his clientele. He said sometimes he must get more information to help his clientele better define the underlying causes of a problem. Having a relationship with them makes them comfortable sharing with him. He said:

And that takes a little bit of trust because, if I'm questioning a farmer or anybody, trying to drill more information out of them, and it has to-- that relationship has to be strong enough that they understand that the answers that they're giving are going towards a program down the road, or I'm not sharing those details with another competitive farmer, or land owner, or the brother, or anything like that. So, there's that delicate kind of a relationship that. When we go informal about requesting people's input, their personal experiences may be vulnerable - due to the ethics of the

extension employee, as to - are we using that for program planning, or how are we protecting the clientele's information?

A State2 Extension educator explained how he has intentionally changed his approach when clientele call with questions, to work to restore relationships he feared could be lost through the increased access to information provided by increasing technology. He said:

I think I probably have moved more towards the engaged model. And simply because I guess, for me, what I've seen I guess over the years is even as people come in or call into the office with a question is it seems like the first thing that we want to do is refer them to the web. And so, we say, 'Do you have Internet?' Or, 'Do you have the ability to go onto this page? Here's our fact sheet.' Or here's this information. And while we're trying to show them the source of the expertise that might be there from Extension, in my mind we're also kind of training them to-- you know, you don't need a person in your local county to answer that question; you just need the web. And even some of our legislators are saying, 'Why do I need Extension if I got this smartphone in my pocket. It's got in there every answer that I could need.' You know?

And so, to me, the question that I've tried to ask is how do we-- for our offices, how do we make our office, our Extension office in [this] County, a destination again? To where, probably, if you go back before

the Internet and if somebody had a question, they were bringing something to the office and say look at this leaf. They were asking questions about food preservation or things that they were trying to figure out. They were calling with questions, and we moved towards putting information where it's accessible, which is on the web, but then we've lost that hands-on and face-to-face interaction with our clientele because we've shifted them to there.

So, I think it's kind of, for me, the engaged model is almost returning to figuring out how do we get them engaged and typically that's going to be in a face-to-face environment, at least at first. It could also be in an electronic environment. But like you said in your definitions, it has to involve the two-way flow of information and communication, not just the one-way dump of information.

The ingredients of shared expertise and learning coupled with diverse audiences not only provided stronger learning experiences and solutions but also served as the basis to develop communities based on areas of interest. This State1 Extension educator talked about a diverse board he worked with on an on-going basis to provide a major educational event. He said,

I think the advantage to that is when we have regular meetings with such a diverse group of ag industry producers, university - in that it is really about - people do form relationships, because you get to know each other

over two years in working together. So, it's much more relationship-driven because you have to in that model. And I think that creates some long-term benefits, even when people leave that board. It's a good experience for people to be on it. And I think the satisfaction of attendees, because the board is made up of a kind of a mix of the same type of stakeholders that attend it, we have a better gauge of what people want to see at the meetings for topics, types of speakers, how the event's organized.

Another Extension educator from State1 spoke of the value of relationships and relayed feedback from producers related to the social aspects and relationship building of an educational program in which they were involved. He said:

Basics. Well, I've used the word relationships a number of times, and I truly believe part of the formula for success in Extension work is all about relationships. . . . Give you an example of this on farm research. You know, we have a-- we have a meeting every year. Usually February-March time frame, where we gather the public. Usually that's area farmers and area agronomists. And they come together, and we spend the whole day going over the research results. And I've had, on numerous occasions, participants of a project tell me, 'You know the findings are important, they're of value. What's really the value is the discussion and the discussion during the content of the program. But also, the discussion during the breaks and during lunch and the fact that I've met people that I wouldn't have met otherwise.' And that's a social cultural component there

that we sometimes don't, I think, put enough focus or enough value on. So, relationships, partnerships, getting back to your original questions, I think, have been extremely important.

Another Extension educator from State2 mentioned the benefit of relationships in working with a team rather than having one individual work to solve a problem. She said:

It's because, it's a culmination of a number of different-- it's not one person saying, 'This is how you do it.' It's a complete combination of thought and buy-in. It's more than just one person saying, 'Follow me', or 'Do this.' It's one person saying, 'How can we make this better? What do you think we should do?' Bringing everybody together, and then everybody moves together to solve the problem together, and you've got a team. And it's also because you don't have one person who's established themselves as the positional leader, and you've got a whole team that are working on it.

Comments from this State1 Extension educator provided insight into how community may also be built and exist in online environments because of on-going dialogue.

Yeah, you bring up a good question and that kind of triggered a thought of mine. The last probably five or six years, we've had a no-till listserv where producers, and specialists, and Extension educators, private industry people, are part of this listserv and they can ask any questions at any time. And maybe not every day, but usually several times a week somebody will

pose a question, 'Hey, I'm thinking about doing this, does anybody have any experience doing that.' And I think that's been really pretty good to get some dialogue, again not in person, but basically online. To have that community of support to help people move forward and maybe not make those same mistakes. Then we've also used that listserv to help advertise programs that we're having here in [this state] or in other states that maybe answer some of those questions in that area of interest. I probably need to develop that for our water crops issue team that we're working on, put something like that together so that there could be more dialogue.

A State2 Extension educator emphasized the importance of sustaining relationships to do further work and to provide insight into what does and does not work. She said:

I think follow-up too, by the educator and follow-up surveys, follow-up questions. Once you build that relationship, continuing to engage with that group, you might be able to add more value to them just to-- talking to them about what they're experiencing and offering additional suggestions and so forth. But it also will give you more tools based on understanding truly what was successful, what wasn't, so in the future you can use that.

Why engage? To provide customized learning experiences that meet the needs of specific audiences

Extension educators spoke about using the engaged model in one-on-one interaction with clientele, and in program planning and needs assessment with committees and advisory groups. Ongoing needs assessment and interaction in face-to-face and online environments supports the development of customized learning experiences that result in higher levels of learning by clientele, appropriate application of resources and research and development of better, more sustainable solutions.

An Extension educator from State1 shared how she could customize after-school programs based on the specific needs of the different schools in her community because of her direct interaction with school personnel:

I think something more specific to my program, when we have gone to some of the after-school programs. We've worked with the principals and the teachers at that school to help identify what we're going to teach or what-- how we can help them in their school. And it might be different for-- and it was different for what-- when we went to one school versus another school that was in another after-school program within our county. Very different needs for each of those, but I think that's a little bit smaller scale. But we're just working with them. Helping to identify what would really help the students at that particular location.

The engaged model can be used to customize education to meet the specific needs of audiences. One Extension educator from State2 shared how she adapted her nutrition education to meet the needs of women returning to the workforce. She said:

Well, besides those programs that I mentioned, when I'm called to do a program in the community, I always ask them what they're looking for. I mean, they'd just call and say, 'Oh, we'd like a nutrition program' but I always ask for more specifics about what they're looking for or what the circumstances are. One place I go frequently, it's for women who are re-entering the workforce for whatever reason – divorce, or death of a spouse, or they've moved-- new to the area. And so, they're looking at a lot of different nutritional needs than the stay-at-home mom because they're trying to figure out how to pack lunches, how to have a healthy dinner on the table for their kids when they get home. So, I always try to gear what I'm going to be teaching to what they need.

In another example, an Extension educator from State2 spoke of making office equipment available to help youth in a rural community learn video editing skills to complete a school assignment.

In the on-farm research program, crop producers identify specific production challenges to their operation and then work with a team of specialists, Extension educators and industry personnel to develop and implement research protocol, collect and analyze data, and then evaluate results on their farm. An added benefit is that findings are shared throughout the state. This Extension educator from State1 highlighted the customized nature of the projects carried out in this program and the involvement of the producers and other partners throughout the program development process. He said:

And then the other one is the [state] On-Farm Research Network. So, this is a program where farmers are interested in a product, or maybe how two hybrids compare, and they want to be able to evaluate either management practices on their farm. So, there's a network of Extension educators that provide assistance to them in implementing their research on their farm. So, if the topic, what they want to research, the rates, a lot of that is all determined by the growers. But in terms of data analysis, one is the plot layout, and then the statistics or analysis of the results is really what the university provides. So, it's a very customized approach for every individual grower, which makes it challenging sometimes. But it also makes the growers-- the reason they like it is because they're the ones deciding what they want to do, and we're just there to support them, or help them. And then we do coordinate grower meetings then, so all these growers can come to a meeting and share their results. And we have them present the results of their on-farm study at four locations across the state. Usually, they just come to one. The other locations where the results are presented, usually I or a couple others will present it on their behalf. But usually, we try to get all the growers, who did the studies, come to present at their local meeting to the other farmers.

Another Extension educator spoke about his use of the engaged model to understand better the context of his clientele, and to take advantage of individual conversations to gain insight into needs of the greater community. He said:

Yeah. So, I think we, in Extension, need to understand that we don't know all the questions that are out there. I just can't sit back and think that I know what every farm manager is going through, whether it's the farm profitability, or production relationships that they have with land owners when they're crop sharing and cash-renting farmland. It would be very egotistical for me to assume that I know the complexity of a farm manager, and that's my primary target. So, without asking them, I would be serving them less by just moving forward in a direction that doesn't involve them. And that's where that engaged model does. So, we may be having a conversation about a topic they call about, but I don't mind, kind of, changing the subject and asking them about things that I've heard about, or I'd like their opinion on, as to a direction of a program that, maybe, best served the community.

Using the engaged model to provide programming for audiences in different contexts than that experienced by the Extension educator was echoed by a male Extension educator in State2. He spoke about his plans for working with a “Women in Agriculture” program. He recognized that this group of clientele is coming from a much different background and perspective than he has experienced. The engaged model will allow him to work with this group to customize programming that meets their needs. He shared:

Well, like I said, I use advisers quite a bit and then we get together. Just for an example, we've decided that through a lot of the discussion that we

need to engage our women in agriculture. We've had several programs on and off throughout-- the last 10 years - have been highly rated, highly attended. We've never really focused on the women in agriculture. And we got several requests here from some of my key leaders over the last two years. So tomorrow we're going to get together with our advisory group to plan our Women-In-Ag education. There's three counties going together. They're all different ages, different places in life, different needs. And we're going to try to use them to put together what women in agriculture really need. Because obviously, I'm not an expert in that area, because I'm not living it.

Why engage? To develop and improve program support

Several respondents indicated seeing the use of the engaged model of program delivery as being crucial to the future of Extension. The use of the engaged model of program delivery was credited with increasing credibility for the Extension educators and Extension. Educators spoke of the value of this model in developing and increasing program support, beginning at the local level. They also found use of this approach to be conducive to achieving the mission of the Extension organization in general. This approach was also identified as being consistent with the tradition in the 4-H program area. One Extension educator spoke of an engaged model of program delivery being the competitive advantage for Extension, especially in more urban areas. Others reported being able to use the connections established through engagement to provide opportunity to connect their communities to the university.

Program support is one of the key reasons given for using an engaged model of program delivery. One Extension educator from State2 spoke of it as building a “web.”

He said:

I also think that when you have more people involved in the process then it's like a web. It goes out and so you get more people who understand what you're trying to do, why you're trying to do that, and you get better buy-in, better acceptance of that. And so, that's important for the clientele that you're trying to help with that, and it's also important because the people who support you, in terms of your stakeholders, also recognize that you're being responsive to the needs of the community.

Another Extension educator likened use of the engaged model to developing fans for a Facebook page. He said:

Because I think life is about relationships [laughter]. I mean that's the long and short of it. It's just not Extension, it's everything, life in general. This is about relationships. There's a lot of the, if you ever use social media for business. It's all in the same type of arguments. It's this idea you want to develop them as fans of your program. Because if they're excited about what you're doing, then they're going to want to see you succeed, and so they are going to do what they can to make sure that program succeeds. If you're out there in the expert model and you're doing it by yourself, they

have very little vested interest in whether you succeed or not. So, that gives you extra marketing and advertising muscle.

Another State2 Extension educator spoke about how buy-in increased program credibility. She said:

I just like some input. As I stated earlier, I think it provides community buy-in if community is involved. If it's coming from a standpoint that the leaders need to be involved from within the community, whether that's a county commissioner or the emergency management division, or township trustees, or something like that. Again, having that buy-in to what is trying to be done, that overall acceptance going into it, I think, builds credibility to the program, to the community.

The engaged model of program delivery increases clientele participation through their attendance and interaction in the process. One State2 Extension educator shared:

Better participation from clientele. I mean, if you're engaging a dozen farmers in an activity a month or two, or three, or four ahead of a particular program, they're going to be engaged in the program when it happens, and they're going to tell their peers about it. So, better participation, or increased participation, but then also better quality of discussion, of dialogue, a better quality of learning, dialogue, however you want to call that.

The engaged model was also credited with providing increased program reach and diversity. This State1 Extension educator shared how he trained volunteers to increase program reach and diversity. He said:

So, my model is more of a volunteer-directed program delivery system than a staff-directed. I tend to train the trainer where I train folks in this engaged model so they can go out and teach in the engaged model for those specific topics. There's only one of me. If I would teach 10 people, then I'd just have 10 people who learn. If I teach 10 people to teach 10 people, I have 100 people. So, my approach is to expand the knowledge. Let people feel successful, engaged, and motivated, and also be part of our team to keep things going. I believe in the hit and run. I start a program train, I'm there for support, and then I go again and train somebody else maybe the same program. And it also is a way for me to increase diversity, get Extension program information out, and also to develop a cadre in the county for support for funding. Support for kids, support for jobs, things of that nature.

Word of mouth marketing can help make people aware of the program that might not have access to other methods of receiving community information. An Extension educator shared:

It [the engaged model] also helps spread the word. I've been here 28 years, but I still don't reach everybody. Not everybody gets the newspaper, and

I'm one that fortunately still has a news column, and that's not the case in all counties. But we don't have a real good radio station. So, involving community to help spread the word is as much important as it is putting the involvement of the community into the context of the program.

Another Extension educator spoke of how word of mouth advertising can generate greater program support. He said:

So, we work with a group of ten farmers on a project, and then another group of farmers unrelated to that group have heard about the results, and they, too, in a conversation with us, praise it or reference it or find value in it. That's encouraging.

Increased clientele support creates positive benefits in generating credibility and sustainability of the Extension program. Use of the engaged model of program delivery increases community respect for the program. Credibility was mentioned previously because of buy-in by multiple parts of the community. The engaged model of program delivery also increases program sustainability in the absence of an Extension educator. One Extension educator from State2, who works in the community development area, stated it in this way:

I find it to be more successful because in involving the community in every aspect of the program, you are getting not only a buy-in, but it helps for the sustainability of the program over time. It's kind of a 'Train the Trainer' approach where they learn to implement a program, and then

we're trying to work ourselves out of a job, really [laughter]. We're trying to train them to do something that they can do on their own over time. So, it's all about sustainability.

Finally, program support in the form of funding encourages the long-term survival of the organization and is reported by many Extension educators because of using the engaged model of program delivery. One Extension educator shared:

I would say for the most part, engaged. Although as we've already talked, the expert model comes into play from time to time. But that engaged model is one that in order to survive, and be respected, and looked upon within a community, you've got to have that engagement, whether that's strictly clientele at the grassroots level, or community leaders, or even other Extension educators or professionals. So, I would say 75% of the time, I'm looking at an engaged model versus an expert model.

One State1 Extension educator shared her concern that holding “too tightly to the expert model, it could not bode so well for Extension over the long haul.” Another said she used the model because:

I have a foundational belief that we have to be more engaged in how we deliver stuff in order for Extension to survive. That's kind of-- I like my job. I really think that it's important for us to consider ways we can engage the community. And engagement doesn't necessarily mean that they are the ones that are the clientele participating - actually participating - in

whatever you're doing. It means that it's more collaborative and the listening part, I would say, is as much me learning from them than they're learning from us.

Extension educators used the engaged model of program delivery because it was congruent with Extension's mission in improving the lives of people and their communities. One Extension educator shared:

You know, we're, as Extension, we're public servants. Our livelihood is dependent upon the prosperity of our customers across the whole state, and so that if the, hopefully the impact that we're able to show, where those dollars are invested, that the dollars are invested wisely in Extension programming efforts across the state. And that's part of the reason why the engaged model seems to work fairly well is because we are addressing issues of our clientele, and they feel the need, and they also are able to experience and see the impact or the difference that we make with our programming efforts.

Another State1 Extension educator alluded to the competitive advantage for Extension in the future due to its strong connection to research. He said:

Well the main reason is we want - our mission - especially local, is to serve the people. And the best way to do that is to find what's [needed] and working together to solve the issue or do programming, in regard to that. And that's the thing that we always in Extension have done. Trying

to-- and I've learned, I guess, because my early career I did quite a bit of research. . . . So, there's a very close relationship between research and Extension. And sometimes, we hit or miss, and we integrate those together, doing on-farm research as well. I think that model is going to be more and more as funding dollars are more competitive and there's only so much you can do. With research let it work with farmers, that's one thing. It's kind of a win-win situation.

Another Extension educator stressed that being engaged with the community is extremely important for Extension to be “the stand-out organization.” However, she said this can often take you outside of your comfort zone. She said:

Well, again I think that that's the opportunity or niche for Extension to thrive. And in urban areas where you have a lot of different organizations - service organizations or whatever, a lot of different opportunities for people - Extension really needs to engage in order to be the stand-out organization. And there's a lot of organizations that sit on their laurels and profess to be the experts, but there aren't that many that truly engage at all levels. I'd say that's another thing that I'm really passionate about is. That doesn't just mean that you go to the four leaders of your community and asked them what they think. You have to engage everyone. And sometimes that engagement isn't so comfortable. We have a county-wide diversion program and sometimes those kids land on my back step for one reason or another. And there's a reason that the juvenile system is

dropping them, because they're looking for anything, anything that would help them. And we're not just youth development for the 5% that are high ability learners, we're youth for all. And so, you just can't say, you can't turn the kid away, you have to say, 'I have the best opportunity to do the most impact right here.' And so, you do what you can.

The engaged model extends relationships to improve accountability by including both clientele and elected officials. One State2 Extension educator shared:

I think, because I need to be accountable to my stakeholders. Every citizen of my county that pays taxes to the general fund of the county commissioners, they should have an influence or a part into what they get out of the Extension office. Whether that's one horticultural answer per year, or once in the spring and once in the fall. If they have needs, we need to respond to them to the best of our ability. So, the engaged model just helps me communicate with the commissioners that, not only the commissioners-- the people that the commissioners represent are the same people that I'm teaching and educating through Extension work. We have a shared audience, a shared clientele. So, hopefully, we gain-- keep traction or gain traction by that relationship with our stakeholders in the engaged model.

This Extension educator talked about the potential for engagement in Extension to help communities solve major issues and extend its reach to future generations. He said:

When we do these types of engaged models, I think the better-- I think we'll learn more from it overall. I think that's probably more of the way of the future. How we—how Extension is used, and being an incorporation of making research too, and working with farmers and this thing- on different things as well, but I think this is how we get more of the -- just, well I think the next generation is more that type-- wants to be engaged, because, well, just in programming-- you know and I don't do that much with the young, the 4-H but we know it's [inaudible] they need to be engaged [chuckles], to keep that generation engaged or else you're going to lose them on that. So, that's very important to try to use that model as we move forward in Extension. Starting locally and organizationally, that's where we have the most potential to solve problems, and different issues, and then learn together. And get more buy-in too, and be more efficient, and in agriculture be more sustainable, as we all work to use this model to work best. And then there will be something, kind of a combination of things, but overall, I think this is-- has a lot of potential.

Another Extension educator shared how in her community, Extension served as a conduit developing connections with administrators from the university. She detailed Extension's role:

We had-- and this is a much bigger scale, this is on a university level. The deans were coming out-- asked to come out and we had to connect them with different groups within our community. They wanted to connect out

in our local community. So, they utilized us since we knew key people within the community. We helped organize these meetings, and kind of like focus groups, but just to help the deans from the university campus come out and make those connections themselves. So, that's a little bit bigger scale, but-- so I think we do it on a big scale, and I think we do it on a very local scale too-- on an individual basis, on individual partners that we might have.

Why engage? To achieve better learning outcomes and sustainability of solutions

Numerous Extension educators indicated that being able to achieve greater impact was the reason for their use of the engaged model of program delivery. Extension educators cited higher learning outcomes, application of knowledge, sustained change and long-term impact. They also found improved ability to measure those outcomes because of their continuing interaction with the clientele. Several respondents also spoke about clientele being more aware and acknowledging the benefits of participating in the engaged educational experiences. Other Extension educators shared that through the engaged model, communities learned processes they could use to resolve future issues. Extension educators also indicated that solutions developed through use of the engaged model were more sustainable.

This Extension educator from State1 saw benefits of enhance learning because of including clientele in both program development processes and program implementation. She said:

On the other hand, we have a variety of ways to get feedback and input from that clientele to structure additional training around what they think a need is. So, use a little bit of both approaches. I would say the most effective is the engaged approach. That's where they learn more, because they're actively involved in the program development, but they're also part of the teaching. Because they bring a certain knowledge base themselves to that training - most generally.

Extension educators from both states credited the engaged model of program delivery with creating a “better quality of learning.” A State1 Extension educator emphasized the improved depth of learning and interaction associated with the shared, peer-to-peer learning and expertise that occurred during the presentations associated with the on-farm research project. She said:

I'd say our strongest programming this way, that truly is engaged, is our on-farm research program. To me, that's the strongest with engagement because in the final program, the Extension people aren't the only people presenting. We actually have the farmers present about their studies and it allows them to take ownership of what they did. It allows them to-- they're the ones explaining why they did the study that they did. It allows farmers to learn at another level regarding statistics, understanding research that they are reading about. And the questions are at a higher level with the farmers asking each other, ‘Why did you set it up this way?’ or ‘Did you

think about collecting this data?’ It’s just a really phenomenal process to watch. It’s really highly engaging.

Many State1 Extension educators spoke of seeing clientele change behavior and apply their new knowledge in their lives and operations more frequently when they used an engaged model of program delivery. An Extension educator from State2 spoke of how participants in the on-farm research program used what they learned from their research projects to educate others and to drive their production decisions. An Extension educator from State1 shared that he has “seen the greatest impact” over his career because of using the engaged model. He said,

Yeah, I think the engaged model for me is the most rewarding in terms of seeing folks actually buy in firstly, take ownership of the information presented, and make the changes. I think that’s where I’ve seen the greatest impact of the 13 years I’ve been in this role, is where people have been part of an engaged learning experience. . . . It goes back to what I said earlier, my experience. The engaged model is where we frequently see the greatest impact and long-term benefit to the learner, where the expert model frequently is information delivery, not always very sure about implementation and application to the individual’s life.

The application of new knowledge and openness to consider novel solutions through use of the engaged model was emphasized by this State1 Extension educator as she shared:

No. I think I found the engaged model to be the most effective in terms of actual implementation and utilization of knowledge and also provide an environment where I would say learners are more open to, and looking for, solutions to a particular problem, or looking for opportunities that they hadn't otherwise considered. The expertise model usually specifically addresses only a specific issue in time and space, where my experience would be the engaged learner model opens up opportunities that otherwise may be not explored.

One Extension educator from State1 shared her observations regarding the ability to achieve behavior change in clientele with an engaged model of program delivery. She said:

I think that what we're all trying to do is have behavior change, and by using the engagement model, your chances for behavior change are much greater. And so, that's where we all want to be. Even though when we do the expert model, we're hoping for change. But we'd probably have a better chance of it with the engaged model.

Another State1 Extension educator emphasized the economic impact his educational program has on beef producers. However, he also acknowledged the increased time and resources and decreased contact numbers associated with using the engaged model to achieve this new level of “meaningful impact.” He said:

The sustainability of their operation, they highlight - when they graduate - that's one of the programs they highlight. And it's almost to the point I don't have to market anymore because of the participants that are graduating are marketing for me. But it's a very impactful program. But there's a lot of time and a lot of resources that go into those 35 people. But again, it's easy to have a couple of meetings where 100 or 200 people show up. It looks good on your impact that you can share, you've reached a tremendous amount of people. But I'd rather change 35 people to where we've got an engaged relationship than have an expert model. But at the same time - and I'll maybe summarize - but the resources and the time that it takes to engage probably prevents some of us, at times, from enacting, and we fall back into the expert model. It's easier but I don't know that it has the same kind of-- the same kind of meaningful impact that the engaged model would have.

In addition to providing meaningful impact, another Extension educator from State1 explained how the ongoing relationships associated with the engaged model of program delivery also improved his ability to measure changes in behavior over time. He said:

The engaged model, I think is-- I see the engaged model being a little bit more effective for long-term success. And so, when you can-- as you work with clientele and you have multiple touches, and whether the program is over or not, as you continue to engage with them, then you can-- it helps

you measure whether or not they've adopted some things. And so, I think they're more willing to adopt because there's trust. There's communication, there's a lot of things that happen in that kind of a model. And probably one of the big benefits is, I've learned a great deal from the clientele that I've had some of these long-term programs with. And it strengthens my program in the long-run.

The improved learning and benefits provided to their lives is observed not only by the Extension educators, but also by the clientele participating in the programs. One State1 Extension educator emphasized the “acknowledgement” of learning and the empowerment to change provided through engaged programming. Another Extension educator emphasized this occurred with an online course in which she had a lot of sustained, clientele-driven interaction. She said:

The reason—I just find it very interesting because for an online course, once they know we're there, and we're talking back and forth, and we're working together, is they really get into it. They feel really good about the program. They feel like, ‘Gosh, I'm getting something out of it.’ We've had comments where they've said, ‘If I'd only had this information before the divorce, maybe we wouldn't be divorced.’

Another Extension educator from State1 spoke of how clientele not only acknowledge their learning but can specify what they have learned and attribute the learning to the educational program or activity. She saw shared learning and expertise as

providing value that makes the organization more viable when working with audiences today. She also shared that using this model is “fun”:

I think what encourages me is attendees at the end saying, ‘Thank you for the great meeting. I learned X, Y, Z.’ Just knowing that we’re bringing value. Not that we can’t bring value through the expert model, but I really think times have changed a lot. We’re in a more engaged society. People are looking for information, but also being-- also desiring to have input into the information. Because that’s what we see with social media, that’s what we see with blogs. So, I think if Extension wants to remain viable and relevant in the future, we’ve got to be willing to create value in this way with our attendees and whereby they bring value to our programming as well. That we can all learn together and that just makes for a richer learning experience.

Well, beyond that, I think for me, it’s more dynamic, it’s more fun. I mean, there’s a lot of Extension meetings we go to where people just want to be the only ones talking, then those aren’t a whole lot of fun to attend. I don’t feel like, for me personally, I learn as much that way all the time. I learn more by interacting, by thinking through things rather than just memorizing numbers so... I would hope that it increases the way that attendees to programs I have are learning too and give them more of a value for coming.

Why engage? To meet needs based on Extension's role.

Extension 4-H educators said that the engaged model is just how 4-H operates. Other Extension educators felt they used the engaged model primarily when they were just another partner at the table and not necessarily leading the efforts. They shared that the community benefited from their connection to the university, their ability to make things happen and their facilitation skills. This section includes their comments related to this role.

A State2 Extension educator specified using the engaged model “to get people involved even at the youth level and when I'm working with 4-H members or schools.” Another Extension educator from State1 suggested that this was the way the 4-H program area has traditionally operated. She said:

Well, I'm going to say the same thing I said before, it's kind of how 4-H operates. I don't think that we really have operated on the expert model. So, I think that's been handed down. And that's just kind of the process we've always used. So, I think that's just how it is, I guess.

Extension educators shared examples of situations where they used the engaged model when Extension was not in a leadership role or in charge, but simply another agency at the table. One Extension educator said:

Yeah, so I was looking at the programs where I tend to have that [the engaged model] show up a lot more, and it tends to be in those programs where I'm maybe a part of the planning committee. Its non-Extension led,

I guess, so that I'm a part of that, but I'm not necessarily the leader and the force initiating the program. And so, in a lot of those, for example, we do a dairy tour here that is pretty much set up and organized by-- we have a dairy service unit. I'm part of that but not totally responsible, so there's a lot more of that engaged model helping. We have a Sheep Improvement Association here that's pretty independent and they know kind of what they want. And again, I'll be involved in some of that process, but I'm not the one has to totally push that process and lead it from beginning to end.

Another example includes work with local groups in the community. This Extension educator shared that he is often asked to identify expertise that exists at the university. He said:

So, it's worked both ways. Sometimes they view me as a resource, 'Do you have a contact with the university that might fit this need?' So right, sometimes I'm kind of that conduit, I guess. I've got another group of veterinarians that I work with that meets monthly. They do a big dairy conference. Again, it's kind of, I guess, almost a hybrid of these systems. But my role there is sometimes, 'Do you have a speaker from the university that you can contact that might fit into this? Do you have some ideas about this?' and then they can take it from that point on, so yeah.

Within the local community, Extension educators see one of the benefits they provide to the community is the networks they have established through their work.

These networks identify expertise that exists from many sources, not just the university.

This Extension educator emphasized how building on partnerships improved understanding. He said:

I'm also thinking it helps to--in an engagement model, I guess I'm also thinking about having partners as you're delivering information so that it's not just coming from Extension, but it might be-- we deliver one piece of a workshop. We might do one component of the teaching, there might be farmer-to-farmer learning, or if it's a Master Gardener project, it might be gardener-to-gardener. Or we might bring in soil and water, or we might bring in an industry partner. We might bring in somebody else that has expertise within the community that can share that, so that it's not just one university perspective, if that makes sense. We could just facilitate the conversation, or frame it, or add some other piece that helps in understanding whose teaching.

Another Extension educator talked about their role in using the engaged model to “make things happen” rather than just facilitating process. He said:

Now, if you want to be seen as somebody that can make things happen, yes, then I think that being an expert in that process. Just, we had a meeting with our legislators on Friday, and now he's wanting to do some other things. And I think he does see me as someone that can make things happen. I can get people together. I can make things happen. So, if that's

part of the process, yes, I think that part of it is important. I don't want to be seen as someone that brings out the drinks [laughter].

Extension educators spoke of their role as facilitators. One Extension educator said:

And so, with the engaged model, you become more of a facilitator of the process than a facilitator of the knowledge. And in a way, we become the local Google. To where Google doesn't create the information, they just find a way to bring the information in a concise format to the person who's looking, and so we're doing that. With the engaged model, you're doing that with learners as you're helping them get access to the knowledge, even though you may not be that expert there. Our director of Extension just sent out something. We just had our annual conference last week, and he indicated that in his little post that Seaman Knapp, who we see as the founder of Extension, always-- he did not want to ever have Extension professionals introduce themselves as experts. Let me make sure. He wanted to see it as bringing the knowledge of the university and the people together to solve problems. So, our director encouraged us to be the people that-- be the Extension educators that help bring people and ideas together, instead of saying that we have to be that expert.

Engaged model partners and programs

Numerous educational program examples were provided in which Extension educators were using the engaged model of program delivery. A lengthy list of program

partners associated with engaged programs were also identified. These include: Ag Technology Association, Arborist Association, Cattlemen's Association, childcare professionals, childhood development agencies and organizations, city government, commodity groups, Community Action, community businesses, Corn Board, county government, County Sheriff's office, dairy committee, dairy service unit, Department of Education, Department of Health and Human Sciences, disability services specialist, experts from out of state, Extension advisory groups and committees (4-H, other), Extension Master Gardeners, factories, Farm Credit Associations, farm equipment dealers, farmers, growers, general public, government agency professionals, health department, highway patrol, industry (agriculture and other), insurance companies, intended audiences, legislators, livestock committees & producers, local agencies working with food insecurity, local feed manufacturers, local food producers, local hospital, local library, local schools, local veterinarians, members of the Amish community, natural resource committee, parents and foster parents, Water Quality Task Force, school districts, principals and teachers, seed dealers, Sheep Improvement Association, Soil and Water Board, tire companies, trucking firm, United Way, university faculty (researchers), university research stations, and wellness companies. Program examples are included in Table 4-3.

Table 4-3. Engaged model program examples provided by Extension educators participating in interviews in both states

Engaged Program Examples	
Agronomy program	Fruit school
Beef ranch practicum	Healthy food options in schools
Business retention and expansion	Herbicide and insecticide resistance
Childhood obesity prevention	Holiday food hacks
Climate change	Local foods
Community sustainability	Needs assessments
Crop management diagnostic clinic	Nutrition programming
Dairy tour	On-farm research
Developing childcare providers	Parenting classes (People going through divorce and non-specified)
Dining with Diabetes	Production issues
Encouraging healthy nutrition with grocery app for parents of young children	Programming for closed populations (Amish)
Environmental issues	Sheep events
Estate planning	Soybean management field days
Extension Master Gardener projects	State beef lab
Farm management series	Stress management
Farm succession planning	Veterinary feed directive
Farm truck safety program	Water and crops field day
Food security	Women in agriculture
Food waste reduction	

Partner roles. - During the interviews, many Extension educators also talked about the roles different groups played in carrying out educational programs. The most generic of examples has the intended audience or stakeholders providing input into program development and the university providing its research basis. A couple more intricate examples provided were those of the on-farm research program and the soybean management field day. The on-farm research project came up frequently in both states. Partners in the on-farm research project included Extension educators, farmers, university faculty, seed and equipment dealers, the State Corn Board, and grower associations. The on-farm research coordinator in State1 is supported through external funds provided by

some of the partners. A summary of the roles of the different partners for this project as provided by State1 Extension educators is included in Table 4-4.

Table 4-4 - Partners and their respective roles carrying out the state on-farm research program

Partner	Role
University faculty and Extension educators	Network of support, aid, contribute to solutions, develop plot layouts, complete data analysis, present and publish findings, coordinate grower meetings
Growers/farmers	Identify research problem for their individual farm, implement research, collect data, contribute to solutions, present findings
Seed and equipment dealers	Support program at the local level
On-farm research coordinator	Manage process
State Corn Board and grower associations	Fund on-farm research coordinator

Partners for the soybean management field days mentioned in State1 included the Soybean Checkoff Board, university faculty, Extension educators, research technicians, and soybean producers. The Soybean Checkoff Board assisted Extension in identifying the problems to be addressed and aided in site selection for research projects. University faculty, representing multiple disciplines developed the research protocol to direct the research and then wrote up and disseminated the report of findings. Extension educators and technicians worked together to plant the research plots, implement the research protocol, harvest plots and analyze data. The producers served as a conduit between the Soybean Checkoff Board and Extension because of their involvement both with the Board and in the local community. The primary role of Extension was hosting the plots and the field day where the research was presented.

In State2, Extension educators talked about partners being involved in identifying other potential partners and participants to include in program planning and

implementation. They saw one of their roles as making sure the teams that were assembled locally were inclusive of all members of the community. One Extension educator shared how she suggests who should be represented without identifying specific individuals. She said:

We rely almost exclusively on the community or organization to identify who needs to be at the table, although, again, we'll provide them with an example of best practices. Here's what another community did and here were the-- sometimes we'll suggest a list of people. These are - to try to encourage diversity or make sure that decision makers are at the table and - so we don't suggest, but we rely on them to identify who really needs to be at the table.

Another Extension educator shared an example of a program that grew from a local to a regional program, using the engaged model. She felt the program was better received because of the engagement of the partners. She said:

We did a farm truck safety program, and what was an idea locally became a regional idea. And so, utilizing that sounding board of producers, they helped bring in representatives to talk on the different topics, and as a result, we had about 200 producers from about eight counties show up to really get involved in a truck safety, particularly aiming at grain truck safety. They're not vehicles that are used all the time in some regards on farms, and so the producers bought into it. And I think a lot of it has to do

with the fact that we had several producers involved in the planning and implementing of the process. And I think it was more well-received than if we just went out and said, "Hey, we're doing a truck safety, hope you come."

Partner participation in program evaluation was not emphasized except perhaps indirectly through completion of surveys. One Extension educator suggested that we need to change our understanding of the evaluation process when using an engaged model. She asked:

Do you have to be finished? Does it have to have an end? Or can it be something where you say, 'This particular part of the project is complete, but this is where it's possible to move forward and move on and continue to do other things too. It doesn't have to be the end. It's just the end of this project or whatever.' I guess that's one of the things I would look at, is just maybe changing our thought from saying, 'It's the end', and making it more like, 'This part is finished, but there's always the opportunity to do something different based on future needs or whatever'.

Implementation concepts

This section summarizes the Extension educator's comments related to the components of the definition of the engaged model: (1) community involvement, (2) involvement in all aspects of program development, (3) shared expertise, and (4) shared learning. The section concludes with emerging concepts.

Community involvement

In State2, Extension educators spoke in detail about who is involved, as well as the structures which support this involvement, that allow for the delivery of the Extension program using an engaged model. Community involvement in the engaged model of program delivery included individual clientele, groups, partners and volunteers. Group involvement came about in many ways. Advisory groups were identified as being formal, subject matter focused and program area focused. Committees took the form of formal committees, subject matter committees, advisers, and sounding boards. Groups formed outside Cooperative Extension that educators used to describe community involvement included working committees, community committees, and commodity groups or organizations. These often serve as partners in program planning. Extension educators also report the role that individual clientele, advisers and clientele play in their program. These are included here to better identify the makeup and roles they play.

Advisory groups

Advisory committees appear to be more formal in nature than other types of committees. The make-up and role of the advisory committees in providing program input are important. One Extension educator emphasized the importance of including a “diverse set of backgrounds” on formal advisory committees to be more representative of the community. She said:

But it does also I think help to have some kind of formal advisory committee where you're taking members from kind of a hopefully diverse set of backgrounds within your community. And that kind of represents a

lot of different clientele that you might serve, and bring them together and formally get some input to programming. And to what's worked, and what they would like to see in the future and things like that.

Another Extension educator spoke about the contribution these people make to the program in providing feedback on the programs. Yet another emphasized the ongoing nature of this feedback. He said:

Well, if you're like an advisory committee, I mean, taking the time to sit down with people, hear their input and then formulate a plan from that, and then some cases, in formulating that plan you're bouncing ideas off of them another time, or two, or three. And so, there's more contacts and, yeah.

So, pull an advisory committee together. I mean, I think for my farm management series, which is a couple of the items in farm management series are my specializations. But nonetheless I'd pull an advisory committee of four or five folks together to say, 'What direction do we need to be going? How can we get there?' So, setting up a series that might occur in winter programming is a good example of how I use the engaged model.

Another Extension educator shared that in some counties there is one overarching advisory committee for the Extension program and then specific advisory committees for each program area.

One Extension educator included the Extension advisory committee and his on-farm research committee as formal committees. He emphasized the importance of two-way communication with these groups. He said:

Well, formal committees, whether that's that on-farm research committee or an Extension advisory committee where we ask for input, not just report. To be on an advisory committee, we need to allow advisors to give their advice [laughter], not just to have a meeting and have an Extension report to them. There has to be that dialogue back-and-forth as to how we can better serve and continue to serve the clientele. And in the same sense, you know if we're going to ask someone their opinion, and they give it to us, we better be willing to listen to it and value it. If I don't value their opinion, I don't know why I would have asked for it to begin with.

Internal committees, volunteers

Committees were referred to as working committees, formal committees, and subject matter committees. There was also reference to sounding boards which were formed by the Extension educator and seem to be similar in purpose and structure to other committees. Homemaker groups also played a role in program development processes.

An Extension educator defined a working committee formed to work in the areas of local food and food insecurity. To form the committee, he said the following:

Probably the best example I can give you is - we've started a local foods initiative in our area, and so we've gone out and sought people who are working in the areas, not only at production, but maybe somebody who works in the community with one of the other agencies and is working on food insecurity. We've been able to form a working committee and try to address those issues from a committee standpoint and a community standpoint.

He elaborated more on how the committee members were identified and then how they began their work. He said:

I kind of view that as when you use an engaged model, you're going out and seeking experts to be part of that engaged model - the people that are going to either do the program delivery, or be the idea makers, or whatever. You still need to draw from some expertise, or at least interest in that topic. And so, I think you still have to have a good background there of people you know that you can get answers from that will help try to bring some type of resolution to the issue that you're trying to work on and move forward that. And then once you have those people talking and we've identified the priority areas, then getting them working in teams to address that, and coming up with a set of goals for that team, and what we want to accomplish in a timeframe, and how we're going to go about doing that.

One Extension educator shared that he had several subject matter committees in the areas of dairy, consumer horticulture, and natural resources. Their role was to “set the program.” He said these groups meet bi-monthly and serve to provide “grassroots” versus “top-down programming.” Another Extension educator described how he would identify potential issues and then use a committee to determine whether they were valid or not. He said:

I think, for me, sometimes it's identifying that there is an issue or a need that needs to be addressed, and then having a committee focus on that. Do they see that also as something that needs to be addressed or worked on, and if the committee's like, ‘No, that's not something that we think is a need, or an issue, or we want to change,’ then they're making that decision. But if it's something that they do see, then we move forward from that point.

Extension educators report difficulty in getting full participation in advisory committees. The previous Extension educator also mentioned how he addresses timely issues using a small committee or subset of a larger committee. He said:

I think sometimes though, you get into time issues. So, do you have time to pull a committee together and to work everyone through a process? So sometimes I might work more with a small committee or just a couple of people when things need to be done rather than bringing a whole committee in on some decisions or changes. But I think sometimes that

just might be a time restraint, and just the restraint that you have of trying to get so many people together on an ongoing basis, bring everyone into that engaged model.

Another Extension educator reported working with individual advisers, one-on-one, because of the challenges in scheduling advisory group meetings. He shared:

I don't use advisory groups. I think to get the right people it's hard to get everybody's schedule to work together, so a lot of times I do it individually. And so, we kind of do it on a different day, but the more they want to be engaged, the more I want to be engaged.

One Extension educator used what she referred to as “sounding boards” to plan programs around specific issues. She said sounding boards reduce the number of meetings and allow for short-term involvement of producers that might be unwilling to make long-term leadership commitments. She uses a storyboarding process for the group to decide how to proceed in addressing the identified issues. She shared:

Well, in Extension, we have enough meetings [laughter], so I don't always use a formalized commodity group to engage involvement with community. So, we, more or less, call up a group of individuals that would fit kind of the subject matter. So, if it was something involving agronomy, I may not use just my agronomy committee. I may involve other producers, and it's just a one-time get-together, and we do kind of a storyboarding process, ‘Here are the issues. Now how do we address it?’

Well, it's helpful now in my years of time here that I know a lot of producers that don't always want to commit to being on a committee formally, but will step up once in a while and provide input. So usually, the criteria is, I make some phone calls or emails, and if I need 15, 20 people, sometimes it may mean that I have to contact 20, 25, but it's people that I respect, that I feel are respected within their area of the county and will be willing to vocalize input. And so sometimes when we have committees, there is that one or two that I call silent leaders. They really don't say a lot unless they really have something burning to talk about, and those are the ones that sometimes aren't good in a sounding board or storyboarding process. They just don't quite involve themselves. So, kind of utilizing that as well, just the idea that not everybody wants to commit long-term to committees, but they're willing to come for one night, kind of focused on one topic, and if it develops into more, great. But generally, it's a one-and-done concept that I utilize in terms of the sounding board. Occasionally, it may require a second get-together just to finalize how we put that together.

In addition to the leadership roles of volunteers identified here, Extension educators also spoke of volunteer involvement in program delivery, recruitment of participants, and solicitation of funding. One Extension educator spoke of volunteers as being synonymous with staff as members of the team. He sees his role as a mentor to both groups. He said:

If I have any issues with funding or other things, I have people who trust me. I've built a rapport through program and committee work, they do the calling for me. I don't have to make the calls to elected officials. I mean, socially, but not for funding, not for issues that come up. I try to utilize our volunteers as part of the team, and staff members as part of the team. And that's how I try to work with people is I'm a mentor.

Homemaker groups meet annually to review the previous year's programs as they plan for the next year. An Extension educator shared that in her county they discuss the topics and then vote to prioritize the topics. Topics receiving the most votes are included in the next year's program.

Another Extension educator observed the benefits of communication, interaction and relationship building among colleagues within the organization. He shared:

Our regional director's really good about bringing us together, and talking, and really-- I'm a mentor to three or four other different more CDs extension directors than I am really Ag Extension educators, but I think a lot of that facilitates a lot of that working together even though the counties are very different sometimes.

External committees and community partners

External committees include community committees not formed by Extension, including community and commodity groups on which many Extension educators serve. One Extension educator shared an example of his work with the local cattlemen's

association and how he works with this group to plan and carry out work with beef producers. He said:

So, when I'm identifying any programs for beef in the beef industry, I work directly with the Cattlemen's Association and we brainstorm and then we decide what we're going to do as far as it comes to the educational programming, like the winter programs and the twilight tours. And then we work collaboratively - like on a steer show, and some other community functions with scholarships.

Another Extension educator spoke of how she serves on a local childhood obesity prevention network. The group works as a team to identify ideas and then develop and implement programs. This is consistent with what was described by another Extension educator regarding community development work.

External clientele and advisers

Extension educators report constant communication, emphasizing listening, with clientele while identifying program and research needs. One Extension educator spoke about the ownership and responsibility he felt for his clientele and community. He said:

Well, I think, over the course of the years, I think I've tried to implement the engaged model more commonly, more often, mainly because I think my purpose is my clientele, and I take a lot of ownership in-- I refer to people in my county. I refer to my farmers. I refer to my homeowners and my landowners. And I'm very, I don't know, if possessive, but responsible

for the area that I'm teaching in for the office that I'm placed in. And with that said, I think, to be responsible or responsive to them. I need to be listening to the questions that they have. And I think that engaged model can be done in a formal and informal method. And I have tried to do that over the years with either on-farm research, or coordinating a winter or summer program based on either a formal meeting or informal conversations that we had with farmers and folks, on the phone or in person.

Another Extension educator shared how listening to some of his clients led to his involvement in agro-tourism to meet a community need. He said:

I have several people that I meet with regularly just so we get the community engagement started, and we use it to develop the programs. Just an example of my specialty is direct marketing small farms-- agro-tourism type stuff. And the reason we started that was because that's what the community was moving to because we're kind of a suburban type county. It's not just something I was an expert in by any stretch of the imagination when I started. So, but I became an expert to satisfy what the community needed.

Another Extension educator spoke about the need to continually listen, even during program delivery to direct education to the need of the clientele. She said:

Sometimes we don't know what they want until the first class, if it's going to be a series, so you have to go in with something prepared that you know that everybody needs to learn. Maybe we're all going to learn about the MyPlate, but then you find out what specifics do they need. Are they worried about how to use that when feeding their picky eater or if they're going to use it when they are lactose intolerant? So, you go in with something prepared, but then you have to be ready on the spot to be flexible and meet their needs.

Program needs are often identified initially through informal interaction with clientele on an individual basis. One Extension educator shared how a call about cash rent might uncover other farm management program ideas. He said:

And informally would be like those conversations where a farmer may call in and ask about a cash rent question. And we have data to share with him on trends of cash rents for farmlands. So maybe in the conversation they bring up a nuance about how - and this happened this week - he and his brother worked together. And years ago, they had this partnership. And the questions become are they-- you take that situation he shared and you kind of drill down a little bit further into it and help him, maybe, help me determine a development program on farm business organizations where the partnerships are LLCs, or how do we track finances in a partnership to better represent the assets that are contributed? And how do we value labor and other resources that go into that partnership? And so, without

really putting them under the spotlight, and invite them to share a little bit more if they want to.

New program ideas are often identified by clientele who then provide further expertise regarding the topic and how the educational program should be developed. Sometimes, enthused, engaged clientele can guide an educational process. An Extension educator shared:

Yeah, I think it happens most often when I have a really engaged and motivated clientele. It's a topic that's really near and dear to them and they're willing to put time and energy into it. So, then that makes that engaged model. Instead of me trying to push something, that kind of pulls the whole educational process right through the system because they're supplying the energy, they want to do this, they want to be involved, they've got ideas, they're coming to the table with something, they have a willingness to give time. Under those kind of situations, that's where I love to use that model.

In one situation, a community development Extension educator talked about how a program activity might be a survey of community businesses. In this case, she detailed how she works with the committee to develop the survey, but may not be involved beyond that point. Another Extension educator spoke of how often the programmatic focus of community improvement may require a series of intensive programs targeting specific components of that focus. In those cases, she would work in an ongoing

relationship with the community as intermediate goals are achieved and new targets are identified towards the greater objective.

In State2, the Extension educators reported that the university encourages them to connect with the local community through involvement in community activities. The Extension educator serves as a conduit linking the resources of the university to the community. Local partners and committees help to develop, fund, market and deliver programs. There is a great deal of variety in how Extension educators report using the engaged model. However, the local connection was emphasized because of the ability it provides to develop programs that meet local needs which provide accountability for local funding bodies. In both states, the importance of well-established relationships and working to create dialogue were emphasized.

The need to establish strong relationships and trust with clientele before embarking on the program development process was emphasized throughout the interviews in both states. Many indicated the importance of ongoing interaction and programming that provided “multiple touches” to provide for relationship growth. One Extension educator shared, “But I still think that for an engaged model to be successful, that there has to be obviously some trust and two-way conversation. We're both learning and sharing and trying to solve an issue. I think there has to be multiple touches with the clientele.”

To develop these relationships and local networks, there must be a high level of trust between Extension educators and the clientele. One Extension educator from State2 spoke of the time required to develop relationships with individuals they felt needed to be

a part of their programs. Another Extension educator, also from State2, shared earlier about how he is working intentionally to establish relationships and make the Extension office a “destination.” In addition, he talks about shifting his frame of reference from “me to a we” to help county residents take ownership of Extension as a resource. He added:

Yeah. So, we've actually done a lot of things. Just as an example, we had a grant that we got some software to be able to make movies, and we also got a nice video camera that allowed us to make movies for the grant around specific topics. And then the movies, of course, we put on the web, and then they were there as a resource.

Well, now we have the equipment and the software that's still in our office. And so, what we've started doing in our office is looking at everything and say, ‘How do we move from a “me” to a “we”?’ And so, . . . we say, ‘Well, instead of it being my office, or my computer, or my camera, my software, it becomes, this belongs to the county.’

And so today, I had a youth and mother come in and set them up, gave them a little bit of guidance on the computer, and they basically did a video for one of his school projects, that he was able to then create. He had already had the footage ahead of time, but he was able to use our editing software and left with the finished product. And so, there's where we were able to not only offer the resources we had in our office. But now, after experiencing that, he's more-- the student was more, both

engaged but also has now learned how to do that, and so the next time will not be as inhibiting. And in the process, he's showing his mom things that he's learning, and so his mom's learning alongside of him. But if we had just said, 'Well, this camera belongs to our university and this software is just for our use,' and such, then we've lost that. We've maintained more of the expert model like, 'I know how to make movies and you don't. And so, if you have a movie, we could make it for you, but you can't do it yourself.'

So, I mean, we're trying to shift as an office to look at all aspects of what we do and see how we can kind of turn things inside-out, upside-down to make them more open to the community. So, in the end, the mom says, 'Well, what can I do?' Or kind of pay you for anything. And I said, 'Actually, can I just take a picture of your son working on our equipment that we can then use to say, 'This is available as a resource. This is a new opportunity that Extension has in our rural county that gives them-- families may not have that equipment in their homes, but they could come in and use it here.'

This Extension educator shared that leadership approaches are important to improve buy-in and participation with clientele. She emphasized the importance of leaders valuing community input to achieve buy-in to achieve program success. She said:

That is so important because you will never have as much success if you do not truly value and make it clear that you value the impact of the people that are going to work the solution. If you force it down their throats, they're going to rebel or they could either sabotage it or just never fully buy in. And depending on the culture in the organization and how well something is implemented, will have a direct impact on the success. It could be that one very effective leader could in an organization, could implement a solution. But if a different leader in the same organization handled it, it could create chaos and turnover, and a ripple effect that has a terrible long-term effect. I've seen all of this. I've seen very skilled leaders with limited resources do amazing things because they engaged the team and they're moral leaders. They're not positional leaders.

When working with individuals and groups, Extension educators work intentionally to encourage active dialogue. One Extension educator from State2 spoke of how she encourages people to become involved in two-way communication sharing their expertise. She said:

Well, again, I'm a firm believer in asking a lot of questions, listening more than I talk, never trying to make somebody think that their answer is stupid or not worth expressing. When I've tried to facilitate groups, I start out by saying, 'This is a safe environment. There are no stupid ideas or thoughts and the baseline for moving forward in this group is respect and trust. And this is how we're going to have our best results, if we all-- are

we on the same page here? No bad ideas. We're not going to scoff or laugh at anybody's ideas because they may be the cornerstone that starts the building of a really great idea because someone's brave enough to bring something up that maybe we hadn't thought about or didn't see ourselves.' So, that's how I start it. So, I just believe in asking a lot of questions and listening more than I talk, and showing a lot of respect for people who are willing to participate and offer their insight and their advice because again, I've seen that the boots on the ground can come up with some really, really great ideas. And they are the ones that generally don't think of themselves as the experts, but they are the subject matter experts in many cases, but they're just not treated that way and they don't see themselves that way.

In addition to face-to-face and social media, Extension educators also use radio, newspapers, newsletters, phone conversations and websites as communication methods with clientele. As mentioned previously, clientele and leadership groups also help to spread the word through interaction with others in the community. Extension educators emphasized that interactions with people in the community may be both formal and informal. One benefit mentioned of being a part of the local community is the ability to have informal communications with people on a regular basis.

Many Extension educators stressed the involvement of stakeholders throughout the program development process. One Extension educator from State1 shared:

We actually sponsor a variety of conferences, annual conferences, across the state for childcare professionals in Extension that we work with

collaborators and partners that include childcare providers and then other agencies and organizations that also work with early childhood development - like Department of Education and Department of Health and Human Sciences, and a variety of others, and in doing that, we try to involve who we see as the stakeholders - the providers, the parents, foster parents, even early elementary school teachers - involved in the process of how to plan those. What to offer - what would be most valuable for them in their circumstances and in their practices - so that it is a good use of their time in ways that they can continue their education. So, we try to involve most of the stakeholders in the whole program development process.

Another Extension educator spoke about his efforts to increase engagement with his stakeholders since coming into his position and how that connects with statewide efforts as well. He said:

When I started my current position, and since I've been in Extension, I started just trying to engage, just trying to get the community more involved, and the clientele that I work with more involved and engaged. What they needed to know, what their important issues were, and this is something that in Extension and my job now, we're doing quite a bit of this statewide as far as that, going locally as well. And that's why I'm, you know, we've done kind of all type meetings, and type of things, and where we provide opportunity for citizens and farmers and the communities to

have their input on what's important to them. And in my specific area as well that we want to get them engaged in the process, and go about learning as much as we can. So, there's always some of this engagement for the most part that I use almost in everything. And then it kind of evolves from there.

All aspects of program development

On-farm research was emphasized as a program in which producers are normally involved throughout the program planning and implementation process. They begin with problem identification and continue through the presentation of the research findings in a formal presentation. An Extension educator from State2 shared:

So, on farm research, I've used that engaged model often - to the extent that the farmers who are completing three-year projects have to-- this year will be the first year we're doing this. They're presenting at our annual agronomy day. They're presenting on a panel, in a panel format. They're presenting what it is they did, and found, and learned, and how they can help other producers.

Team approaches were used to identify problems, root causes and develop sustainable solutions. These allow people to learn processes that can be used in multiple situations. As one Extension educator said, this approach is teaching “. . . more of a process. The content can change.”

Needs assessment. Engagement with stakeholders for needs assessment was most commonly reported in the interviews. Clientele may be more involved in one area of program planning than others. Extension educators from State2 reported using both formal and informal processes to gather input from clients, advisory groups and different forms of committees to identify community needs. One Extension educator shared:

I think I use the engaged model more during planning processes to determine what topics the community is interested in partnering on and is interested in learning about. So, during the planning process, before I have my programming set, we'll sit down and we'll have a discussion that's really two-way, where we're trying to determine more of a needs assessment, I guess.

This community involvement helps guide the Extension educators in work in areas where there is sufficient interest. One Extension educator shared, “Otherwise, I could just spin my wheels putting programs out there that they’re not interested in or they don’t have a need for, then no one comes to them and they’re not successful.”

State1 recently completed a major needs assessment process at the state level as detailed by this Extension educator:

You know, our organization has done a statewide calling out, you know, what do I say? A statewide asking the public statewide, what are the significant issues that you need answers to? So, that was the calling out to the state to get input, feedback, dialogue. And then, you know, our

organization took that up and picked multiple issues out of, that kind of represented all those issues that the people of the state brought up.

A State1 Extension educator spoke not only of having the community help identify the needs, but also having them set the priorities and help determine who might help to address the needs.

Generally, we've been accustomed to using probably more so the engaged model, where it's community involvement. Its customer driven, in terms of what are the issues out there that our clientele perceives to be main issues that we can address. They'll help us prioritize those down, and then look at the resources we have available. Is that something that we can address, or someone within the system? If so, then we go ahead and design the program, implement it, and then come back and evaluate impact. If we can't address it, then, what partner that we are associated with can help implement a program to help address that issue? Maybe we can partner in on some degree of it also.

One Extension educator from State1 spoke of the potential for using social media for needs assessment. She suggested that this medium may provide input from people that may not respond to traditional methods of information gathering. She said:

When I sit down of an evening, I have my iPad and I am sitting there on social media, and looking at what local people are posting on social media - what they're thinking about, what they're talking about, what they're

worrying about. There's something about social media that people will spill their guts on social media and you might have them in a face-to-face meeting and they're not going to say a word. That's kind of an unusual phenomenon. I don't know that anyone has really studied that. When you're watching what local people - and nationally in content areas - what people are talking about or concerned about - I think that that really helps drive the conversation.

One Extension educator in State2 is working with producers to gather input that might be used to move the mandated recertification process for pesticide licensing from an expert model of program delivery to an engaged model. If accepted, the recertification will use active delivery methods and be based on an engaged model of program planning. She said:

From a standpoint of producers, right now have a pesticide license and are required to get recertified every three-years with a three-hour program. And we are attempting to get the fertilizer certification to run simultaneously with the pesticide license. So, in the initial years, they are going through five hours of training, three for pesticide, two for fertilizer, if they have a pesticide license. And if they don't have a pesticide license but are getting their fertilizer license, then they are required to sit through an initial three-hour program. And then the recertification will-- and it is evolving right now, but the involvement of the producer at this point is coming up with topics that can be implemented into field days where it's

not just sit in front of somebody up in front of the room speaking for four hours, or three hours, or two hours, but incorporating some other elements of the same material, but into a more of on-farm field demonstration day or field day setting where it's a little bit more hands-on, a little bit more interesting, a little bit more interactive than just classroom instruction. And so, coming up with ideas from producer groups and other, maybe, industry groups as to how we might be able to implement programs and then hopefully getting the acceptance of our idea for credit for that certification from the [Pa] Department of Ag.

Extension educators spoke of identifying needs by asking stakeholders for their input one-on-one, using surveys, canvassing the crowd at community events, following social media, meeting with interest or advisory groups, or tracking repeat questions coming into the Extension office. There was no clear-cut process either for this or for program planning. Other Extension educators spoke of gathering input to drive content on websites, conducting regular surveys to evaluate online newsletters and using social media analytics to drive and evaluate engagement.

Program planning and implementation. In some cases, Extension educators may gather the needs from the community and then go about program planning in a solitary fashion. In others, they work with committees or teams to identify and achieve common goals. One Extension educator talked about identifying problems with others. He said:

On my engaged model, I might listen to what they had to say, and then seek out that information because I know about how to do that. When I'm

at a loss for how to solve the situation, I would spend a lot more time with those that present that problem, asking them questions, asking them to work with me to identify the problems to be solved, and how we go about solving those problems.

Another Extension educator spoke about how this worked with the on-farm research projects. He said:

Sometimes we have those conversations with our stakeholders when we're developing, like in my case, on-farm research. When I'm asking a farmer, or he's asking me a question, about solving a problem on the farm. We try to drill down to what exactly the objective of the research is, so at the end of the research we can actually answer the actual question we set out for. Because if we're not careful, we may not answer what we set out to do if we haven't talked about the objectives, and what we truly want to learn, and laid out the research to begin with the right way. So, that community involvement can certainly be a part in the planning process, as well, so that at the end we're not scratching our head, even if we have an evaluation instrument at the end of the program or research.

Extension educators expressed that program planning is more challenging using the engaged model. One Extension educator shared about partners that he works with that want to provide funding to aid him in educational programming in areas of need that are of interest to both Extension and their businesses. But to make that happen, he must be

flexible because the businesses want to schedule the programming around their customer appreciation days. So rather than setting up his calendar and getting on with planning he must wait until they set their schedules to commence planning. The storyboarding process used with the sounding boards to develop a farm truck safety program by one Extension educator appears to be a unique form of needs assessment among these Extension educators. The activity brought together many partners around the issue to also participate in program planning and delivery. She said:

We actually had tire companies there to talk about proper truck tire maintenance, and just to talk about tread and things like that involved around the truck. We had another trucking firm that they brought representatives in to talk about truck maintenance. We brought in the Highway Patrol and the County Sheriff's Department to talk about weight limits, weight loads, what they look at when they pull someone over to drive up on the portable scales, and other things that they're looking at in terms of truck wear and tear, that they shouldn't be on the road in some cases or something like that. So very few university people. A little bit from ag safety in our unit, but another piece was the insurance side. So, we brought insurance company representatives in to talk about what they should be carrying for insurance, from a liability, if they have an accident, things like that. So very broad in its scope.

Through the on-farm research program, producers involved in identifying the problem also participate in solving the problem through research and then in presenting

the findings. Another State2 Extension educator gave an example of a program activity in which she involved local partners in planning, and presentation processes to provide information on emerging legislation. She said:

So, an example would be having some involvement with local veterinarians, local feed companies, and a few producers to actually bring forth a program to inform the community as relates to livestock production in regards to the VFD rules coming in 2017. Rather than just putting the program out there, I got input as to how to best address it in a meeting setting, so they were all involved. And in my case, a couple veterinarians, and a couple local feed manufacturers, were actually on a panel as part of the program to address questions that producers had, as well as a formal presentation given by someone within the industry.

Evaluation

Often, when Extension educators in State1 spoke about evaluation it sounded as if they were working on this part of the program planning process alone. Some Extension educators did mention continuously soliciting and listening to feedback to make programming adjustments. The primary means of evaluation mentioned in State1 were pre/post- tests and surveys, often including a needs assessment component for future programming. One Extension educator mentioned increased response rates for an evaluation survey because of being able to connect the evaluation to an electronic registration system and have it delivered electronically following an event.

When discussing the definition of the engaged model, Extension educators in State2 often indicated that they involved their communities in all aspects of program development except evaluation. One Extension educator emphasized the importance of shared evaluation. He said, “I think evaluation's key because if we want to continue this then they need to be aware of what's good, what's bad, what's happening.” Other Extension educators shared ways in which they are practicing engaged evaluation. In some cases, they report doing this through visits with volunteer leadership groups to review the previous year's activities as they plan for the coming year. This was expressed both in program planning for homemakers and for the on-farm research. An Extension educator shared the types of questions he might use in this process. He said:

And so, on-farm research is an area where we have a planning meeting in the spring. And I say, ‘What projects do you want to be new this year? What are the new projects? What are the ones that need to roll off? Which ones do we have enough data? And can we help producers make decisions? Or do we have enough critical research math that we answer our questions? If that's the case, then let's roll this project off and what's the next thing?’

In another case this Extension educator has a formal survey with IRB approval that he used for program evaluation. He shared:

In the case of that agronomy program, we'll have an IRB survey on the fertility component of it because that's, kind of, a signature program.

There's a standard IRB survey that's the true research evaluation. But then we do programmatic evaluation either with a survey link, following up on it [the program].

Another Extension educator spoke of the importance of incorporating the preparation for the evaluation into the program planning process. He emphasized how evaluations are used to develop impact statements to provide program accountability. He said:

And it seems like Extension meetings are notorious for, 'We're not done with the meeting until the evaluation is completed,' which is good. From a program planning standpoint, we, as an extension professional, maybe our planning for the meeting is not done until we've thought about the evaluation that we're going to use at the end of the meeting. Whether we do it right at the last few minutes of the program or it's a follow-up email survey or whatever means that we are gathering that feedback, the planning process nor the program, itself, probably, is not complete until we think about that evaluation. Because if I don't have an evaluation at the end of the program or an event, it's much harder to write a bonafide impact statement as to what we accomplished other than, maybe, putting people in chairs for a certain period of time. And then they listened or didn't listen or whatever they're experience was in the program. Without an evaluation, it's hard to write those impact statements.

As mentioned earlier, one Extension educator in State2 challenged the traditional evaluation processes occurring at the end of a program activity. She shared how she might approach evaluation by considering progress in achieving goals in ongoing projects based on their established priority. She said:

It's the kind of thing where you almost have to just say, 'Okay, we've to start with this stage,' and so forth. And I'm not sure that any of these projects ever necessarily have to have an, 'Well, we're done. We achieved what we wanted to achieve.' They certainly have to have a goal. I'm not saying just go in willy-nilly and just start plugging this hole in the dike and that hole in the dike. But I think that maybe we need to rethink whether projects are ever finished.

What I would do is, I would have a goal and set up metrics to begin with, when I start. For instance, in this one town, if I was going to use that town as an example, I think they have like 70% of their kids are on free lunches and I can't even tell you what percentage of the population is seniors. Let's just make something up. Let's say 70% are seniors and 70% of the youth get free lunches. Well, you begin to establish something that-- the trend here is that the population is aging and that it's got abject poverty. There's a great deal-- this is not an affluent area, and it's not going the right direction. So, you set up a program maybe, to start out with . . . - let's say that you wanted to help the seniors with meals, so that they had three meals a day, and your goal is to make sure that, I don't know, 80% of

the seniors get three hot meals a day or per day, and then you can measure that.

And that part of the project, you've achieved the goal, but it's not over. It's not complete. It's ongoing. With the kids, say a good deal of them, 70% have school lunches and they eat for free. Then what are they eating in the evenings? What's the plan for making sure in the summers and on the weekends, that they have food? You start to, I don't know, advance the thought process. Food insecurity, you go into a number of models, but you do little things, little projects and little successes that in time, that are easy to measure. And are the kids-- also, the kids, are they getting their approval slips from their parents signed so that they can bring home backpacks of food on the weekends so that they can eat? Are the seniors getting warm meals delivered? Are they getting to their doctor's appointments? So just set up things, little things that are measurable and then continue building on that, one success at a time.

Engaged program delivery methods

Program delivery methods were emphasized by the Extension educators in State1. One Extension educator also specified that even when using the expert model, he tries to use the engaged methods for program delivery. The delivery methods related to more engaged programs sought to increase interaction using both face-to-face and online methods. One Extension educator indicated she is using flipped classrooms with Extension Master Gardeners and with youth. In the flipped classroom, the clients are

given readings to complete prior to attending the face-to-face session. Then in the face-to-face session, either the subject can be explored in greater detail or hands-on activities can be provided that reinforce the principles included in the reading. Another Extension educator spoke of working to develop open-ended questions that were more effective in creating discussion.

An Extension educator from State2 referred to the collaborative learning produced by having producers share their knowledge in presentations as being “more authentic.” He acknowledged that one challenge is having participants become more open in sharing about their business. He said:

It's, I don't know if sincere is the right word. It's more, maybe authentic would be better. It's more authentic knowledge. Yeah, or a more authentic delivery system. You said delivery, but-- and it enables, or what I hope to do, especially in our on-farm research, is facilitate community collaborative learning among farmers, which is a bear to do. Because, I mean, they're-- these guys are presenting to an audience of 2 or 300 people that most of them have no interest in other people knowing their business [laughter]. But the committee that we work with, they're open minded, and they're progressive, and they're fun.

Another Extension educator spoke of changing the format for their traditional field day to incorporate greater opportunity for questions and discussion.

So, the engaged model, we tried that at our-- we had our water and crops field day here, in our district, this last August, and we tried to do that. I think it worked out pretty well for us. We spent a lot less time with a formal presentation. We tried to keep our presenters down to 10 or 15 minutes each, and then we would have a panel discussion, where we would encourage producers to ask those questions, you know for more information. And then also, in the afternoon, we moved to more tours and demonstrations that would be smaller groups. Those that were really interested in a specific topic would go and talk to that specialist or educator about that. And I think that really allowed for that deeper discussion – you know smaller groups, people are more willing to ask questions. So, we got to that next level of discussion in a lot more cases. . . . We started out each specialist gave a five minute, ‘This is what I’ve got here. This is what we’re doing.’ And then that really opened it up for more discussion.

Other techniques Extension educators reported using to increase interaction in face-to-face settings included hands-on activities, small group discussion, having peers serve as instructors, and using technology-enhanced polling to gauge understanding.

Other Extension educators spoke about how different audiences might vary in motivation and commitment to different topics or to a specific topic at different times. What is needed by a specific audience at one point may change over time. An Extension educator from State2 explained:

I don't know that every client, that they fit into the same box all the time. At different times, they're going to be engaged or something will come up that stirs them up. They may not have been interested in something before, and now all of a sudden something changes. Whether that's because of markets, economic forces, or because of production forces, or because of new members coming to the group, but they can go from being a group that asks you to do a lot to, to all of a sudden, 'Hey, we want to take charge. We want to push this. This is important to us.' So those groups kind of ebb and flow, I think, in this, and I don't know of anyone-- I've worked with groups that they go back and forth. So, you can't really put them in a box and say, 'This group always does this and this group always acts in a certain way,' because the situations of life can kind of cause that to change.

Extension educators are also working to make programs provided in an online environment or through use of technology more interactive as well. Many Extension educators mentioned engaging with clientele through social media. One Extension educator said:

I would just say that a lot of my comments so far have been me thinking about traditional programs, but this very much also works for the web, for social media, where engaged is really more of the preference of the people that we serve. When I first started with social media, my whole thought was, I was going to share all this information, more like an expert, sharing

all this information, providing resources to websites. And what I quickly learned is, that space is more of an engaged environment. People like discussion, people like responding back and forth, people can just jump into a conversation at any time, and I've done that many times too. It works really well with the new media and technologies that we use as well.

One Extension educator spoke of the amazing responses she received because of responding to email from clientele participating in an online course.

Probably in the program that I'm doing, it is working with parents going through divorce. And so, we use an online model where they have to respond back to us. It's been very, very fascinating because at first, they get online. They think they're going to rush through it, check a, b, c, or d, or answer yes or no, or whatever. And what we're really making them do is they have to write out the answers, and they have to send them to us through email. Then we are responding back to them through email. We, a lot of times, add more to what they have said, or if we see something that we need to address, we address that. And it's been quite interesting because they're not truly engaged at the beginning. But once they know it's one on one, they become engaged, they start asking questions, they start responding, the responses get better. It's just been fascinating, because for people going through divorce it's pretty private. And they do like to hear--

they need help. And so, then they start asking for that help too. So, it's been very, very good in really engaging back and forth.

Shared expertise.

Other Extension educators shared that it is important for Extension educators to have expertise to have credibility. One Extension educator said:

I don't believe in the expert model a whole lot, but don't construe that to think that I don't think that when the Extension educator enters the room they shouldn't be one of the most knowledgeable people in that room. No matter what we're talking about, even if we're talking about engagement, they have to be seen as an expert. I don't love that. They have to be seen as a resource, a reliable, trusted resource on that topic.

He went on to share the type of expertise he feels is needed to be for clientele and Extension educators.

You at least have to have a knowledge of what the industry is like. And I preach this to all the farms I work with, too, is your customers expect you to be an expert on your business. Know your farm. But they also expect you to be knowledgeable about the industry, and any externalities that may occur with that. So, you need to be up on what's happening within local foods or whatever. So, I say the same thing, Extension.

Another Extension educator talks about the need for expertise in addressing community problems. She said:

Well, I think that there are cases where you absolutely need to have an expert. . . . You've got all these different areas where you can bring a whole bunch of people in, but they don't really know where to start . . . Or they've never done, say, strategic planning. So, in that case, you need an expert in strategic planning to be able to set the table, to be able to provide the facilitated environment, to begin to gather the information for a strategic plan. That, to me, is where you'd use an expert. Or say, you were doing something in healthcare and you needed somebody that really had medical knowledge. You were setting up a free clinic or you need an expert to tell you how best to set that up and how best to use it and so forth. But the actual idea of identifying that you need the clinic or possibly even where it's placed and so forth, would be more of the engaged model. But then the actual nuts and bolts of things, you would need an expert.

But I think that overall you have to have the engagement of a group of people who then say, 'We need an expert to tell us about how to set up this clinic or which doctors we need and where we're going to find them and that type of thing.' If that's almost after you, in general, had the plan in place-- I'm sure there's other times, Karen, where you would need experts in a field. I just think that overall when you've got people that are--

you just have to be careful that they're not calling themselves experts. I've seen people do this with, even evaluating Myers-Briggs or StrengthsFinder, and they're the ones that are going to explain to you how your personality fits in with other people, and they're coaches and that type of thing. And they position themselves as an expert, but sometimes they can be off. . . . So, that's why I like to work in groups and teams because I think a lot of times you find that either if somebody is slightly off, there's that debate as to whether you're on the right page or not.

Many times, the expertise that people bring to the program is based on their life experiences. Another Extension educator talked about sharing expertise when working with his 4-H program. He shared:

If I'm doing any of the non-formal education programs such as working with volunteer development, committee development, I always get input from the learners in the group because some of them have better ideas than I have. I share information that's accepted by our organization or other experts. And then I work with them on how to utilize that information, or model into their experience of everyday or into what they are doing with their clubs or programs.

I use it almost at all of my various committee meetings - if I do workshop sessions with 4-H advisers, or officers, or teen leaders, Extension advisory committee folks - if I'm working or teaching on a

specific topic. Again, I have them engaged as an informal setting. And I try to have them bring their past experiences in as an adult learner to help others learn. So, I do use the engaged model as I said 95% of the time almost with everything I do.

I feel it's more successful for people to buy in, to learn, to feel like they're part of the solution, not just part of a problem or the topic. I want them to feel confident that they're part of the group. So, they can feel able to share their past experience, open up, ask questions of what they want to know, but also learn from others.

Another Extension educator shared how she identifies expertise among the people she works with daily. She said:

So, I'm a firm believer that you use both, that you really tap into the people that are the boots on the ground and doing the work and know what they're doing and living the life that you're affecting. And then, bring in expert help where you can, not only from-- in my case I work for [a state university], but I would not be hesitant to tap into any of the other experts that I run into on a daily basis just by participating in committees and so forth, and bringing that knowledge and those skills to create a positive impact on the population here.

In some cases, including expertise from within the community can help support the program by building on what is shared from the university. Beyond expertise in

specific program areas, clientele contribute their knowledge related to program delivery and community perspectives. Previously I shared comments from one Extension educator who talked about how industry became more involved in program planning and support when they were providing expertise and not just program sponsorship.

Shared learning

Shared expertise helps to provide shared learning environments. A State2 Extension educator spoke about two summer programs he offers that rely on shared expertise and shared learning. He said:

In the engaged model, we have hosted several-- two things that we've done. This is the second summer we've done them. One's called Workshop Wednesday, and the other one is Tech Tuesdays. And Tech Tuesday is specifically technology-related. Workshop Wednesdays is more 4-H project-related workshops. And for those, we've used the-- and then also, we do an afterschool program with youth. So, for those, we've probably used more of the engaged model because there could be a youth that has some expertise that they're sharing because they've figured it out. We kind of give them, 'This is the ultimate goal at the end of the session. These are the tools you can use, and we're here to help you.' And so, those are probably some of the ways that we've implemented it with those programs.

So, for the Tech Tuesday, it could be anything from we do a beginner video-making intermediate kind of thing. For adults, we've done

how to use your phone, smartphone and such. And so, with that, it could be classmates who have discovered a certain app, or something else that are also sharing the information with each other. But we're facilitating all of them getting together and doing that. We have some robotics kits and some things that we've done with youth around the technology piece, too.

I think, again, it's giving... I think it's kind of finding out where everybody's at that is a participant at the time - finding out what their level is and such, sharing the knowledge that the university has or the resources that the university has to offer, and so that could mean a lesson that might be kind of more scripted. And then usually, if you will, the second half of the time is spent where each learner is kind of challenging themselves to do something, or learn something. And then the idea of sharing, where the group shares out what they've done, and if somebody else wants to know how that's done, then they can share it with each other.

Shared learning is used in all program areas as community members come together to solve problems using the engaged model. This is one of the many benefits of changing the focus of the Extension program “from me to we” as mentioned previously. Extension educators have the opportunity in an engaged model to “facilitate community collaborative learning.”

Feedback from Extension directors

Both Extension directors talked about the criteria they are looking for in the Extension educators they hire. Their thoughts regarding the types of expertise the Extension educator needs to contribute vary greatly. In State1, the Extension director wants Extension educators that are well educated and more knowledgeable in complex areas. He wants them to be able to interact on an equal basis with what he sees as more knowledgeable clientele. The clientele generally have terminal graduate degrees. So, he looks for this in his Extension educators as well. In State2, the Extension director wants to take advantage of the enthusiasm of recent graduates by reducing minimum requirements for employment from a master degree to a bachelor degree. Once hired, Extension educators can complete advanced degrees based on their interest in personal and professional growth. He emphasized the role of the Extension educator in facilitating process in an engaged model.

The Extension directors agreed that as we think about engagement, the processes around program evaluation need to change. In State1 the Extension director said “Extension has been too focused on measuring impact.” He feels that Extension has taken low risk approaches to achieving what others expect of us rather than achieving our full potential. He has appointed a team of Extension educators who are exploring developmental evaluation.

The Extension Director in State2 called for “major transformation” when asked about shared or participatory evaluation. He emphasized that the organization needs to think about what we want to reward and how we change our performance review

processes to achieve that. He feels that evaluation in Extension has developed to mirror the process used for faculty on campus without recognizing the differences in the roles. He also said we've emphasized logic models for too long. The linear processes associated with these do not explain the complexities that occur in practice.

Implementing the expert model of program delivery.

Findings presented here are from the survey of the panel of experts, and the semi-structured interviews with the Extension educators.

Panel of experts.

The panel of experts considered the expert model to be consistent with the outreach mission which Extension and other organizations within the University may provide. They referred to this as "taking the answer to the people." As an example of programming using the expert model, they identified issues addressed by the Extension Disaster Education Network (EDEN). EDEN developed in 1995 out of the North Central Extension region to build upon lessons learned through multi-state collaboration responding to disastrous flooding that occurred in Missouri in 1993 (EDEN, 2015). A national team of Extension educators works to proactively develop materials that can be used to support communities, meeting needs resulting from a wide range of natural disasters that may occur.

Semi-structured interviews.

To gain insight into why and how the expert model was used, interviewees were asked to identify the situations in which they used this model. They were then asked to identify the processes they used to implement this model. Findings indicate why or when the expert model is used as well as how the model is used. This section begins with findings related to when and why Extension educators use the expert model of program delivery. This is followed by an overview of findings related to the programs and partners associated with expert program delivery. Finally, findings are shared related to the implementation of the expert model through program development and delivery.

Why expert?

The expert model of program delivery is used by Extension educators: (1) to provide education for specific purposes, (2) to meet specific audience or community needs, (3) to introduce other Extension programming, (4) to introduce engaged programming and (5) because of attributes of the Extension educator or topic. None of the Extension educators used the expert or the engaged model exclusively, although there was a small number of Extension educators that preferred the expert approach. This section provides examples of specific situations in which Extension educators from both states use the expert model, regardless of their model preference.

Why expert? To provide education for specific purposes

The Extension educators gave numerous uses of the expert model to provide education for specific purposes. The expert model of programming is used for delivery of mandated programs, to present research, to respond to specific questions, to provide

specific types of information, to address statewide themes identified by the University, and to provide professional service. More detail related to each of these uses is provided here.

Specific purpose: Delivery of mandated programs

The state Cooperative Extension organizations partner with various government agencies to provide certification training for mandated programs. Examples of these include child-care provider training, parenting classes for people going through divorce, chemigation certification, and private pesticide training. In these cases, the content and delivery method are often dictated by the sponsoring agency. One Extension respondent shared about her experiences with the child-care provider certification training:

Well, it depends on what kind of programming it is. Right now, the programming that I'm involved in is early childhood education, and we're working and collaborating with a lot of state partners who actually require certain training be taken with licensed childcare providers. So, in that regard, we probably use an expert model because it's training that they [clientele participating in the training] don't choose - or they don't help develop - they're just required to have because of background information.

Usually the states do [require the certification], and in this case if you're licensed and want to keep your license, then you're required to have this training. It's a little bit like certification or something like that. And most states have some sort of system that there is required training in order to be, like I say, be licensed or certified or whatever you want to call

it, so that they can say, 'Yes, you're sending your child to a licensed facility and we've been inspected, and we've met the criteria to be licensed,' and sort of that affirmation, so that parents know that supposedly it's a safe and quality educational place [chuckles] to send their children.

Right now, it fits the situation - what is needed by-- and, like I say, the clientele that we're serving with this, it's needed because this is training that's required that they have. They don't have a choice. They have to have it. It's not been identified by them as being needed. It's been identified by somebody else, and being in the middle of that is-- being in the middle of those requirements right now, and the timeframe that they have to get the training, is making it necessary to use that expert model. That, 'I've got all the information you need. Just come to the training and you'll get it' [laughter], That kind of thinking, you know.

In State2, an Extension educator spoke about his use of mandated programs and some of the audience limitations he sees with these. He said:

Well, a lot of that's just the mandated programs. We got pesticide education, we got fertilizer education. We have [Certified Crop Advisor] CCA credits, different things like that, where there are certain things that have to be taught. So, a lot of the farmers don't exactly know exactly what that is. They're not real thrilled about it, so it's hard to develop those, what

I was talking about earlier, fans of the program. They just have to come. So, I would use the expert model as far as that, but I go to my advisers to talk about what is the best way to deliver that. But you're never going to develop them as real, 'Oh, this is a great idea [laughter].' So, they either believe it's a great idea because of the community around them or they don't, so you just kind of go with that. But that's about the only time I really use an expert type model.

One Extension educator talked about how he works to develop himself as an expert when presenting these programs. He said:

Well, like I say, I would use it in-- I use it more quickly in regulated programs. But in the pesticide re-certification, in [this state], we have fertilizer certification program. So, those I'd just consider, kind of, canned curriculum that we get handed from the state, from somebody that wrote it in a state office. But I use that expert model more there. Trying to study up on my own, become this prepared expert, deliver a program for an hour and move on.

Specific purpose: To present research. One Extension educator from State1 said that delivery of research-based information was best achieved through the expert model. She said:

I think we cannot get away totally from the expert model because of the important part of the expert model is that you are sharing research-

based information. And people still want to hear that. They still want that. They still need - a lot of cases - need it, and that might be the only way of actually hooking - if you want to say that - someone into understanding what you're talking about, getting involved in what you're talking about. So sometimes it has to be that expert model because first of all, you have to get people excited about things. And so, a lot of times the expert model is the only way.

A State2 Extension educator shared that the expert model allowed him to share the latest research with clientele. He said with this model he could “listen to state specialists talk about the latest research they’re doing, and bring that out to the clients.” Another Extension educator said this model worked in teaching food preservation and food safety where “there’s no discussion on what is safe and what’s not as far as proper procedures.” Yet another Extension educator said he used this model to let the research “speak.” Another Extension educator added that this research basis is what differentiates us from Google or bloggers.

Specific purpose: To provide specific information. The expert model is frequently used to address specific questions or present specific topics. For instance, one Extension youth educator in State2 shared:

I think there are still times when there are people that want specific knowledge. To me, I see a good use of the expert model is-- so we have 200 different 4-H projects, and so I'm not going to be able to be the expert of any one of those different projects. But if I focus in on two or three of

those projects, and I know them inside and out, and my colleagues can call on me-- like, so one would be robotics, and so they don't have to be the robotics expert. But if they have a youth that is struggling with a robotics question, they could send them to me. Meanwhile, I don't have to be the goat expert, but then I can facilitate still the goat questions by either tracking the resource down or the person to do that. So, I still think part of our strength with Extension is having those expertise that we could bring, and those are the times when people want specific answers. Sort of they need that answer and they either don't have the time to facilitate or participate in the engaged process, or they don't have the capacity. They're looking towards the expert piece.

Similarly, another Extension educator said:

I think that sometimes if a specific request comes in from clientele where they are specifically requesting a certain topic, and sometimes they may even have in mind a certain speaker or presenter. So, that obviously lends itself well then within that model. When somebody is calling in for a question and asking me because they don't have that, again, seems to-- I use probably that expert model, because I'm answering a question or giving them information that they've called about.

Extension educators also used the expert model to provide informational programming related to government legislation or institutional policy. Like the mandated

programs, the information provided by these programs is very specific and does not leave much room for interpretation. Extension educators feel their main role is to make the clients aware of the rules so they can implement changes as needed in their practice. Examples of these programs that were provided include 4-H volunteer child abuse prevention training, Farm Bill programming, and training related to the Veterinary Feed Directive (VFD), Confinement Animal Feeding Operations (CAFOs) and Extension Master Gardeners.

One Extension educator spoke of developing an expertise in farm management. Now he is often asked to speak on the topic by other Extension educators and respond to common questions around reports that must be run each year. He said:

I've developed programs that I've taught around the state by request of other people that have seen me teach and wanted to bring that program to their county with their clientele. And nobody else is doing that in the state. So, I guess from that standpoint, when a county has identified that local need, that that would fit for them. I guess, then they call expert. And, humbly, I caution describing myself in that, but, it happens. And I'm glad to do it. And we've been successful for several years with those aspects of that. Whether it's teaching and writing curriculum and helping people solve problems after the fact. When they have problems with how to do that record-keeping, they have my contact information. And they say, 'Well, I'm running reports at the end of the year. How do I get this report

to show how I would like it? I know you talked about it in class, but how do I make it work? I know it's in there.' And so, we solve the problem.

Another Extension educator spoke of using this approach in a similar situation when there are “necessary” but not exciting programs. She shared:

The only times I can think is just when I think it's a program that's necessary, I'm one that will just jump in both feet, and do it, and just kind of see what kind of response. It does not happen that way very often, but from time to time, you've got to present a program that you know if you just tried to advertise it, got more involvement, you may not even get anybody at the table to talk about it. Taxes might be something that-- who wants to talk about taxes [laughter] in that regard? Or estate planning? Sometimes you present the estate planning program and hope that people come because farm families don't always like other farm families knowing what they're doing with their property and their estates, and what they're doing in their family models. So, that would be a case where I'm going to present the program from an expert model standpoint, and hope that we hit the target, and people come. Because that is more of a private farm management aspect to their businesses. And the same would be in some discussions with taxes, so that would be a couple examples. But like I said, I, for the most part, spend more time in the engaged model.

Informational topics with little room for interpretation were another example provided by this State1 Extension educator. He said:

And so, sometimes we have to be one-way. For example, we have this new thing called Veterinary Feed Directive. And that is information that we really can't decide, 'Oh, community volunteers, do we want to go with this new VFD that's out there?' It's like, 'Nope. There's no discussion here. Here's how it is. Here's how it's going to be implemented. Here's what you have to do.' So sometimes we are the one-way delivery. We're the expert on issues like that. It's also like child abuse training, again, those kind of things. We're the expert person on those types of issues. We're delivering the information. And that's probably where policy and procedure comes more into play as an expert model versus the engaged model when you're trying to make program changes.

Using this approach for this topic was echoed by an Extension educator in State2. He also used the expert model in providing training on the Veterinary Feed Directive training. He emphasized his lack of control over the subject matter. He said:

I think the expert model, to be effective, needs to understand the learner situation and circumstances, and obviously, the learners, those are diverse, but sometimes these specific issues - I'm going to give another example - veterinary feed directive is one that was in the cattle industry, livestock industry. It's a big issue. It's an informational topic that folks need to have

information on in a pretty quick way. So, that's where the learner model-- and it's also regulation that maybe we as an Extension educator have no control over. It's more information delivery, things you need to do to be prepared. It's more of a recipe-type scenario than it is a circumstantial scenario where you can change things. I guess that would be my feedback on that.

Another Extension educator spoke about how he used the expert model to provide training on CAFOs.

Well, it's probably more these types of things where there is not a lot of leeway. I mean we try to do as much as we can but kind of like when there's different rules, licensing and that type of things, very specific laws that have to be-- that are administered by the state and we have to pass these laws-- I should say pass these-- do the training according to whatever these laws are and some of that might be national type trainings for the environmental things, or different trainings they have-- as opposed to use of-- when we look at CAFOs, which are confinement areas, or how they handle their waste material because those are environmental issues and we'll do some training for this and don't have a lot of leeway on this - these rules that they have to follow. There are sometimes field days, and this type of thing, to get input from everyone involved like community, and farmers, and this type of thing, but there's so much-- there're some of

the things within that have to be, expert model that needs to be used when you deal with these type of issues.

Other types of programs that some Extension educators reported require the expert model of program delivery are those where the purpose is primarily to provide information or raise awareness. The subject matter revolves around common questions. Extension educators from State2 reported delivering this content in face-to-face environments, through webinars and videos. The idea of using the expert model to present new ideas and concepts is highlighted in this response.

The expert model, I've thought about that a little bit through this morning. It might be such where you are introducing new ideas and new concepts to clientele that may not be aware of, for example, new technologies that are available or are coming down the pipe there, that hopefully it can stimulate further discussion with clientele then and give them food for thought, and perhaps a little more of a challenge to use that. You might be introducing new curriculum to youth, or adult leaders in some cases, and I use, at least on the youth component, some of the national drives right now are involving STEMs: Science, Technology, Engineering and Mathematics. And so more of the expert model would work probably better in that delivery, implementation, design and evaluation of that type of a program effort versus coming more from the engaged model. So, try to get them to think outside of the box.

Another State2 Extension educator highlighted the use of the expert model through informational programming to increase awareness. The purpose of this training was to introduce possible change which might improve aspects of agricultural operations. He said:

I guess in the area of expertise that I work in, in irrigation management, a lot of producers don't realize that they could make improvements in their system. As long as the pivot is spreading water and they're getting good yields, why would they make any changes? They've irrigated that way for the last 30 years, so obviously, it's working. So, they may not understand that they could make improvements, and pump less water, and leach less nitrogen into the groundwater, and reduce fuel costs. Just making them aware that there may be issues out there might get them thinking that they need to come to another program and get more detailed information.

Yet another State2 Extension educator shared an example where he delivered information intended for a large audience to provide information about a new product:

Yeah. For example, a subject model around, I'll pick one here, a product called Pasture Range and Forage insurance that I've provided educational resources on. That expert model really fit there in terms of just explaining the program, explaining how it worked, helping clientele understand how they might utilize it, getting some examples in a webinar-type setting, and then allowing them to go explore that for themselves, and then if they have

questions can come back, and ask on those. That would be, I guess, an example of the expert model where I delivered that kind of scenario recently.

Specific purpose: To address statewide themes identified by the university. The expert model is also used to provide programming around statewide themes developed by the university. One example shared by an Extension educator from State2 follows.

I think that's one where for instance, some of this water quality work that we're doing throughout [the state] where we, as Extension educators, go to [the home university campus] or work with legislators, or review literature. And we want to bring that out and share that new information here in the county. We truly are the source of information. We're the ones that are creating the felt need for our clients here in the county to come to those meetings. So, it's not something where the local farmers or local agribusinesses are saying, 'Hey, would you put this program on for us?' Or, 'This is an idea we have.' A lot of what we do is information that is being brought out from the university to share with our clients. So, that's probably when I see that being used the most.

The university themes may be an example of programming intended to benefit broader society goals. One Extension educator spoke of using the expert model to "shape the future" for his community. He said:

It may not always be the right model. I don't like to get, I guess, locked into any one model because I don't think it's maybe always the right model. There may be situations where if we're really looking ahead and we see a situation coming that we can try to shape the future, so to speak, with good programming or education or providing something for the producers. There may not even be an awareness that this is going to be a need yet. We're doing more, I guess, preventive types of programming, so then that engaged model may not be the right one because it may not be something the community would perceive as a need yet, and by the time they would perceive it as a need, now you're reacting and maybe you haven't-- you're in a corrective phase rather than trying to, I guess, make a better future, for a lack of other words. So, it may not always be the right model.

Another example of an expert program intended to achieve a higher purpose for society was the childcare provider training. An Extension educator from State1 shared the objectives associated with this program.

The Extension objective of providing early childhood education to childcare providers and parents is based on the belief that a good, healthy start in life is imperative to later success in life. We're concentrating on providing a quality learning experience to children in an effort to help them become, more specifically, school-ready - so contribute to school readiness- believing that as we grow and become adults, then success and

contentment with life will follow. So, that's sort of the general objective in our approach to providing the foundation for that quality early childhood experience, and particularly in terms of good quality child development that will then contribute to overall school readiness and later success in life, I guess in a nutshell.

STEM was an example shared by another Extension educator.

Well, if you've got the example I just gave you, if you've got STEM as being one of the national initiatives from the President all the way down because we need to have more, build skills in knowledge based some of our youth for being future scientists. That would be one way to introduce that in. So, you would design your program and implement it in your teaching different aspects and concepts of science, technology, engineering, your math, for example, to whatever, whoever it might be, whether it's a youth audience. We have kind of focused on both of those - either adult and youth audiences - and then you turn around, in say six months, evaluate your previous audience as to there's still there understanding of those basic concepts for it.

A specific example provided by an Extension educator from State1 of a time which she used the expert model was for presenting changes in institutional policy to 4-H volunteers. She said:

Well, this is another question I had to think about a little bit. And the last time that I remember feeling like maybe it was more the expert model was when-- you remember when the big upset with Penn State and all the things relating to the child abuse and things like that that went on at Penn State? As a result of that, many policies changed within the university system. And once those policies were made at the university level, I kind of felt like we used that expert model to go out and talk to our volunteers and really say, 'This is what's changed and this is why we're doing it.' It wasn't like we had a discussion about it. It was more, 'This is why we're doing it and it's important that we change this.' And that's the one instance I really felt like maybe we did use the expert model within the 4-H program.

Specific purpose: To provide professional services. Another Extension educator shared the example of "professional services" as programming with a specific purpose requiring an expert approach. He said:

Yeah. So, a couple that I can think of, one is when we get closer and closer to the professional services that farmers use, as an example, that they need, or like estate planning. Estate planning involves, really, a lifelong of accumulated assets in a family business that may be moving to the next generation. And in that case, there's so much reading that could be done by the farmer or manager about that. And sometimes they just want it boiled down. And they want to go to a meeting and kind of get the essence

of the options, and what to do next to make sure that their son or daughter or their grandchild has an opportunity to farm sometime or in the business.

Why expert? To meet specific audience or community needs

A State1 Extension educator suggested that sometimes the audience is only interested in increasing their awareness or receiving an introduction to a topic and not particularly in becoming actively involved around that issue. In these cases, use of the expert model would be justified based on the need of the audience. This he attributed to either the topic or the individual. He said:

But I also recognize there are times, whether it's by topic or by the person - and I can give you some examples, perhaps, of that - or by the size of the crowd, even, that learner-engagement is a little bit more difficult to achieve, even though I think that's the preferred model. For example, there might be a topic that's an informational topic, that a lecture - a one-way communication - might be acceptable. They come to a meeting, they want to hear something about a topic, and then they go home, and that's the one contact we have with them. There might be an individual who's not really interested in solving complex issues, not really interested in a sustained relationship. They come in with a bug. They want it identified, and how do you get rid of it? And so there are probably times that that works well.

Similarly, a State2 Extension educator responded that sometimes the expert model is what is expected. He said:

And then, I suppose, part of it is maybe following expectation. I use it to-- it's kind of what I-- in some respects maybe what Extension is expected. And part of it also might be its habit or this is what's easy. It's kind of what I've become accustomed to. So, I think there's all those kinds of different factors that play into it.

Many Extension educators spoke of issues that may arise on a seasonal basis or emerge as important issues that required a quick response as those that worked best for delivery using expert methods. One Extension educator said:

Oh, I don't know, I think to some degree the expert model is effective. It is effective. And it depends again on the clientele in my mind a little bit, it depends a little bit on the topic, it depends on the size of the group, it depends on timing a little bit. Because if there's an issue that your community has all of a sudden identified, whether it's bullying in schools or childhood obesity or something, and we have to have a quick turnaround, sometimes it's easy to fall into that expert model trap, if that's what you want to call it. And to go into a school and share information about nutrition or bullying or whatever at that time. But at some point, I still think that we need to step back and say, 'Okay, we started with the expert model. Now with this issue, how are we going to get to the engaged model?' Sometimes we don't do that. Sometimes it's easy just to go in and lecture, walk out, and now our job is done. I still think there are times when we need to re-evaluate and say, 'Okay now, with that group, how do

we go back in and provide more deep, robust, rich educational experience where we can engage in a two-way conversation to solve this issue?' We probably in some cases, don't do that very well.

Another Extension educator shared an example of a topic where she might broadcast information rather than engaging her clientele.

I think another level to think about is when do you go through a process of engagement? You'd go crazy if you try to engage on everything that you did. You wouldn't get much done. Or sometimes you just simply put out information. For example if new food safety research indicates you need to only wash your hands 10 seconds versus 20, about all you would need to do tell people to update their information. I don't think you'd need to engage people before you shared the information.

Finally, another State1 Extension educator spoke of using expert program delivery methods to maintain control in a controversial, emotionally charged situation.

I've used the expert model another time when we've had a controversial issue arise, and I was facilitating a meeting where we essentially had a couple of experts come, and speak on a topic, and then I facilitated with written questions. People could write their questions on pieces of paper and hand them to me as the moderator, and then the experts would then address those questions. And I used that model because it was such a heated topic that it was a way to help reduce the amount of emotion in the

room, to me, and help allow for information to be heard, while hoping to reduce the emotion.

A very common use of expert delivery methods was related to specific issues or questions that may be presented either in one-on-one or group settings. One Extension educator defined these as “specific issues in time and space.” Another Extension educator spoke of using expert delivery methods in a one-on-one setting to address specific questions presented by individual clientele in their area of expertise.

Well, for example, someone brings an insect, I’m a crops educator, but I deal with lawn and garden and insects and a wide array of questions and so on, so if somebody brings in, if someone brings an insect into the office and asks me what it is and I say ‘it’s a - a bedbug’. And I would know, no qualms or questions, because I know for sure that’s what it is. I guess that would be the expert model. You know, I know what it is and they are asking me, so, boom, I give them the information. I mean if I didn’t know what something was, then I’d say well I’m not sure, it looks like this. I’ll have to investigate this more and then I’ll get back with you. I guess I’m still not asking for their input.

As alluded to in that example, the Extension educator can serve as a connector to additional information as needed in their area of expertise. There are also times when questions may be presented that are clearly outside their area of expertise. However, the Extension educator often is still able to aid because of their connections to other experts.

So, I've used the expert model when people call in to the Extension office to ask a certain question. Sometimes, though, it's not necessarily in my area, but I know where to find the answer or the other expert to help them find that.

Many Extension educators expressed difficulty in using the engaged model of delivery when working with large audiences. The mode of delivery may be in a face-to-face setting, through a webinar or online. Webinars can be used to introduce resources and then provide opportunity for the audience to ask additional questions. The Extension educator continued his thoughts on the topic to suggest that the expert delivery methods are clearly defined and useful in these specific situations.

I find the expert model to be applicable for programs, again, where we're maybe addressing a specific topic, a specific issue, or delivery of a webinar or video-based situation, where there's not much, if any, interaction actually with the clientele. It's more just presentation of information, then you're referencing resources, and then giving them the opportunity to follow up with, and then ask additional questions later to address their question. So, I think things are very specific in terms of, I'd say, a formula or a specific set of things that need to happen is where I see the expert model probably being most utilized effectively, I guess.

One Extension educator spoke about using the expert model to respond to questions that come from absentee landowners. Another Extension educator shared how

responding to specific clientele questions in an expert model becomes his program because of covering multiple counties. He said:

Again, I think it's just the nature, geographically where I'm located. I don't have other Extension educators around me. The counties are vacant and so those people in the region call me wanting specific information on individual topics. And so, it's not really where I could sit down and say I've got four or five things here that really get grouped into something I can develop a program on. I'm being viewed that way, as kind of an 'Ask the Expert' kind of thing.

Another Extension educator who estimates he uses the engaged model 65% of the time said he responded to producer calls from across the state about computerized farm record keeping. The specific requests for information come in multiple ways. One Extension educator shared:

So, I think, some of the one-on-one individual questions that come in via email, phone call, or they come to the desk, that they're looking for a specific answer. So, I think when it's kind of a black-and-white situation, where they are asking a question that is either specific to our county, that if you send them somewhere else, they wouldn't have that. Or that their answer wouldn't relate to the environment that we live in, in our county, are some of the dynamics that we're experiencing in our county.

In groups, the audiences being addressed, or the way in which the presentation is managed may result in use of the expert model of program delivery. One Extension educator shared how he used an expert model with young audiences early in his career and why the expert model made him uncomfortable working with older audiences. He said:

Well, I guess for me, it's been more-- well, initially, when I first started in Extension and especially in 4-H, I always worked with younger audiences, like I tried to target elementary-age youth when I did a lot of my teaching or a lot of my programming. And part of it was, because in their minds, I became the expert. And I didn't like to get into too much of the upper-level high school or even adult teaching because I didn't want to have somebody say, especially with technology, where you usually say, 'Well, you did this wrong.' Or, 'I know how to do this.' Or, 'I know more than you.' And so, that intimidation factor of the expert model was always present.

Another Extension educator agreed that the age of the audience may dictate use of the expert model. He specified that he used the expert model when working with audiences in grades K to twelve.

When working with specific audiences, Extension educators may be invited to make specific presentations and present in specified ways that preclude use of the engaged model.

Sometimes in certain program planning, that's also something that's used. Just examples, I guess, where I use that are like policy meetings, Outlook meetings, when we're presenting information that's pretty specific - it might be fertilizer related, pesticide related, those kinds of things seem to work - that model works fairly well.

Another Extension educator shared:

I guess if you are asked to come to a setting and the person that's setting it up said: 'This is what we need.' And I guess you're sort of engaging with the director, but you might not be engaging with the audience. If you come in and they're-- well, let me think. Let me think of a situation. Like I said, I don't use this one very often. Okay, maybe it's with food stamp recipients, and they need to learn what they can and can't spend that on, and they might need to learn how to manage it better. And so, that might be a case where you're coming in as the expert and giving them those bits and pieces of information.

Cooperative Extension educators reported using an expert model of program delivery when responding to client questions in a one-on-one setting or when addressing large audiences. One Extension educator detailed his assumption of the expert role in describing his interaction with producers. He said:

On another token, some of the work I do, there's some facts that I know that are established and they've been established through years of

research. And, I can tell a grower, you know what, if you come into this field with the combine, the way your beans are situated and the height of your pods, you are very likely going to have a disaster. I mean, I can kind of in an expert way say, it doesn't mean I know everything about growing and farming beans and it doesn't mean they don't have a lot of input as well, but on that specific point and that specific question, I can come across with a more expert, authoritative recommendation, based on knowledge and research.

It would be a little bit like I just said. Some cut and dried, research-based information that I can impart. You know, if you have soil ridges in your field that are holding up the head of your combine, every inch of height that you raise on that combine is going to be the equivalent to about three bushels/acre harvest loss in yield. I can just tell a grower that and that's based on, you know, multiple years of research, it's a piece of valuable information. Then, they might not know it. So, if I really know my facts, or know this is such and such an insect, or you know, then I would impart that knowledge in that, in a authoritative, probably not the right word, but very, in a very confident fashion and they accept or reject that piece of information as they chose.

A State1 Extension educator spoke of using the expert model in providing demonstrations for field days. He said:

I've used the expert model in teaching the effect landscape position has on the variability of soils, and how one needs to account for that in their farming practices. So, those are two examples. I dug pits in the ground in three different locations within the length of three football fields. . . . And I've done soil pits, and I talked about how the soil has changed from those three pits, just because of the landscape positioning and how that can affect your agronomic practices, productions of a crop.

He later shared the response of the audience to this demonstration. He said, “. . . and a lot of people are just amazed and overwhelmed by the sciences associated with soils, especially if they can see it. It's one thing to talk about it, but it's another thing to feel it and see it.”

Why expert? To introduce other Extension programming

In State1, Extension educators shared that they often used the expert model of delivery to meet potential clients and introduce them to Cooperative Extension, increasing “public awareness” of the organization. An Extension educator shared:

Yeah, certification, or those large audiences, that we're just trying to get our names and faces out in front of people, letting them know what expertise we have, so that when there's a field tour or another talk - a specific talk - that maybe they would come listen to us then.

These introductory situations also provide an opportunity to gather feedback for use in needs assessment from new audiences.

I also kind of see it in-- sometimes there's one-time presentations that you have to do for the community, and so sometimes it's around your area of expertise, so it's a little bit more of, you are the expert. But, again, I still try to get them involved and kind of see what else that they would like to learn, more than me just telling them what they should learn.

Why expert? To introduce engaged programming

In addition, delivery of programs in an expert model may also be used to introduce clientele to involvement in greater engagement through Cooperative Extension. One Extension educator from State1 detailed this process using the example of the emerald ash borer which is an emerging pest threatening ash trees in numerous US states in the US and Canadian provinces. In the initial stages, information is provided through the expert model of program delivery. As individuals become more aware of the pest, and its impact on their lives, they begin to contribute to the educational programming through their shared expertise and learning using an engaged model. This Extension educator said:

We have this emerald ash borer, and it's new on the scene here. It's just arrived. Well everybody's in a panic and you see a lot of experts out there from the university world - Extension world - who are sharing what they know about the pest, and what - probably a homeowner, a municipality, a government agency - will need to do in order to manage this pest. As time goes on, there's going to be partnerships, and relationships developed with these government agencies, and these municipalities, and individuals to

see how we can better manage the results of this pest damage. So, there'll be more of an engagement as time goes on. But initially, no one knows anything but us. When I say us, I'm talking about the academic world - about this pest. So, that's an expert model. We do press releases, we do radio. We do television. We might speak at conferences-- this pest isn't going to go away so in the coming years there'll be partnerships, relationships - that will develop - that we'll look at the validity of managing this pest, based on what we know.

Extension educators spoke about how clientele interest in engaged programming changed over time. One example was given of how a program that began as a university theme in a top-down, expert-driven approach became more engaged as clientele became active in determining future research and education.

Another one [state theme] along with that would be fertility . . . But with the algae blooms, and the issues we've had in water quality, and as agriculture impacts that, that's kind of been more of a top-down charge, initially. But as we've gone now, that's kind of switched to where we're using a lot of producers to help orchestrate where we go next with research, education, and things like that. But initially, that would be an example of something that was probably a charge.

Another Extension educator said that sometimes, she will get the “ball rolling” with the expert model. She said that increasing producer involvement, even with

mandated programming, has created more of an engaged approach over the course of four years. She is currently proposing a process for the recertification of fertilizer licensees that will use the engaged model.

An Extension youth educator from State2 said that when he uses the expert model, he is constantly looking for opportunities to get people involved and switch the delivery to an engaged model. One Extension educator stated it this way:

Normally, it's [a community presentation] very surface. We don't get into anything real in-depth. I would just come in and make a presentation.

Whether or not it led to-- it's kind of the first step in many cases. It may lead to a more engaged model, but it's oftentimes the first contact that you would have. And then it kind of lays the groundwork, sometimes for the engaged model, because you're sharing your expertise, and you're showing that-- you're building that trust and showing that you do have the expertise to be able to help them deliver other programming. So, it's kind of more surface.

Why expert? Because of attributes of the educator or topic

Extension educators identified personal reasons that they may use an expert model of program delivery including time management, control, building upon their area of specialty, administrative support and personal gratification. Getting things done to move on to other things was the purpose of using this approach in this response from this State1 Extension educator.

And I think a lot of times we're in that get 'er done mode, where it's like we just need to do it, and move on. So, I think that, for me, would probably-- would be a barrier. It's just like-- it's things like upfront, you're not thinking about the benefits on the backside, some days. You're just like, 'Okay, this is what we're doing. We're going to do it and be done.' So, that's my thought on that one.

Issues of time management both for himself and for his clients lead another State2 Extension educator to use the expert model. He said:

Another one is time. Certainly, I like the engaged model. It takes time, it takes more time to work with that model. Time oftentimes that just isn't available to me, so I don't go that route. And sometimes it's also time, not only on my part, but from the part of community, clientele, or members. They don't have the time to engage in that type of process. It becomes easier for them to say, 'This is the type of program we need, set it up. Bring this person in. Do this.' So, it's time, both on my side and on the community side.

Another State1 Extension educator spoke of the expert model as a "convenience model" she used to manage her schedule when it became overwhelming.

Yea, when I get overwhelmed then I have a tendency to just say, 'This is what we're doing and this is when we're doing it.' When you look at your calendar-- . . . I don't mind when I get double booked. I can manage

double booked, but when you're triple booked for a slot of time, then that's when you start freaking out, and start sliding back and say, 'Enough of the doodle pools. We can discuss when we're going to meet a gazillion times. We're just going to meet on Tuesday at 10:00.' And you have a tendency to slide back into that expert - this is what we're going to do because it's what I can handle.

Other Extension educators spoke of using this model because of the control and comfort it provided to them. One Extension educator said "But it's easier, it's easier to do a program as an expert lecturer. It's easier to deliver because it's-- you know, you have control over the audience and you can give them the information that you think they need." Another spoke of the ease of using this model because of the control it provided while describing the process she uses.

Well again, probably just because it's the easiest, it's the easiest thing to put together. You can put together a PowerPoint presentation with the assumption that you have a pretty good handle on what it is people need to learn about a given topic and you can hit the highlights, hit the important points well. Whereas if you do an engaged model, depending on how you implement that engaged model, sometimes topics or discussion may go off topic of what you would consider to be the most important issues that need to be addressed. You know, with the expert model, you can control that a little bit more because you've got the flow, you've got the outline for how the information is going to be presented.

Wanting to control how programming is presented is what another State2 Extension educator attributed to his preference for the expert model. He shared:

I don't know that it's the right model, but for my personality, I probably use the expert model within our county programming. There are times when programs that we do are initiated through an engaged model. But when we've done those and I've met with people and they've initiated them, it seems like it shifts to an expert model as we developed the program, and those others that are involved kind of step back from the process. And that probably comes from-- I don't want to say I'm a control freak but I am a control person, and I want to make sure that things are done right. So, I probably, in a team or group approach, am that person that says, 'Okay, I'll just do it to make sure we get it done.'

Another Extension educator spoke of benefits and challenges of using the expert model depending on your degree of certainty on the topic and your knowledge base relevant to that of your audience. He spoke of the danger of losing credibility by providing incorrect information or failing to follow-up with an audience when more information is needed.

I think you use the expert model . . . on certain subjects and topics when you feel confident, you understand the science behind the topic or the subject. You're more capable of using the expert model. It depends on your audience to some extent. . . if your audience is senior agronomists,

and you want to use the expert model, you damn well better be on top of your game. They'll eat you alive. . . and if they do eat you alive, if you're not on top of your game, then you've lost credibility. So, . . . if I'm going to be the expert on, let's say irrigation management. I better think about all the potential questions, and have a great understanding about the science associated with that specific topic, if I'm gonna hang my flag out there as the expert. Otherwise if I fall short, first of all, you can be an expert and relate to the audience, 'I am sorry, but I do not have information on that question,' or 'I do not know the answer to that question. I assure you I will follow up and get back to you with it.' Or, you can say that and not follow up, or you could tell them the wrong information. So, there's, you know, the consequences of wrong information is not good. That is not good. Consequence of not following up is not good. And you're better off just saying okay, I just, you know, I don't know. And that's a point, if you have an audience you might have to say, 'Jeez, I'm sorry but I'm just not up to speed on that at this point.' . . . but if you're going to go all out and fly your flag as an expert, I think you better have your ducks in order.

Other State2 Extension educators said that they used the expert model in areas in which they have developed expertise, like the Extension educator with the farm management expertise mentioned earlier. This Extension educator used his expertise to respond to phone calls in animal science and agronomy.

Like I said, because most people view me as a specialist in the areas of animal science and agronomy, and so I get calls related to what pesticide to use, how to balance a ration for my steers in the feedlot, and so they're basically drawing on my expertise or my ability to find that information for them.

This Extension educator used her expertise to train people to adopt new safety approaches, replacing practices that have been previously handed down from generation to generation.

Or if we're doing a food preservation class, you want to come in there as the expert and not just as their friend and say, 'Oh, my grandma did it this way [laughter].' And you want to come in as the expert and tell them the right way. So, those are different times when you might want to put on the expert hat. And hopefully the audience will realize why you're doing that.

Sometimes the Extension educator is asked to speak on a specific topic that is of interest to the community:

It typically is when a community organization just calls us in to do a presentation on a specific program, or share the outcomes of something, or in some cases, we've gotten quite involved in energy development - so they might want information about solar or wind and the impacts, and to provide examples. So, we might come in just to share our expertise on

certain topics. It may not be to any kind of programming. It would just be a matter of sharing our expertise.

In some areas, Extension educators relied on specialists to provide expertise to address specific topics with which they do not have comfort or expertise.

And there're things that we, legally, cannot do as an educator because we are not attorneys and we're not lawyers. So, we need to rely on experts, whether they are internally in the university or externally, that have all been vetted or cleared by our specialists, and that's a helpful relationship.

This Extension educator worked with specialists who had expertise around farm policy and economics.

We do farm policy and outlook meetings every year. And so, the farm bill, federally, there'll be specialists . . . their career is based on farm policy, and they study it. They study those thousand page federal bills, and they boil it down, and they bring to a meeting what pertains to my county. And we say, 'Okay, we have grain farmers. We have dairy producers. We have hog producers, beef cow [producers]. Of that thousand-page farm bill, [the specialists] boil it down for us, and present a farm policy. What does it mean to my producers?' So, again it's a trust thing. Our participants, our farm managers come knowing that they are trusting in the organization to have done their homework and be able to teach, maybe, what that farm policy means to them.

Grain marketing is another area where the expertise comes from specialists at the university to supplement the knowledge of the Extension educator.

Grain marketing, as well. Grain marketing is another area of expertise that we've been fortunate to have. Not that our experts have all the right answers, but they've done continual looking and the studying and understanding of, maybe, what the global or local markets, how they trend. So, having somebody that has studied and specialized, that kind of puts them in that expert position and allows them to be that expert model for that teaching. And I, by no means, would never feel comfortable teaching in that expert role on grain marketing. I just haven't spent enough time teaching in that area, studying in that area, to even be in the vicinity of even the word, expert. So, I need to rely on somebody else. And my clientele continue to ask for that information. So, it's kind of engaged, but yet, I pull in an expert to respond to their needs.

One Extension educator shared that his limited use of the expert model occurs where his training was provided in an expert model. He said:

And part of that just becomes, because of things we've done traditionally, over time, where we have-- you know, we've been to the training that the university has provided for us, and so then we're coming to train volunteers, and we're coming to train 4H youth on a specific subject matter. And so, because the organization hasn't shifted entirely to an

engaged model, those are all still in the format of the expert model delivery.

Another Extension educator also spoke about why he used this model from a personal and career perspective. He feels that the university and Extension have emphasized the role of Extension educators as expert teachers and gains personal satisfaction in using this role.

There's a number of reasons [to use the expert model]. One is, it makes me feel good. Secondly, it looks good on my annual report-- makes administrators feel happy that they have somebody out there in an Extension educator position that can teach. We've stressed that at the university, Extension people are teachers.

Expert model partners and roles.

Numerous educational program examples were provided in which Extension educators were using the expert model of program delivery. Program partners in expert programs provided by Extension educators were the Certified Crop Advisor organization, community groups, legislators, local service clubs (Kiwanis, Optimists, etc.), campus-based specialists, the State Department of Ag and the state. In these programs, Extension provided program delivery while the partners identified the need, requested the presentations, and in some cases even provided the content. Extension educators indicated that the expert model of program delivery was most effective for topics that were timely, seasonal, important, new, and emerging. They also used the expert model to

address topics which provided no room for interpretation or customization. Expert program examples are included in Table 4-5.

Table 4-5. Expert model program examples and partners provided by Extension educators participating in interviews in both states

Expert Program Examples	
“Ask an Expert” website	Healthy living
4-H Curriculum	Homeowner questions
4-H Incubator project	Insect identification
4-H Robotics	Insect pest management
Bullying in schools	Livestock nutrition
Certified Crop Advisor training	On-farm research results
Chemigation certification	Organic gardening
Child abuse prevention training for 4-H volunteers	Parenting classes for people going through divorce
Child-care provider training	Pasture range and forage insurance
Childhood obesity	Personal safety
Confinement Animal Feeding Operation training	Pesticide application
Consumer questions	Presentations to civic/service organizations – Kiwanis, Optimists
Crop demonstrations and production clinics	Presentations to general audiences
Emerald ash borer	Private Pesticide Applicator Training
Estate planning	Producer questions
Extension Master Gardener training	Science, Technology, Engineering and Math (STEM) curriculum and activities
Farm Bill programming	Small farmers
Farm management	Solar energy
Farm policy and outlook	Strategic planning
Fertilizer certification	Taxes
Food preservation	Vegetable production
Food safety issues – hummus recall	Veterinary Feed Directive
Food stamp regulations	Water quality
Grain marketing	Water usage
Hand-washing recommendations	Wind energy

Expert program development processes.

The primary parts of the expert program development process shared by the Extension educators in State2 were related to sources of expertise, needs assessment,

program planning, program implementation and program evaluation. Sources of expertise that Extension educators reported using in their local communities include information from their university and from neighboring universities, legislators, scientific literature, state specialists, and their own experience. The Extension educators mentioned several attributes of experts, including: having a career-long focus on the subject, attainment of credentials (degrees) and scholarly achievement (research, writing, publishing) participation in curriculum development, interaction with university specialists in teaching or writing, having membership in professional organizations, being recognized as knowledgeable about the topic by others, completing specialized training and courses, and participating in ongoing study of the subject. One Extension educator shared that he had always heard that the criteria for expertise was ten thousand hours of training, teaching and education in the subject matter. One Extension educator shared that within the 4-H programming area, different Extension educators develop expertise in specific project areas to provide coverage of the large number of possible projects.

Needs or programs delivered using the expert model are generally identified through specific questions and awareness of situations around which they feel there is need for education in State1. In instances where programming is provided in partnership with the state, the need may be mandated for clientele. One Extension educator indicated that he uses the expert model to “address specific topics.” When asked how he identified those topics, he responded, “Those are felt needs of the audience and also that which I know to be important time wise or seasonally.” He shared that he developed these programs based on his experience. He said, “I’ve done this a long time and I know what

the needs are of various learners.” Another Extension educator shared his method for identifying topics and carrying out program planning for one of his programs.

Now, inadvertently, I've communicated with growers over time and then inadvertently, through observation, I know what the topics are. But I'm going to have experts spend 30 to 60 minutes standing in front of a group addressing the topic, and life will go on. We'll move on. You know, that's the program. I didn't take a survey. I didn't have a town hall meeting. I didn't necessarily send out a call for ideas. Through personal relationships, personal interactions with growers, industry people, and personal observation, I've identified the topics and I've found the experts to address it [the topic].

Needs assessment in the expert model is accomplished through careful listening to the people in the county, personal experience, or creating need around themes or in areas where needs haven't been expressed yet. This was summed up by one of the family and consumer sciences (FCS) Extension educators preferring the expert model.

Okay, so the needs assessment is basically using my knowledge of the industry and community and realizing that, even if I haven't heard this from the community, that they might not be aware of it, but still need it, based on my experience.

The program planning process is clearly defined as well. One Extension educator said that she gets advisers to recommend the best delivery methods for mandated

programs. Another Extension educator shared that in his region, he and the other Extension educators make the delivery decisions with the materials provided by the Department of Agriculture. Another Extension educator said that he simply makes the specialist aware of the different commodity groups represented in the audience so that the program can be tailored more to their needs. A team of Extension educators from diverse disciplines work together in another region through the program planning process. Finally, one Extension educator suggested that like needs assessment, program planning is a solitary activity. He said:

I guess in addition to bringing things out from the university, I also pride myself in being a good listener. So, as we work with ag people here in the county and I listen to their concerns or needs, like this year, we've got a lot of concern with different disease issues with corn and soybeans. I listen to those concerns with the farmers, and work with state specialists. We've begun to develop some programming that we can bring out to try to help answer the questions that are out here by our clients. So, being able to listen and then to figure out, okay, this is what the concerns are, the questions are. What do I need to do from there, to get answers back to our clients?

Program implementation and evaluation follow a similar solitary responsibility. One State2 Extension educator spoke of using canned programs from campus that are provided with an evaluation instrument. The primary emphasis in implementation and evaluation is on the quality of the presentation that the specialist provides. Evaluations

were given to document the Extension educator's assessment regarding the presentations. This is used to determine whether specialists will be invited to speak in future presentations. An Extension educator shared:

Myself and others have, cautiously-- well, not cautiously. Sometimes we give state specialists or even others that have specialized, one or two chances to do well in our county. You've heard me refer to my county and my clientele and my farmers. I feel very, very responsible to deliver a quality program and product to them. And, I guess, the other aspect of the expert model is, if there is a supposed expert that is trained and should do well at the county on a particular topic inside their realm of knowledge, but they come and do really a poor job, it does not take long for them not to be asked ever again to a county. And that message spreads pretty fast because a county program will see an agenda, and they'll say, 'Hey, how'd that person do on your agenda, or your program?' And, maybe, that's somebody from six counties away, and they're asking me about how he or she did. And maybe the evaluations are the formal way of kind of documenting how that went over. Maybe there's some informal things that were a challenge, or positive. So, the expert model has a way of keeping the best busy, and the poorer performers at home, or on central campus, or wherever they go.

The State1 Extension educators that preferred the expert delivery method had a lot more to say about their evaluation processes. One Extension educator indicated that they

would use the same evaluation process for both engaged and expert program models, but would expect different results. One Extension educator spoke of plans to add a “personal touch” to his evaluations by having program participants consent to receiving a call back three to four weeks following the program to see if they have made any changes. Another Extension educator spoke of only evaluating audiences with which he had a “close connection” to increase response rates. He voiced disappointment that people do not complete evaluations on websites. Another Extension educator provided a six-month follow-up survey to see if program participants had retained “understanding of those basic concepts” related to STEM education. Another Extension educator reported transitioning to a more experimental approach from a pre/post-test approach with a six-month follow-up. She said:

I think that's an interesting concept because a lot of times, doing a pre-test, post-test, is the way I would see it, a lot of the times evaluating it. I think right now we are doing a pre-post at the end of programming and then maybe a six months follow-up also. I think we have to still continue to evaluate even more where we actually-- and as we're thinking the future to be more evidence-based, that we are starting the research of the program. In January, talking about where we actually have a group that doesn't receive the program, and then will receive the program maybe a month later or two months later, and then to evaluate that one before, and then actually the people that are receiving the program to evaluate that as they're doing it before and after. So, I think it's going to be very interesting

to take it to another step and to evaluate it that way to really grasp how much is the program helping. Because it is really-- when you do a pre-post at the end, it's more on their attitude or their thoughts, and it would be actually looking, so we are kind of going that way.

Expert program delivery methods.

The Extension educators shared different types of delivery methods with the expert model. Some of these methods do not permit direct contact with the clientele such as video presentations, providing net facts or guides, newsletters, press releases, and television. Expert-model Extension educators also included webinars and posting on social media as delivery methods not permitting interaction.

Examples where direct contact is possible were one-on-one sharing of information, lecturing, and providing demonstrations to an audience in a face-to-face environment. Information can be shared on a one-on-one, on demand basis when answering consumer or producer questions, conducting site assessments, or trouble shooting problems. Presentations on specific issues were provided to large audiences through webinars. One Extension educator shared:

I would say the expert model, I would probably utilize in a webinar-type delivery of information, where clientele could go view the webinar on a specific topic maybe they have an interest in, and then follow up with questions individually. I've found that model to be very effective on common questions in terms of being able to point people to that resource,

allow them to view it, and then when they have specific questions around maybe the information that's presented there, visit with me individually.

A common method of expert program delivery is through lecture to an audience. An Extension educator, who normally preferred the engaged model spoke of using an expert approach to delivery 4-H policy training to volunteers. She said, "I think your definition kind of summed it up. I kind of felt like we just stood up in there and did our PowerPoints and said, 'Here's the different things that are changing.' And it felt very-- when I read that, that was the one time I felt like we-- it wasn't like it was up for discussion as to how we did it; it was like, this is how it is."

Several Extension educators mentioned using PowerPoint in delivering their presentations. One Extension educator said, "Oh well, of course, probably the most common method is PowerPoint presentation and then the expert up there talking and working their way through a PowerPoint presentation. That's probably the most common." A benefit of using a PowerPoint shared by one Extension educator is that it helps to provide a script and can easily be reviewed or reused by colleagues.

Another Extension educator used PowerPoint with other approaches to include audience participation in her presentation.

And also, I gave a presentation recently for this program of where, again, the PowerPoint was created with other people looking at it. Now I'm going to go out and I'm going to be sharing it with others, but I'm putting it through a major review process with a lot, with potential end users, and see what would work well for them. During the PowerPoint, I tried to

create methods of engagement within the PowerPoint. For example, there's a little quiz in it. There's a section where people raise their hands, if they agree or disagree with something; there's a section where they raise their hands to identify which are areas of wasted food for them. Also, every slide has an image with it, so that it's very sensually engaging. You're not only seeing, you're not only listening or looking at bullet points and hearing my voice, but you're also seeing images that reinforce various ideas. And also, in combination with it is a handout, to help increase the amount of learning and so this is time for people to engage during the presentation vs. spend all their time taking notes. And also, there's a part of it when we talk about food waste and ways that you can prevent that, in terms of just practices within your home. I do this Oprah like thing, where I take a microphone and go out into the audience and get answers from people. 'What have you done that's worked?' That's kind of how it's that combination of expert and engagement. I didn't just sit down with a group of people to begin with and say, 'Well what do y'all want to hear?' But it was more so based upon what is the identified need, but then how do I package it based upon talking to people and presenting information in a way that'll be palatable for them?

Yet another Extension educator outlined the presentation provided to his clientele to provide information on the Farm Bill.

Let me give you an example that comes to mind that we probably had here within the last 18 months or so - Farm Bill Education. So, I had a policy specialist come in to talk about the Farm Bill. That was new. We had over 250 people here, shared the details of the Farm Bill, talked about, well, the ins and outs of the program. The people came. They listened. There was a few questions, but it wasn't, certainly, a deep engagement process by no means. So maybe there's some topics like that - that's a one-time informational thing. That they can come and pick up what the program entails, the Farm Bill entails, and then they can go back to home, and visit with the management of their operation to see how they can incorporate Farm Bill policy. That might be one example.

Another example of an expert delivery method provided by the Extension educators was through demonstrations. One Extension educator spoke of providing demonstrations in a local grocery store. Another Extension educator provided soils demonstrations to clientele using this approach as shared previously.

One Extension educator provided suggestions for inviting other sources of expertise into an expert presentation when questions arise that the Extension educator cannot answer. He said:

And there you have an opportunity to maybe turn it around to the audience and say, 'Okay, does anybody here have an idea on that or have a response to that?' Or you can then maybe engage everybody in your audience in a discussion about that topic

Implementing the hybrid model of program delivery

During the semi-structured interviews, some Extension educators chose to talk about why and how they used a hybrid model of program delivery. In these cases, the interviewees were asked to identify the situations in which they used this model. They were then asked to identify the processes they used to implement this model. Findings indicate why the hybrid model is used as well as how this model is used.

Why hybrid?

One of the reasons given for the preference for a hybrid model included the need to use both the expert and engaged models and to include active learning experiences when working with audiences. Several comments related to the concept of expertise. Communities may see the university in an expert role and have expectations related to that role. One Extension educator suggested that working in an engaged model helped him to become an expert. Another Extension educator saw her role as a facilitator being a reason to use a hybrid model. Another used what she considers a hybrid model to develop yearlong or multi-year educational programs based on issues identified through different methods at the local level or by the University.

Regarding the need for both models, one Extension educator shared:

My perception is that, in Extension, we have a mixture, engaged and expert models. It depends on what it is we're trying to accomplish at that time. And so sometimes there are things that - as you said like with food

safety - that we initiate a program idea and used science-based material.

But we then may co-create with clientele the way the content is presented and promoted.

Another Extension educator was concerned that administrators recognize the value of both models. He said, “I hope that the deans of each of the land-grant universities take a good hard look at it. From my viewpoint, I don't think either model should be relied upon exclusively. And I hope they understand that.”

One Extension educator shared that she is moving more to an engaged approach as she learns more about neuroscience and how people learn. She is learning how mixing learning activities may be beneficial. She shared:

Really trying to work more toward the engaged model, but I have to say that I still fall back on the expert model a lot. I realize that all of the research on learning and how people learn and the neuroscience of how our brains learn, that people do better when they are in the more engaged model with hands-on activity or different methods of learning rather than an expert lecturing.

But personally, . . . I guess learning a little bit more about how our brains actually learn and how new neurons in the brain are formed as people are learning something new, how that actually happens and how you can get better learning occurring when you do an expert model, but just for a short period of time - like 25 minutes - and then you take a break

and you do engaged learning or diffused learning for a period of time - maybe 15 to 20 minutes - and then you go back to the focused expert model learning, and how alternating back and forth between those models can really improve learning and retention. So, for me, some of those things have been really interesting and really makes me even more excited about using different methods of teaching.

The question of expertise is also present in the discussion of a hybrid model. One Extension educator suggested that the use of the different models may be related to location of the university site. Local offices emphasized and engaged mode, while campus emphasized the expert model. She said:

So, I wonder if that's not really what our roots are - that expert model [chuckles]. But once you get out in that local area, really what makes it keep working and changing and meeting needs, is that engaged model. So, I really see-- to be honest, Karen, in my mind, the two work fairly well together. I think we do need to have a more engaged approach, but I don't think that you can quite leave that expert model excluded, because it has a place. That knowledgeable person does have a place.

Another Extension educator talked about the value of shared expertise and learning working with growers at the local level. He said:

On the other hand, I might be coming in with my plans or my research concept and a grower from his years of experience and his knowledge and

understanding might inform me, say, you know what? I have tried that, I've seen that four times and it leads up to a disaster. So, the grower might be imparting expert information to me. Something I was unaware of. So, it's kind of a give or take, both ways, learning, educational experience.

Another Extension educator spoke about how his work in the engaged model with the on-farm research program increased his confidence and built his expertise. He said:

I will say, I mean, they [the expert and engaged models] kind of work in concert, Karen. I've referenced on-farm research where I'm engaging farmers and I'm learning. I'm becoming more and more confident in presentation and teaching that I will do that's going to cross over into this expert feeling. Does that make sense? I mean, it's this grassroots effort to develop really original content and original research that then makes you more confident when you teach. As your confidence improves, your approaching expertism, I guess. I don't know. But it couldn't be the other way around. You can't get the order flipped. At leastwise when you're talking about the delivery model. The delivery model for an expert versus an engaged-type program, the engaged have to come first because it's more grassroots. It's more original content, original information that then helps you become an expert.

Another Extension educator expressed that her community looks to her and the university primarily as a source of expertise. She incorporated multiple sources of

information, including issues identified by the university to develop her program plans in what she defines as a hybrid model. She develops long-term, ongoing programs consistent with an engaged model. She said:

I serve on a lot of community boards or expert teams, I guess you want to say, and they look to you as a link to the university to be able to guide them to resources that are available and maybe what are the issues that maybe are the most important to be tackled, or what partners could work on what part of the project. And then looks to us for education, especially in my program area, would be in things like nutrition, food safety, children's wellness, those kinds of things are things that they look to us to help them on.

I tend to have some several yearlong projects, so there's something that's going on that maybe I've been working on for a couple years, and then I start to look, as we are now looking towards 2017. When I am finishing my plans for the year, and making my plans for next year, I'm thinking about, okay what things have I-- maybe our county commissioner has mentioned, this is an issue, or that health survey that the results are starting to come out of. What was in there that it doesn't look like anybody's working on that is a fit for us, or that we know we can have resources to reach? I guess that's the way I go. And it tends to be a couple year, at least, projects. So, whatever it is I work on, I'm probably going to work on it for three to five years, and then maybe somebody else is

working on it or whatever. Sometimes it's stuff that the university identifies and says, 'Hey, we think this is going to be an issue this year,' for instance, food safety in [this state] because, one, I think even nationally there's been changes in legislation. So, we are doing a lot more food safety training than we may have done in the past just because there is a urgent need for it.

Hybrid model partners and roles.

Several program examples were provided in which Extension educators were using what they defined as a hybrid model of program delivery. Partners identified for hybrid programs were agricultural producers, community boards and expert teams, county commissioners, evaluation specialist, local workplaces and the university. Hybrid program examples are identified in Table 4-6.

Table 4-6. Hybrid model program examples

Program Example
Children's wellness
Complex issues
Corn Expo
Crop drainage issues
Crop production issues
Email wellness challenge
Food safety
Nutrition
On-farm research

Hybrid program development processes.

There were several different processes outlined related to specific programs using a hybrid model. Again, the Extension educators talked about how they mix both the expert and the engaged models in their program. One Extension educator considers his big picture program to be an engaged model, with both engaged and expert approaches included within it. He said:

It's always kind of a part, it's a part of the bigger picture which is an engaged model. Interjecting, you know, concrete, data-based information as it applies. You know, and the grower might imply that expert model to me also saying 'Wait a minute, I have tried that and that's not going to work.' So, he has a piece of expert information for me. But, it all goes together. I don't know that, it depends on how complex the scenario is. You know if you're talking about a field of crops you've got everything from planting, to fertilization, to insects, weeds, I mean, there's all these inputs into it. So, it's a complex thing going out in a field, that you're interacting with and about. If somebody walks in the office and says, 'What's this bug?' That's very simple. That's a very simple. Now how to control that insect in their home or whatever might be more complex. But, just identifying it, I can come across, if I know what it is, completely with the expert model. That is such and such. But for me, they always kind of blend together. If I have some expert information that I can impart, I

should do that in a, you know in a respectable, humble fashion but I should impart that expert information. So, to me, they go hand in hand.

Many of the programs defined in this model contained community involvement in different parts of the program planning and delivery process. For some programs, clientele were only involved in needs assessment, like the example provided in the definition section where the Extension educator involved a medical center in needs assessment. However, she took responsibility for program planning, and implementation. She did draw on the expertise of others, but she put the program together. Another example had lots of involvement by stakeholders and partners through all program planning processes. Yet the Extension educator emphasized that Extension held the primary responsibility for implementation. He said:

So, the mixed model would be the [local] Corn Expo. . . That is an event that has multiple funding partners and sponsors that actually help, not just with funding, but some of the work load prior to and during the event. It's a community event, so we have about 400 people attend that, and it's all focused on - for corn growers, but there's a lot of people, so I partner with the [local] Chamber, handles a lot when it comes to breakfast and serving. The corn growers help with a whole bunch of things - so even when I program, or changing a timeline, or the time of day, a lot of that I run past those groups, as well as our Extension board. We had talked about what week to hold it. So, it's not that me making decisions only-- at the end of the day, I'm in charge, but it's a lot of communication between

different groups on what that event looks like. And then the topics we cover each year based on the feedback from the survey that stakeholders take at the event, and that's really-- I look just at qualitative. So, if a lot of people say fertilizer - they want to know more about nitrogen fertilizer and corn - the next year we get a speaker or focus one of the sessions on nitrogen management. So, it is driven by the stakeholders. What they want next year's program to kind of look like, or topics.

A unique program highlighted as using a hybrid process is the email wellness challenge. The Extension educator first mentioned this program when I was asking about how she conducted program evaluation. This program appears complex in its content, but very simple in its delivery. It is unique because of the way it is delivered and the success she reports in getting responses from program participants related to behavior change because of the program. This success counters concern expressed by other Extension educators that their clients might not participate in evaluation for programs delivered in a virtual environment. This is how the Extension educator described her work with this program:

I do a lot of work in that area [health and wellness] and one of the things that I work on the most - is we do email wellness challenges. So, you're not meeting with someone in person maybe. You're communicating all through email. We do a pre-and post-test and work with evaluation specialists to design those, have IRBs, all that kind of stuff. And so, with those, we use a pre-and post and then I'll make comparisons looking for

change and then open-ended questions that would be in the post that would say, 'What did they get the most out of it?' 'What changes have they made that they're still using?' And then some things are-- you're going to do a six-month follow-up on maybe one or two things a year. I'm not doing that every time, but there's usually a couple projects where you're going to do that kind of thing and then a lot of lessons are just going to be maybe a lesson or a three-time lesson and you're just at the end, you're just doing some kind of brief survey. Did they learn new information? Are they using that information? Just those kinds of questions that are the necessary things we have to turn in to the USDA.

We have been doing these for about six years. . . . We recruit people. So often through a workplace or maybe they came to another program like a diabetes program, let's say. So you know they're interested in their health and so then we would have a theme and so we do two or three a year. So usually one in the spring, one in the fall. Often one at the holiday time that would be like a zero-weight gain. We don't care if you lose weight, just don't gain more kind of a thing. And then we pick a few themes. So maybe about three to five things - always focusing on wanting them to get 30 minutes of physical activity about five days a week, wanting them to eat at least five fruits and vegetables a day, and then we're going to pick on different themes. So, it may be, if it's spring, we might be focusing on-- are they using herbs, are they going to the farmer's market,

are they getting out and walking, doing outdoor things, maybe doing some gardening? In the fall, we're [football] country, so when they plan their party, their tailgate, do they put fruits and vegetables in there? Are they doing fruited water? Do they get up from their desk every half hour, hour, and take a walk, do some stretches? Those kind of things. And short messages, so it's going to be just a couple paragraphs with one focus for each message we use twice a week. We did some research studies to determine what length of time. We do six weeks long, and we've been pretty successful.

I encourage correspondence. And so, I get a fair number of responses from people that will say, 'Thank you so much. Last week you talked about--.' For instance, this time we had a lot of things in the fall with patriotism and messages like that. And so, I had some people-- or generosity and thankfulness-- and so, I had people that messaged back and said, 'You know, I chose to do this. I volunteered here,' those kind of things. And people like hearing what others are doing. It kind of encourages them. And then we do the pre-post evaluation. So, at the end there's some open-ended questions and places for them to give their own little impact statement: 'This is the change I made. Thank you very much. I didn't realize I wasn't eating enough fruits and vegetables until I started tracking them. And now I'm eating more fruits and vegetables,' or 'I tried

new vegetables with my family that I never tried before.’ Those are kind of common themes that we hear.

Barriers and drivers associated with use of engaged program delivery

Research question three seeks to identify barriers and drivers associated with Extension’s move toward an engaged model of program delivery. The underlying research theory is that barriers and drivers do exist in the organization and may be related to the Extension educator’s program area. To identify these, the interviewees were asked to identify what prevented them from using an engaged model for program delivery, either from a local or organizational perspective. They were then asked what encouraged them to use an engaged model for program delivery, from a local or organizational perspective. A summary of their responses is included in this section.

Engaged program delivery barriers

Themes related to engaged barriers emerging from both states included 1) time, 2) coordination and timeliness, 3) existing expertise, 4) unwilling collaborators, 5) loss of control, 6) expert knows best, 7) clientele that just want answers, 8) organizational change, 9) environmental limitations, and 10) emphasis on being unbiased. Other themes that were mentioned but coincide with the themes identified above were personal preference, emphasis on participation numbers, commitment to other programs, emphasis on marketing past successes, emphasis on research basis, and work/personal life balance.

One Extension educator expressed need for greater understanding of what engagement is and when it should be used. She said:

I think that too, in terms of presenting the idea of engagement to Extension, I think that more examples probably need to be given. Because the term's tossed around a lot, but what it actually counts and is a different kind of thing.

Time

Time was a primary barrier to use of the engaged model. Another limitation associated with time was the need for a quick response to timely, emerging issues. The emphasis on time may also connect to challenges associated with maintaining balance between work and personal life. In State1, Extension educators shared that time committed by the organization to presentation of some major expert model programs reduced time that was available for development of engaged programs. In State2, the emphasis was on time constraints both for Extension educators and clientele, as well as the time required to develop relationships.

An Extension educator from State2 acknowledged that the engaged model does take more time, but he said the time spent was worthwhile in providing the best service for his county. He said:

Since I use this [the engaged model] 65% or 70% of the time, I don't know that there's really any barriers or preventions of using it - just because, to

me, its value so much is to make sure I'm on track. It does take a little longer. But if I take the shortcut, and I make assumptions about what programs to put together, that's not going to serve me or my county in the end, as well. So, it's an investment in time and people and making sure that you talk to enough people and the right people so that you're engaged with enough.

Regarding time, alone as a barrier, one respondent from State1 said, "It's more time consuming and more difficult to develop a really good quality program using an engaged model, so we're working toward it." She goes on later to say that what takes so much time is "coming up with hands-on activities or breakout activities." In a similar vein, another Extension educator said, "The expert model - you frequently can show up to a location, deliver a speech - PowerPoint presentation, in a 45-minute time period, and leave, and you're done."

Another Extension educator spoke of a program he is developing and how he uses previous communication to identify topics and delivery methods rather than using needs assessment processes. He said this preserves time which he emphasized "is a big deal." He found his approach was successful because of his strong personal relationships with his clientele. As mentioned previously, the limitation of time also affects clients. One Extension educator shared how clients share their ideas regarding the program but ask him to take care of the implementation to conserve their time.

Another factor contributing to the time barrier is the amount of time required to build relationships to engage with clientele. In defining a year-long intensive program

using an engaged model of program delivery one Extension educator from State1 responded:

Another really good question. Perhaps some of it is timing. How much time it may take to develop a program and a curriculum and some of those things. That might be in the back of your mind. . . . But I still think that for an engaged model to be successful, that there has to be obviously some trust and two-way conversation, we're both learning and sharing and trying to solve an issue. I think there has to be multiple touches with the clientele. And so sometimes that prevents maybe that engaged model being used more often is because you're devoting a lot of time to a certain clientele group. And so, for example, I'll go back to the practicum. We meet with them eight times during the year so that takes - and I meet with 30 people - and certainly on my impact report I could go and have a number of meetings with two or three hundred people, eight times during the year. But I'm meeting with these 35 producers, eight times a year, and so you're devoting a lot of resources, your time and financial resources from your budget and that sort of thing for 35 people.

An Extension educator from State2 said:

I think it's just a matter of knowing who to engage, who to bring to the table, and being able to take the time to develop those relationships. Because I think it does take time to know who those people are and to

have them want to participate. I guess from the-- what prevents you, I think it's just a little bit harder from-- it takes more time I think than just putting together whatever you think is best from the expert model standpoint.

Another Extension educator indicated that she may revert to the expert model as a response to seasonal demands on her time from family and clientele.

Because while I would love to say I always do an engaged model, then you start - it's probably because we're having this call around the holiday season - but then you start getting to a really busy family time, or whatever, and you start falling back on the expert. This will suffice now because it's the best I can do right now. Following an engaged model, it's time consuming. You're paying attention in the 4-H area, you're paying attention to the schools, and you're participating in community organizations that perhaps have a youth component, and if they don't have a youth component, you're going anyway because you're trying to encourage them to have a youth component.

The challenges of time with competing demands were cited as a barrier for another Extension educator. She said: "And also, I think another level to think about is when do you go through a process of engagement? You'd go crazy if you try to engage on everything that you did. You wouldn't get much done."

Another limitation of time available for use of the engaged model of program delivery was commitment to other programs. This specifically referred to the programs offered in cooperation with other entities to provide certification or licensing. Extension educators said that time spent on these programs reduced time left for other programming that may be delivered using the engaged model. Mandated programs are very structured and do not allow for active methods of program delivery.

Coordination and timeliness

Coordination and timeliness, as a barrier, expands on the time challenge, attributing this to the added meetings and coordination of people. Sometimes timelines for activities must be changed to adapt to partner's schedules. One State2 Extension educator spoke about the increased interaction required in using the engaged model. He said:

Well, if you're like an advisory committee, I mean, taking the time to sit down with people, hear their input and then formulate a plan from that, and then some cases, in formulating that plan you're bouncing ideas off of them another time, or two, or three. And so, there's more contacts and, yeah. So, the best part about the engaged model is I like people and I like relationships. The reason that would hold me back from me using it even more is because of time, and people, and relationships.

Another Extension educator said:

Time, because you have to work. I mean, it's just as easy to throw together a program and put it together on a flier and call your speakers. But engagement takes time. Good engagement takes time. It means meetings. Sometimes it takes months for an idea to kind of ruminate within the committee before it gets to a place where you're ready for a program. So, there's a lot more engagement that you have to have. It's time, a lot of time. It's time.

Other Extension educators mentioned the need to get things done in a timely manner. One Extension educator said:

Well, I think if there's any barriers, sometimes, it's time. Because it does take more time. It's more meetings that you're interacting with folks. So, I think more meetings, more time. And I think a lot of times we're in that get 'er done mode, where it's like we just need to do it and move on. So, I think that, for me, would probably-- would be a barrier.

One Extension educator said that he overcomes this by pulling together a small committee, or subcommittee that can then report back to the larger group.

Another Extension educator talked about the long hours and weekends she spends to interact with stakeholders. She shared that this often overlaps with her family time.

So, it can be very time consuming. And in the rural areas, a lot of those, even if they are community organizations, they meet in the evenings. So, you're running from 8 o'clock in the morning till 9 o'clock at night and it's

very time-consuming. In fact, this weekend I have a Saturday robotics practice because that's when the parents wanted to have it. So, it can be very time-consuming and then you start thinking, you start backing up a little bit and saying wait a minute, this is too much. And I think that's where we kind of get to fall back on that expert model and think, you know, wait a minute, I don't really need to be doing all of this. Right?

Other Extension educators spoke of time challenges limiting engaged approaches to program delivery when topics emerged that required a quick response. One Extension educator said:

On one of the questions you had up there was what prevents me from using an engaged model. And the only thing I could really think of sometimes there's issues that come up relatively quick on the horizon and time may be a limiting factor at some of those where it's extremely important that you have to act and move fast to develop a program and deliver it out there to meet an issue that maybe has popped up, that was not seen on the horizon. And still important, if you can engage, be engaged, and partner in with local organizations to help in that process. But timing sometimes on a critical issue is very important to get it addressed as quickly as possible.

Another Extension educator suggested in this type of situation that the best response may be to use “an expert model to initially deliver the information in a timely way . . . and

then follow up in the future with a more in-depth type, more engaged learning experience.”

Existing expertise

Existing expertise was mentioned as a barrier to engaged program delivery in both states. This could mean multiple things. Some Extension educators spoke about not knowing how or not having experience using the engaged model. Others expressed concern with being able to identify partners, both in the local community, and within the organization. Several Extension educators spoke about not being knowledgeable in active delivery methods consistent with engaged programming. Others felt that the organization tended to depend on organizational strengths related to subject matter rather than explore engaged programming in new areas.

Several Extension educators spoke about themselves or their colleagues not knowing how, or being comfortable using the engaged model. An Extension educator from State2 indicated that he used the expert model more out of habit because it was what he had always used. Another Extension educator from State2 said that one of the challenges is that Extension educators don’t often think about how they are doing their work, they just continue to do what has worked for them in the past without considering alternative approaches.

Other Extension educators spoke about the challenge associated with identifying partners to work with in the engaged model. One Extension educator said that for her, the challenge was knowing where to find “that local knowledge base.” She said, “If I think

something's important, but I'm not sure who in the community it involves, I guess that would be the main preventative there." Others spoke of challenges in identifying partners within the Extension organization that think in a manner consistent with engaged programming. A State1 Extension educator talked about needing to carefully select partners who approach program delivery in an engaged manner. He said:

It takes a lot more time and preparation to put together a curriculum, a learning setting, to have that kind of model in place. It, I think, requires more systems thinking, and understanding diversity of systems, interaction of systems, and it also requires more inclusiveness of bringing in others who may be able to participate with you, partner with you in the delivery of the program.

Some of the Extension educators expressed concern that some of their colleagues were not knowledgeable in active, or multiple, delivery methods that might be used in engaged programming. One Extension educator felt this may be a generational issue. He said:

I don't see folks in grad school anymore focusing on informal, formal, or non-formal education. And when I did my grad work at [a state university], I spent so much time on that in various classes in the institute. I think it was so interesting and developed people to take a look at things differently instead of being the center. And I think society too, it's more of a 'me' society as you're going through millennials and things. And I just

feel there needs to be some type of teaching experience of learning the difference between formal education, non-formal, informal, for successful program, and grassroots, and sustainability in Extension programs.

Another State1 Extension educator talked about how she works to increase interaction when she works with colleagues using less active educational approaches. She said:

I don't know that anything really prevents me [from using the engaged model], other than in situations where I bring in people and their style isn't to be as engaged with their presentations. And in those cases, I tend to try to ask questions to facilitate discussion. But some people just really don't want questions and I don't understand that in our position. But that is the real truth. Some people just really don't want questions. So, it's also respecting our colleagues and how they-- and also for me, it's also been over time as I've watched different people present, kind of picking and choosing who I'd like to use to be the people delivering information. Who are more willing? Who engage with the audience?

Some Extension educators felt that the engaged programming was not always consistent with past successes and strengths of the organization. One Extension educator from State1 was concerned that through needs assessment clientele might identify challenges that Extension is not prepared to address. She said:

I think people have found out that there is a degree of where you need to determine what it is you're capable of doing before you get advice on what you should do. If you just have an open-ended, what would you like us to do? Well, some people will say want you do something that you are unable to do and then wonder why you bothered to consult them if you don't follow their recommendation. I mean, like, we might ask, 'Well, what do you need done?' and people said, 'Well, we need a cure for the common cold.' So, I don't know, that's where I always get confused to be honest with you, because I think that there's a point of where you can't have an completely open canvas if you ask people, what would they would like, but then aren't in the business where that is within your scope to be able to do.

Another Extension educator felt Extension tended to market past successes, preventing exploration of meeting societal needs through use of an engaged programming model. An Extension educator from State1 stated:

The other thing, Karen, I would say is, I think, in Extension, we have a tendency to, rather than ask people what they need and how can Extension help, we much prefer to tell people about all the good things we've done and all of the good resources we have. And I think sometimes that focus is a little misguided. I think that tends to favor the expert model whereas asking people what they need, if Extension resources can provide something that will help them meet that need if [chuckles]-- you know, it's

two sides of the coin there. That's probably the engaged model as opposed to the expert model [chuckles].

Sometimes, the barrier preventing use of the engaged model may be due to the existing expertise at the organizational level. An Extension educator from State1 suggested that programming decisions may be made on existing expertise within the organization and sometimes, this may prevent programming in more effective areas.

And I'm thinking specifically right now, in our [a specific] program in [this state], there has been decisions made about certain programs being taught and being offered to [our state] clientele, and while the roots of it might have been based upon some local input, I think perhaps it came out of the fact that we were really good at those things, and those areas of academic study are strong at the university. So we get from them the expert advice and plan some programming around them and then offer it to the clientele. And I guess that's the essence of what I think the expert model is. So, I think there is some of that. I think organizationally, we sometimes feel that if we really do have valuable information so if this is what people should know about, we're going to offer it. And I don't think that's completely wrong, but sometimes it misses the mark a little bit.

Unwilling collaborators

State1 Extension educators indicated that one of the barriers to the adoption of an engaged model of program delivery is colleagues, either at the county or university level, who are not comfortable relinquishing their expert status to use more engaged program delivery methods. This appears to exist in all roles in the Extension organization as program assistants, Extension educators and specialists were all mentioned. A State1 Extension educator suggested some Extension educators may resist greater engagement because “it can reveal your lack of knowledge or lack of expertise.” Another Extension educator from State1 spoke of needing additional time to work with specialists “so that they feel comfortable with that type of format as well.” Another State1 Extension educator said:

And so then, moving forward in an interactive, more engaged fashion, I think our institution is leaning towards the engaged model. And in any large organization, you have a multitude of personalities. Some of those personalities are going to want to come off as the expert. You know, it’s just the way they’re built and so, some are not. Some are going to want to, so anyway, that’s just a natural thing that you work through with any large organization of people. There’s various personalities and some take hold of something quicker or better than others.

A State2 Extension educator said that the expert model often works best due to some Extension educator’s tendency to procrastinate.

Sometimes the barrier in finding willing collaborators may be a matter of location. One Extension educator from State2 said he is located in the “hinterlands” and doesn’t have access to specialists with which to work. He said:

As I thought about that one, I would say it's not having external people or entities that will participate in program development and delivery of that model, would probably be what would keep me from doing that. . . . I'm thinking about the specialists in those fields of the answers that we want to present, or the program that we want to present that I don't have access to people to do that.

Sometimes another challenge encountered is getting people involved who have had negative experiences with Extension in the past. One Extension educator spoke about how damaged relationships with clientele or communities may present an obstacle in using the engaged model of program delivery. She said:

I think that the engaged model, you need to take time to talk to people, and you need to know who to talk to. So, you've got some restrictions there. If [you] don't have much time, if you don't know who to talk to, and if you don't have the resources to locate the people to talk to. That can prevent you from doing an engaged model. If there's been prior events that-- relationships, bad relationships whatever, that people-- there is well - or sore feelings towards each other, and they won't work together, that can really create a problem as far as an engaged model. . . . So, I look at it that

it's time, it's resources, it's knowing the right people to give you the right answers. And again, those longstanding - I don't even know the word to use - prejudices or ill will or prior hurts that really prevent people from moving forward.

Loss of control

An Extension educator from State2 was used the expert model to “control” the program delivery processes. This may be related to concern that inviting other sources of expertise may introduce ideas that have not been vetted in research. An Extension educator from State1 who has a great deal of experience in working with the media shared his concern that information may be introduced into engaged educational programming that does not have a research basis. He said:

I'm leery. I'm leery that it's the latest fad and that it's-- you lose control of the outcome. That the stamp of Extension approval would go on outcomes that are not found, not based on science. In any field, family consumer science, nutrition, animal production, it doesn't matter, all of those need to be based on something rather than Oprah or Dr. Phil or mother earth news. Dr. Oz has even come under a lot of scrutiny lately. That which tends to be popular, and exciting, and sexy, and titillating tends to sell, and unfortunately, it's not always sound. . . . I know the newsroom and what works and what they tend to be interested in. And they're interested in

edgy, and sexy, and something different. They're interested in getting an edge over their competing stations. And they'll do just about anything to get there. . . . And so, I'm just leery of losing what we use as our competitive edge - localized, unbiased information.

Another State1 Extension educator stated it this way,

I think also another concern, and I think this is where we are challenged a little bit, is that we're moving into an era where with social media anyone can be seen as being an expert. I think from a university standpoint, we value research-based information, and oftentimes in a model where we are asking the learner to be actively participatory in that learning experience, sometimes information can be shared that is not accurate or true. So, from a coordinator/facilitator standpoint, you can find yourself in an awkward position where people are getting up and making statements or sharing things that really are inaccurate. How do you navigate that and try to keep information being shared or delivered that is true and not false? I think that's part of the challenges I see somewhat with the learner engaged model, especially where learners are an active part of delivery of education.

Another challenge is that partners may not share the expectations for program delivery held by the Extension professional. One Extension educator spoke of a situation where he is simply a member of an organization that provides an annual event. He shared

that some things did not occur as they might if he were managing the program. However, despite these challenges, he indicates the event was a success. He said:

Some issues we've ran into - there is complications in implementing the program, because the board of the group is largely volunteers, and they're the ones spending their time on it. There's a lot of coordination of who's going to do what. And then, that board members change because they're two-year terms, so there's not a lot of continuity because of the two-year terms. And then the group dynamics change then, when you bring on new members and new leads. And then who's president? Treasurer? Who's in charge of the overseeing of the program? So, I guess the continuity. And sometimes things don't happen as quickly as they should. And things aren't organized as well because there's just a lot of people involved in making those decisions as a group. That can slow planning down.

So usually, that event-- we're late getting the program. We're late getting advertising out. People love the meeting, though. Attendees who attend, we get great responses from them. And the board themselves since they've had a hand in everything. I think the event is great. Most of the complaints from attendees have been not getting things out to them ahead of the meetings soon enough for planning purposes on attending it. So, I guess that's what I've seen that causes me to hesitate to implement that model in a local program like, let's say, the corn expo. I'm pretty much the

key person coordinating everything for that. And I'm working with a whole bunch of groups. But where this engaged model, it's not me deciding, it's just me being another member on the board. I would say that's been the biggest problem with that engaged model.

Expert knows best

Some Extension educators feel that they are better at identifying what is needed than are their clients. An Extension educator from State1 talked about identifying the topics and selecting speakers for a program through “personal relationships, personal interactions with growers, industry people and personal observation” to save time. Another Extension educator is critical of the organization for thinking “that we know what’s good for people.” One Extension educator was critical of assumptions that might be made beyond content matter selection regarding program delivery. She emphasized the importance of listening to the clientele.

But I think to move to an engaged model, I still think we're making a lot of assumptions about what the public wants and needs. And we're still looked at expert level, and I will tell you, delivery-- we'll go to countless meetings where my colleagues will say that the best way to deliver a program is face-to-face. So, that's the only way they offer it. And I'm in a very rural area and that's not what I hear our clientele saying. I hear our clientele - I can't tell you - it's an hour and a half into our central area. And what I hear

our clientele saying is that if they have a burning question, or if they need help with their business, or they need help on something, they need localized help. And they kind of want it now rather than waiting till we've scheduled a meeting four months from now.

Clientele that just want answers, not education

Sometimes clientele is only looking for answers and are unwilling to participate in engagement. Audiences or individuals who just wanted answers to questions and did not want to commit to participation in an on-going or engaged educational program were one reason given for use of the expert programming model. This surfaced again as a barrier to engaged programming. An Extension educator from State1 stated, “Okay, there's situations where you have an audience that is requesting information on a specific topic and that's all they want, and so you find an expert, or you are the expert. You provide the information, there's no interest in taking it any further than that.” A State2 Extension educator provided another example. She gets calls from absentee land owners who want local information but are not present in the community for greater involvement. She said:

Again, it sort of depends on the nature of the topic. . . . I have a lot of absentee land owners, for example, in my county, who might call the office to ask about leasing terms, farmland leasing terms, leasing rates, if it's appropriate to raise the rates. And a lot of times, it's sort of similar to

the Farm Bill where, just like with the Farm Bill, I can't tell them what to do, but I can give them information that hopefully can inform their decision. And a lot of times I guess that is more than I think - an expert model. Sometimes there's not really as much input from their end.

Another Extension educator from State2 shared an example where the community does not express need for greater engagement. She said:

I think what would prevent using that type of model would be basically the type of project or program that we would be delivering it-- what would prevent us more than anything is a community or organization not needing it to that degree. In other words, we basically, we're listening to our clientele and delivering based on their needs. In other words, they would prevent it from happening. Our clients would prevent it from happening.

Another Extension educator from State2 shared that sometimes the community doesn't see the need for the programming that she deems important, so she must "jump in" with the expert model to increase their awareness.

Organizational change

Organizational change was mentioned most frequently as a barrier in State2. This includes areas of change needed or change that has occurred that prevents the use of the engaged model. One Extension educator attributed less use of the engaged model to the "disconnect" between the academic and practical application of program planning. He

shared that in practice, Extension educators don't think about the models related to their work, primarily because of time constraints. He said he appreciated what I was doing to try to understand more about the models so that there might be more understanding of these within Cooperative Extension and throughout the university.

Another Extension educator echoed this concern. People go through education seeing the teachers use the expert model, so they use this model when they become the teachers. He said:

I think from an organizational perspective, it is more-- I think it's more how information is packaged. Do we package it to be taught in the expert-type model? Going through tenure and now I have also started taking PhD classes, the big thing that I've heard is, 'What's your specialty, or what are you going to be known for?' And your document has to show that throughout or your dissertation. Whatever your dissertation is, that's what you're going to be known for, for eternity kind of thing. It's our academic model still is in that expert mode? A professor on campus doesn't like to think that one of their students might have some knowledge or expertise because that's what they're being paid to be is the disseminator of the knowledge. So, I think, in academia, there's a sense of intimidation that the learner or the student might know more or might-- if you open it up to an engaged process. That's why I think it's kind of a shift that is turning. It can turn, but not quickly because we're in the academic environment.

This Extension educator also talked about how their state had formalized a structure that created artificial boundaries that limited collaborations. These were intended to provide better coverage in areas where there were vacancies. But the impact on areas that did not have vacancies was restrictive. He suggested the organization needed to consider the needs of the different regions to avoid making policy that benefited some while being detrimental to others.

Another Extension educator suggested changes in how professional development is delivered to Extension faculty. He said that traditionally training at the university has been provided in an expert manner. He suggested that to increase engagement, university training should be provided in a more engaged manner.

Other Extension educators spoke about the expert emphasis in Extension personnel from the past to present. One shared how he saw the expert model being played out in his colleagues in his early days in Extension.

And I think some of our colleagues that when I first started in this county, my 25-plus-year colleagues saw themselves as the experts, so they very much wanted-- so here's a good example would be the FCS person in our office, if a canning question came in, and let's say our support staff member had heard talk about this canning question over 20 plus years, and the canning question doesn't change or we refer them to this fact sheet that doesn't change. Ideally, if that FCS person wasn't there, that support staff member should be able to just deliver the information to help the client get the answers that they need. In this case, it was, 'You are not the expert.

You don't have knowledge, so you cannot deliver the answer.' So, it was very much a 'only the experts can give the answer.' So, I think because of where we have been in Extension, we were seen as the experts - both internally and externally.

From a different perspective, a State2 Extension educator expressed concern that young Extension educators coming into Extension today also have a tendency towards the expert model. He shared:

I do see younger folks coming into extension. Those who have grown up in Extension. I'm looking at 4-H. They tend to move toward the expert model, being the teacher, being the main center of approval, and program focus, which really limits their time and their ability to grow the program. And I'm not saying it's totally bad. I'm saying maybe our goal should be to move towards the engaged model down the road as we get more experience.

Where, as I mentioned, those younger folks coming on, taking on roles. They're given the expectation of being the expert for the expert model instead of the engaged model. And you can see it in time management, solving problems, firing volunteers instead of working with them to improve. The first thing is, 'Yeah, we can fire them.' You know what I mean?

A different approach to conflict. As the expert, it's my way or the highway instead of working with folks as a peer with the volunteers and folks you're working with in your county. I just see that moving with the administration more toward the expert model, which I don't agree with, but they get rewarded for that.

Successes, sustainability, support. If I have any issues with funding or other things, I have people who trust me. I've built a rapport through program and committee work, they do the calling for me. I don't have to make the calls to elected officials. I mean, socially, but not for funding, not for issues that come up. I try to utilize our volunteers as part of the team, and staff members as part of the team. And that's how I try to work with people is I'm a mentor. Young folks coming in, they don't have that knowledge or approach. They're used to being a teacher-centered or in-control type program manager instead of the grassroots, engaging model. That's been my experience.

Another barrier related to organizational change is the need to change our evaluation practices away from an emphasis on participation numbers to more emphasis on quality interactions. One Extension educator suggested that there may need to be change regarding how Extension administrators measure value. He stated:

Engaged model, there's a significantly greater time investment, and I would say one of the challenges with that is that while you have greater

impact, it also takes more time and limits or restricts more, I would say, the number of people from a count standpoint that you may actually deliver the program to. From an Extension evaluation standpoint, I think administration needs to understand that. Historically, I'm not saying this is always the case, but historically often numbers were what drove impact or value, and the engaged model often does not generate the same quantity that maybe the expert model would.

One Extension educator supported this point referring to the time and resources invested in an engaged program that focused efforts on a relatively smaller number of beef producers but yielded greater impact. As cited previously, he questioned whether it was more valuable to devote time and resources to achieve noticeable impact with 35 producers rather than providing programs with lesser outcomes for 100 or 200 people.

Another Extension educator agreed that participation numbers shouldn't drive program evaluation. However, she indicated that she had success in reaching many people through an online, mandated program. She said, "You can't always reach as many people with the engaged. I think we've been very lucky with our online programming because it is mandated and so we reach about 2,000 a year. You can't always do that with engaged. It takes more time to work with more individuals and take them through the process."

Environmental limitations

Limitations related to the environment in which programming was delivered were also given as a barrier to use of the engaged model. An Extension educator from State1 reported that he was prevented from using an engaged model of program delivery by environments where interaction was limited. He said:

What would prevent me, let's see. . . . not being in an environment where you can engage. For example, if I'm out interacting with clientele in a give and take scenario, I can, I can use the engaged. If I am just presenting something you know via technology, you know, creating a video, or creating a net fact or net guide. I am just presenting information and I don't really have the opportunity to engage. As simple as it sounds, is to engage you have to engage and be somewhere where there can be a give and take on information. Or if it's just a meeting where I'm up there talking and, I mean even at a meeting you can engage by things, questions, concerns, comments and you know you can get some audience interaction, but, I think being more distanced from the clientele and not being out rubbing shoulders with them limits engagement. And I suppose there's scenarios of a lot of give and take, you know, Facebooking, tweeting, et cetera, et cetera, depending on how deeply you're involved in that.

He suggested need for exploration of ways to increase interaction in these online environments and in large audiences.

Emphasis on being unbiased

An Extension educator from State2 expressed concern that using the engaged model may result in bias toward some part of the community. She said:

I think it's just a balancing act, I guess. You've got to try to engage different pieces of the community without leaving anybody out, without having one voice be louder than the rest, especially if you've got industry that you're engaging. You don't want to-- you still want to come off as unbiased. And so, I think that on the one hand, it really is helpful to have community input. To have a community voice in your program with a community perspective. At the same time, I think the challenge is trying to keep that balanced and unbiased by involving a lot of different perspectives. But at the end of the day, it's going to be useful information for a wide audience.

Engaged drivers

Drivers associated with Extension's move toward an engaged model of program delivery provide insight into areas where emphasis might be continued or strengthened to increase use of this model. The top drivers identified were; 1) local program support, 2) organizational support, 3) stronger programs, 4) better outcomes, and 5) supporting the future of Extension. The findings related to these categories are presented here.

Local program support

Interviewees indicated that they were encouraged to use the engaged model because it provided greater buy-in and ownership of the program by their clientele. This resulted in increased credibility and local support. A State2 Extension educator mentioned that people prefer the model because they like to be “part of the solution, not just part of a problem or the topic.” Another Extension educator shared the benefits of community support as she said, “I just feel like there's a shared perspective and many hands make light work, and you have the buy-in and that will keep it going long after you've gone. It's not just based on you.”

Using the engaged model of program delivery creates community buy-in. The Extension educator from State2 that provided the example of the farm safety truck program shared what encourages her to use the engaged model.

I just think it fits better to community involvement, community acceptance to what we're trying to do. They buy into it with their involvement. They help the rest of the community buy into it with getting others involved. The last thing we want to do is - maybe a way to say it is - not preach to the choir. And so, by involving community, you get that buy-in, not always on a larger scale but you at least hope that.

Another State2 Extension educator emphasized that the participants in the on-farm research project became “vested in the research” and remained involved because of the

value the program provided to them. This, in turn, encourages the Extension educator to continue to use this model.

Community buy-in and support encouraged involvement throughout the community. One Extension educator from State2 indicated that her engaged program included involvement that extended to community leadership including officials such as the county commissioners, emergency management and township trustees. Another State2 Extension educator spoke of hearing farmers involved in on-farm research talk to other producers “about the results that Extension helped them find . . . the value of what that allowed them to do and not do.” This is evidenced in this excerpt from an earlier statement by an educator from State1,

The biggest encouragement is it gets everybody involved. . . Whether it's working together, and doing research on things, if it's an issue producers are dealing with or if there's a concern about some disease coming in or stuff of that nature or disaster type response, whatever it is. If we can get everybody involved, it's going to benefit everyone and I think there'll be a good feeling of satisfaction and buy-in.

Going back to the example of the on-farm research project, a State1 Extension educator shared how the engaged model encouraged producers to “take ownership” of their accomplishments and learn at higher levels through their interaction with their peers. Extension educators shared that local support and involvement in the Extension program grew from the involvement of citizens in identifying the issues to be addressed

and then continued as the program developed and the process was evaluated on an ongoing basis. One Extension educator from State1 shared:

What encourages us? You know, that local interest, based out of need, what have you. It's that, 'This is definitely what we need.' If we're actually looking at current issues - and I think that's probably what encourages us most, to use the engaged model - what is the issue at hand? What do you need help with? What would be good and useful information or tools for you? That's, I think, what drives the engaged model. So, yeah, I guess I think that's what encourages us to use it. We're tuned into that, yeah.

Another State1 Extension educator stated:

Encourages. Sometimes it's the results, the feedback and working with clientele. You get those positive responses back that puts the light bulbs up there that we're on track. We're seeing some results that whatever that program might be is making a difference out there. And as an engaged model, you still kind of go back and forth with members of the community, wherever that might be. If we need to alter or make a few changes, based off, say, that first go around. Or we need to go a little deeper into the knowledge base, or the details, to help provide a more, maybe a more clear-cut answer. And some follow up with it.

With the engaged model, the community can identify issues of importance and drive or “push” the process of learning and developing solutions together. This leads to

“better input” and results. One State2 Extension educator likened this to a web that provided greater understanding, buy-in, and acceptance of his work. In addition, programs are customized to meet the specific needs of the community.

Organizational support

Findings in this section highlight how change to an engaged model is being encouraged from the top of the organization and how that change is playing out at the local level. Using an engaged approach at the state level, changing job descriptions to encourage engagement, and providing support as change occurs at the local level are some examples provided here.

In State1, several Extension interviewees mentioned a statewide needs assessment and dialogue implemented as an indication of organizational support of using an engaged model of program delivery throughout their state Extension organization. This provided an example of engaged needs assessment and served as support and encouragement to use the engaged model. When asked about the plans for continuing engagement through program planning, implementation and evaluation, one Extension educator responded:

I don't know that, you know there's other great meetings planned, although, we are encouraged to constantly be getting feedback from local personnel, local individuals whether it's you know, county boards or. You know, how is the feedback, how is there program feedback? Probably, by, we are encouraged to really be connected with our communities and

growers, constituents, et cetera in a dialogue. And they're always interested in how are our presentations received? Are people really learning from them? There's quite a bit of evaluation type stuff that's encouraged.

Then he provided an example of how the organizational support is actualized through the on-farm research program.

I think it's kinda what I already emphasized. I think, at least our state and our organization is fairly committed to be an engaged type learning style. You know, we have a big emphasis on on-farm research where growers and university people are working together. You know, the grower is as much involved in it as the university people. You know and so that's a real engaged learning fashion I think. So, it seems like that's an emphasis and I'm, I assume other states, I guess I don't know, that's probably what you're going to find out.

Another area of organizational support that was reported in State1 was a change in the job descriptions. Extension educators are now expected to spend 20% of their time in building community relationships and partnerships. An Extension educator shared:

And I think one of the things that they've changed in our system, which I think is really cool, is everybody's job description changed across the state to have a 20% focus on building those community relationships. And to me, that's huge. Now we've been given permission to-- I'm not-- I'm just

saying that kind of-- you know, we can be a part of those community organizations, and it isn't specific as to what you have to be a part of, you choose within your community. But there's an expectation that you're going to spend 20% of your time really working on those community relationships and partnerships. So, I love that.

The Extension educators in State2 also shared that their organization is very supportive of them using the engaged model for program delivery. They said they are encouraged to utilize local expertise in programming and through advisory committees. They also conduct needs assessments with community groups to support this model. The Extension educators feel they are encouraged to be involved in the local communities, to engage with the audience and meet local needs. One Extension educator emphasized that the university permits the use of community speakers and the development of partnerships with outside organizations. She said:

But here I do have the freedom from my—[the university] does sort of give us the freedom to work with the community's help. We are allowed to have speakers from the community at our events and things like that and partner with different organizations.

Another Extension educator shared a blogpost from the Director of Extension encouraging them to “be the Extension educators that help bring people and ideas together, instead of saying that we have to be that expert.” He also spoke of the

opportunity for change for the organization because of personnel change through natural attrition due to retirements. He said:

Well, as I shared today, with our director coming up with that post, makes me feel a little bit more at ease that he's not looking to me to be the expert, that he wants to see Extension as kind of bridge builders or the people that are connecting the dots and not necessarily the people that always have to be the contact creators or the expert person. So, that's encouraging to see from a top-down perspective. Because some of the stuff that we're doing in our office is definitely, probably, grassroots. We're doing it through some different initiatives that we've done, but not necessarily because-- from the top-down they've said, 'This is how you need to change your office to be more engaging.' For us, it's kind of come because when I moved to this office five years ago, everyone in my office had 25 plus years in my office, and I had five years within Extension. So, they not only had been there for 25 plus years, but had also worked with each other for 25 plus years. So, they had certain ways of doing things, so certain traditions and certain protocol, and things, and were not quite open to anything that was new. And so, over those five years, those people, one-by-one, in our office, have retired. And so, now, the person-- so we've now had a turnover of our entire staff, which has allowed for looking at new ways and looking at different ways of doing things because those who have joined the office are seeing some of the things that we're doing,

where they've joined the office because they see some of the things that we're doing in our office. So, we've been able to shift simply because of a mindset shift.

Stronger programs

Other drivers that encouraged the use of the engaged model of program delivery identified by the State1 Extension educators were having a stronger program, increased interaction with and of participants, relationship building and the ability to customize the program to meet local or individual needs. Stronger programs because of engagement were mentioned many times. One Extension educator described how Extension involved the local community in working to provide child-care as a step towards keeping younger residents from leaving the area. She said:

We know that in the rural [part of our state], it is important to-- childcare is very, very important. The only way you can get childcare to really work in the rural areas is to have the community engaged. And so, one of the things that we are working with is to work with communities first, and say, you know, 'If you want your young people to be in your communities, you have to have childcare. And so, let's work together to make this happen in your community.' And once the community is engaged in helping the childcare person either get started or continue in the small community, it really does work to have a whole team, the whole

community working on it. They have to support. Then with training, we have to have an interactive or an engaging way to help those child-care providers. So, we've gone to a model where we would-- in fact we're looking for a grant, that we can really get this going, where we would actually use some computers, or laptops, or something that they can interface with us. And if they've got a question, they can call their mentor and work with their mentor so that there's an engaging conversation going back and forth, over a period of time. It can be up to three-years or more. And then also having the community involved with it so that it really looks strong.

Many Extension educators mentioned the improved interaction provided by the engaged model of program delivery as a driver that encouraged its use. An Extension educator summed it up, "The appeal of engaged is just that title, that it helps to allow for a more interactive discussion and customized to the audience's needs, and sometimes the predetermined expert model doesn't do that. So, I think that's the appeal of an engaged model." Another Extension educator responded that she found the engaged model to be "more fun" and "more dynamic." This stems in part from the energy created by the interactions with this model as opposed to the expert model. Another State1 Extension educator shared:

Yeah, I guess just seeing the interaction that we had, especially in those afternoon tours, was just tremendous for me. I've been at field days where we've been in a tent or a building and talked for 45 minutes at a time. One

specialist. And you kind of see people's eyes glaze over and they've kind of lost contact with the presenters. And just seeing the engagement that we had in those smaller groups in afternoon tours was just tremendous for me. And from talking to our specialists, they were really excited with the dialog and discussion, too.

Use of the engaged model of program delivery is credited with building and strengthening relationships with clientele. Those relationships lead to greater success in development and implementation of policy and in solving problems. One Extension educator summed this up as the meaning of Extension as he said:

I think what encourages me is the meaningful relationships that you develop, the benefits from both perspectives that you get. I hope to be helpful to them. They're certainly helpful to me in that relationship. I think I see tremendous success with implementation of policy or management techniques and those implemented kinds of things are very beneficial to the clientele. So, I enjoy seeing that, when you have that relationship with a group, over time, and their implementing things, or we're changing some of the way we deliver programs for the research we conduct as a result of that to help them solve issues. That's what Extension is.

A State1 Extension educator mentioned the long-term benefits and improved clientele satisfaction with programming in an engaged model because of the relationships formed through an engaged model. He credited those relationships to the regular

meetings, the diversity of the group and the shared experience in providing a successful program. Relationships are built and strengthened through use of the engaged model. These provide on-going program support and positive feelings toward the program. An Extension educator stated it this way,

Well, okay. Part of it is, again, the value of partnerships, relationships. . . .

I think engaged program probably generates -how should I say this- strengthens relationships and partnerships. People like to be associated with successful programs, and you can have an engaged program that is successful that there's other parties, typically, they have them involved and they feel good and I feel good when they feel good.

Being able to provide stronger programs with enhanced learning and improved outcomes encourages Extension educators in State2 to use the engaged model of program delivery. These Extension educators spoke of stronger programs that provided useful information that was beneficial to a wider audience through use of the engaged model. Volunteers and other program participants expanded the program reach through their delivery of programs and sharing of findings. The producers involved in the on-farm research gained knowledge that they could use in guiding production decisions. Community members learned processes that could be repeated to address issues in the future.

Extension educators in State2 also shared that use of the engaged model supported relationship building through the ongoing interaction from program planning to completion. Past success encouraged both Extension educators and program participants

to continue to work using this model. Benefits of relationships include increased buy-in, program support, and word-of-mouth marketing for programs. The engaged model increased interaction over time, but also increased program participation.

Improved outcomes and impact

Another driver encouraging use of the engaged model of program delivery was the improved outcomes and impact that resulted from this approach as evidenced by earlier statements by Extension educators. One Extension educator emphasized the added value provided by active learning in her programs. Not only did everyone learn more, but they could share what they learned and attribute it to the learning experience she provided. She encouraged Extension to consider ways to emphasize adding value to programming to remain viable. Other Extension educators talked about the sustainability of solutions and approaches provided through this model as drivers.

One Extension educator from State2 credited the engaged model of program delivery with providing “more authentic knowledge” because of his facilitation of “community collaborative learning.” This “authentic knowledge” encourages him to use this model. Another emphasized the personal satisfaction that he received using this model. He said:

I believe it's the satisfaction of doing a good job as an Extension worker and bringing the people along. And when you do that, using an engaged model, you're building those relationships with people. And if you've built

those relationships, you get buy-in from your volunteers, and from families, and people in the community of what you're trying to do. And then so when you do have, maybe, a big change that you want to make, you know that they're going to be on board because they support you in what you're trying to accomplish.

Other Extension educators reported seeing and expecting greater medium and long-term benefits and impact when using the engaged model of program delivery. They felt these were more likely to happen with the engaged model of program delivery. Another Extension educator spoke about the greater impact that, despite the increased time and the reduced contact numbers, he associated with the use of the engaged model. He attributed the increased impact to the emphasis on knowledge application of what is learned to aspects of the participant's life associated with this model. Another Extension educator also emphasized long-term economic impacts associated with increased sustainability and profitability as major drivers for a program in which he is involved. He said:

If you had a group that you did the expert model with, and a group with the engaged model with, I think the evaluation tool at least in my mind, would be very similar, but I think you'd get a lot more meaningful impact from the engaged model based on that same kind of evaluation tool. That would be my guess. . . . But I'll tell you what that is some meaningful-- that is probably a signature program in our state. It has had tremendous impact on profitability of those participants.

Supporting the future of Extension

Many Extension educators shared that the engaged model provided grassroots community support with citizens and community leaders and suggested that use of the model is essential for survival of the Extension organization. As indicated earlier, one Extension educator sees his training of volunteers so they can help deliver programs as providing increased diversity for the program and developing support for funding and other benefits to the community. He said he used the engaged model, “Because it is successful with building grassroots-level support which also helps us down the road with funding.” One Extension educator from State2 summed it up, talking about growing up as the son of a dairy farmer. He said:

And that goes back to my dad because when I was hired, I wanted to make sure everything that I did improved my dad's profitability. And it was like I was being held accountable to the community. We should be held accountable to our communities to make us-- are we meeting the needs that we have from our county level? And the only way to know that is to engage them and ask them. And it's for political support. It's for support. It's for knowing that you're doing the things that they need the most.

An Extension educator from State1 highlighted the importance of Extension using an engaged model as a means of remaining competitive and thriving as an organization. She felt that using the engaged model was the “niche” that separated Extension from other organizations. She said:

I just have a belief that that's the way we should operate. I have a foundational belief that we have to be more engaged in how we deliver stuff in order for extension to survive. That's kind of-- I like my job. I really think that it's important for us to consider ways we can engage the community. And engagement doesn't necessarily mean that they are the ones that are the clientele participating actually participating in whatever you're doing. It means that it's more collaborative and the listening part I would say is as much me learning from them than they're learning from us.

Chapter 5 - Summary and Conclusions

This chapter begins with an executive summary for this study. This is followed by a summary of some of the lessons learned through the study that were not related to the research questions. Then the findings are combined with conceptual framework and other literature to consider what they mean for Cooperative Extension and higher education. Finally, this chapter provides conclusions and recommendations for these organizations within the framework of the study.

Executive summary

Introduction and purpose

Calls for Cooperative Extension to change to an engaged model are documented as early as the 1960's (Fessler, 1964; Vines, et al., 1963) and continue today (Henning et al., 2014; Reed et al., 2015). There are also calls for greater engagement in Higher Education (APLU Task Force on The New Engagement Planning Team, 2016; Byrne, 1998/2016 ; Fear & Sandmann, 2016). Extension can provide leadership in guiding higher education in this charge because of its long history of connection in local communities (Kellogg Commission on the Future of State and Land Grant Universities, 1999; King & Boehlje, 2013; McDowell, 2003; Mitchell & Gillis, 2006; Peters et al., 2010; Reed et al., 2015).

Although there has long been interest in greater engagement of Cooperative Extension, there does not appear to be a clear definition of what engagement is and how

it is achieved. Further, there is no indication of what Extension needs to do internally to make this move. The purpose of this study was to define engagement within the context of a state Cooperative Extension organization, to increase understanding of how and why engagement is implemented by Extension educators at the local level, and to gain insight into barriers and drivers associated with the adoption of an engaged model for program delivery. This information will be useful to increase understanding of the engaged model of program delivery for Cooperative Extension. Findings can be used to increase engagement within Cooperative Extension and between higher education and local communities. This study was unique in that the primary emphasis was placed on engaged and expert models of program delivery at the local level, determining how and why each was used and developing recommendations for how organizational change might encourage or deter use of these models.

Conceptual & theoretical framework

There are three components related to the conceptual framework for this study. The first component is the educational approaches used by Cooperative Extension as defined by Merrill Ewert (See Figure 1-1) (Franz & Townson, 2008). These were classified by Ewert based on emphasis on content and process. In this study, educational approaches that are high in process are those most suited to an engaged model of program delivery. Engaged approaches are facilitation and transformative education. Educational approaches that are low in process are associated with the traditional, expert model of

program delivery. Expert approaches are service and content transmission (Franz & Townson, 2008).

The second component of the conceptual framework relates to the theories associated with expert and engaged models of program delivery. The traditional theory used to describe the work of Cooperative Extension has been Rogers' 1995 theory for diffusion of innovation (Foley, 2004; Franz et al., 2010; Seevers & Graham, 2012). This theory is based on the concept that education targets innovators to adopt innovations that improve processes or products (See Figure 1-2). Needs are determined by an expert. The end goal is easily evaluated through determination of how many people have adopted the innovation. Impact can be calculated based on the adoption and estimates of what value that adoption has on both an individual and societal level. This theory explains the top-down model of delivery of new technologies and innovations to clientele at the local level used in the expert model of program delivery.

However, Rogers' theory for diffusion of innovation does not work well in addressing complex issues requiring solutions that must fit within a unique, local context. The theory of collective impact has been used to describe work in adult education intended to strengthen communities as being consistent with engaged models of Cooperative Extension (Niewolny & Archibald, 2015). Collective impact is used to describe how communities solve complex, social issues involving multiple parties and provides for social change that cannot be achieved by the limited activities of individual organizations (See Figure 1-3). The five conditions identified as being important for the achievement of collective impact are "a common agenda, shared measurement systems,

mutually reinforcing activities, continuous communication, and backbone support organizations” (Kania & Kramer, 2011 *The Five Conditions of Collective Success* section, para 1). This theory better defines work using an engaged model. Strong local connections and networks of resources help communities develop solutions.

Communities and the university, through Cooperative Extension, share responsibility for identifying both problem and the solutions. The university plays a supporting role as a back-bone organization. The breadths of resources available from the University make it a desirable partner in addressing any conceivable challenge.

The final component included in the conceptual framework revolves around how faculty view their roles related to society as described by Peters, Alter, and Schwartzbach (2010). The service intellectual’s work in society is to respond to questions and provide services (Peters et al., 2010). Peters, Alter, and Schwartzbach define the public role of faculty in this tradition as “limited to the provision of facts, knowledge, technical assistance, and technologies” (p. 52). The service intellectual tradition is consistent with the role of Extension professionals as change agents using the diffusion of innovations theory in the expert model of program delivery.

A second role identified was the action researcher/public scholar/educational organizer (AR/PS/EO) tradition (Peters et al., 2010). The AR/PS/EO tradition values shared expertise and two-way communication between the institution and local citizens in identifying needs, developing and implementing programming to address those needs and evaluating achievements (Peters et al., 2010). These attributes define engagement (Beaulieu & Cordes, 2014; Bridger & Alter, 2006b; Byrne, 1998/2016 ; Sandmann,

Furco, et al., 2016). Their use in connecting the local community to the University exemplifies the use of an engaged model of program delivery and provides mutual benefits to all parties (Bridger & Alter, 2006b; Byrne, 1998/2016 ; Peters et al., 2003; Sandmann, Furco, et al., 2016).

Based upon these components, conceptual frameworks are provided for the expert (See Figure 5-4) and the engaged models (See Figure 5-5) of program delivery for Cooperative Extension. The framework for the expert model emphasizes one-way communication and demonstrates the role of the university through Extension in providing expertise through technological innovations. The framework for the engaged program delivery model demonstrates two-way communication and shared expertise as the partners work collectively to develop culturally relevant, contextual solutions.

Methods and Data Sources

The purpose of the study was to gain greater insights and understandings related to the definitions and application of engaged and expert program delivery models as well as barriers and drivers to their use in Cooperative Extension. The exploratory nature of the study was consistent with a qualitative research approach. The research project used an embedded case study to describe the phenomena of engaged versus expert program delivery models of Extension program delivery within the context of the individual, situation, program area, and state. The states and program areas used in the study were selected based on survey responses from a panel of experts. Critical case sampling was used to identify two states in which an engaged model of program delivery was being

used. One state was more urban and the second was more rural in nature as determined by U.S. census data. Purposeful, random sampling was used to identify successful Extension educators in program areas thought to emphasize the engaged and expert models of program delivery. This was intended to provide greater contrast in responses, resulting in a more accurate picture of engagement from multiple perspectives. Data was also collected by survey of the panel of experts and from unstructured interviews with the state Extension directors for the selected states.

Results and Conclusions

Definitions for expert and engaged models of program delivery were drafted and provided to study participants to assist in identifying an operationalized definition for Cooperative Extension. Based on the findings, the proposed definition of the engaged model occurring through the work of Cooperative Extension educators in local communities is:

The engaged model of program delivery in Cooperative Extension is characterized by community involvement in all aspects of program development, sharing in the identification of issues to be addressed, developing a process for implementation and development of knowledge, evaluation and securing funding. Expertise and learning processes are shared. In the engaged model, Extension serves as a conduit between the community and the university. The engaged model is based on

relationships with the community developed through continual interaction, partnerships and collaborations. Relationships and learning extend beyond traditional program boundaries. Learning experiences using an engaged model are robust and rich, as the community works in both formal and informal settings to identify problems and develop solutions.

Greater detail is also provided related to the meaning of community and shared expertise.

Through the study, a third model of program delivery was identified, the hybrid model. The proposed definition for this model is as follows.

The hybrid model of program delivery in Cooperative Extension is used to involve clientele in the delivery of programming that meets local needs.

The model emphasizes shared expertise which comes from the university, stakeholder organizations, and individual stakeholders. Stakeholders are also considered to be partners. Partners are involved in multiple aspects of programming, and their role may vary based on location. There is emphasis on continual interaction between Extension and the community throughout the programming process. In this model, the university provides state interest teams, data on trends and research while the local community is responsible for application. The community is defined by interest rather than geography. In this model, an expert approach may be used initially to increase community awareness in a subsequent, more engaged programming approach.

Through the study, Extension educators identified the reasons for using the specific models as well as how the models were implemented. Table 5-1, below, summarizes the (1) reasons provided for use of the models, (2) sources of expertise identified by the Extension educators when discussing the specific models, (3) program delivery methods associated with the different models, and (4) partner roles.

Table 5-1. Summary of findings provided by the Extension educators related to their use of the three models

	Engaged	Expert	Hybrid
Reasons given for use of specific models			
Because of the attributes of the Extension educator or topic - time management, personal preference		X	
Co-creation	X		X
To achieve better learning outcomes	X		
To address specific types of topics	X		
To build and strengthen relationships and social networks	X		
To develop and improve program support	X		
To develop solutions in complex situations	X		X
To introduce engaged programming		X	
To introduce other Extension programming		X	
To meet needs based on Extension's role	X		
To meet specific audience or community needs		X	
To provide education for specific purposes - mandated programs, research presentation, answer specific questions, provide specific types of information, to address statewide themes, to provide professional service		X	
To provide information		X	
To provide sustainable solutions	X		
To use both engaged and expert models			X
To include active learning experiences with audiences			X
To improve learning and retention			X
Sources of expertise			
4-H Advisers/officers/teen leaders	X		
Chamber of Commerce			X

	Engaged	Expert	Hybrid
Clientele	X		
Community members/groups	X		
Extension advisory committee	X		
Extension educator	X	X	X
Information from neighboring universities		X	
Learners	X		
Legislators		X	
Medical community			X
Scientific literature		X	
State specialists		X	
University		X	X
Youth	X		

Program delivery methods

Conference or exposition			X
Demonstrations	X	X	
Face-to-face interaction	X	X	X
Facilitated meeting with moderated question session		X	
Flipped classrooms	X		
Lecturing – PowerPoint presentations		X	
Net facts or guides		X	
Newsletters		X	
Online interaction: social media discussions, email	X		X
Panel discussions	X		
Personalized interaction		X	X
Phone calls		X	
Press releases		X	
Producer presentations, peer-instructors	X		
Site assessments		X	
Small groups	X		
Social media posts		X	
Technology-enhanced polling	X		
Television		X	
Tours	X		
Trouble-shooting		X	
Use of open-ended questions	X		
Video presentations		X	
Webinars		X	

	Engaged	Expert	Hybrid
Partner roles			
Data analysis	X		
Delivery method recommendations		X	
Development of solutions	X		X
Financial support, programs and personnel	X		X
Identifying other potential partners	X		
Implement research	X		
Needs assessment		X	X
Presentation, including research findings	X		X
Problem identification	X		
Program implementation	X		
Program planning	X		X
Program promotion			X
Research data collection	X		
Site selection for research projects	X		

Finally, the study sought to identify barriers and drivers associated with Extension's move toward an engaged model of program delivery. The underlying research theory was that barriers and drivers do exist in the organization. A summary of barriers and drivers associated with the use of the engaged model of program delivery in Cooperative Extension is provided in Table 5-2.

Table 5-2. Summary of barriers and drivers associated with use of an engaged model of program delivery

Barriers	Drivers
Time	Local program support
Coordination and timeliness	Organizational support
Existing expertise	Stronger programs
Unwilling collaborators	Better outcomes
Loss of control	Supporting the future of Extension
Expert knows best	
Clientele that just want answers	
Organizational change	
Environmental limitations	
Emphasis on being unbiased	

Significance for Theory, Research, and Practice

This study provides recommendations for an operationalized definition of the engaged, expert, and hybrid models of program delivery for Cooperative Extension. The definition for the engaged model is consistent with the definition of engagement provided by the Carnegie Classification for Community Engagement. Both expert and engaged models of program delivery are used in Cooperative Extension and there is some agreement on what they entail. These may more appropriately be combined to form the hybrid model of program delivery which may provide greater representation of what is used and what is desirable because of the way in which it provides accommodation for shared expertise.

Examples of the use of the engaged and expert models are consistent with the educational approaches for Extension program delivery identified by Merrill Ewert (Franz & Townson, 2008). The classification of these approaches as engaged or expert as presented in this project, also appear consistent with practice. Degree of interaction and

desired outcomes may contribute to defining these approaches, in addition to process and content. Being able to identify the educational approaches within the Extension organization will be useful in making strategic decisions about resource allocation and delivery methods.

The theory of collective impact (Kania & Kramer, 2011) is consistent with the engaged work being carried out by Extension educators at the local level. Communities appear to be heavily involved in needs assessment with Cooperative Extension. There is opportunity for Extension to move beyond the traditional programming model, to the more fluid model of problem solving depicted by this theory. This will require modeling this program delivery method while providing professional development training for Extension professionals. Organizations need to determine how this changes program and performance evaluation practices. Mechanisms for support of ongoing communication and evaluation also need to be developed. Also, this may change the characteristics that organizations look for when selecting Extension professionals and administrators.

The model of engaged program delivery used by Cooperative Extension provides strong relationships on which universities can build as they seek greater engagement. This is especially true when considering the research and outreach missions of the land-grant universities. Greater attention needs to be paid to how students are incorporated into the engaged work of Cooperative Extension. Also, interaction between Extension professionals at the local level and university faculty must be planned to provide for development of relationships, recognition of areas of expertise and opportunity for collective work in communities.

Further study is recommended to explore the perspectives of Extension stakeholders, specialists and administrators related to the shift to an engaged model. What are the benefits and challenges they identify related to a move to an engaged model? How will their roles differ in an engaged model? What supports do they need to encourage them as Extension shifts to the engaged model? What services do clients need to receive that are currently offered only in an expert model and are there different ways they would like to receive them? In addition, how do leadership approaches and organizational structure change as Extension and higher education move to greater community engagement?

The findings support the use of both engaged and expert models in Cooperative Extension and in higher education, but suggest program planning and implementation needs to be most closely aligned with the engaged model. Stronger relationships among professionals throughout higher education organizations, including those at local and campus locations will allow the higher education to build on the strong community connections maintained by Cooperative Extension. This will not only provide communities with increased access to resources that will help resolve the major challenges they are facing today but will also provide increased capacity in shaping their future. Engagement of higher education can successfully intertwine the three missions of the university: Extension, research and academic instruction.

There may be room for revision in the definition of the engaged model as Cooperative Extension works with communities more towards achieving collective impact that encompasses rather than focuses solely on the delivery of educational

programs. As previously mentioned, there is also a need for further study to define a hybrid model and consider how it works in communities. This blending of the models seems to provide opportunity to combine expertise from multiple sources within the local context to provide more appropriate, sustainable solutions. In the future, we will want to consider how the structures of communities, Extension, and higher education provide the best support, and the types of personalities and leaders needed to support this blended model.

Lessons learned

There were several things learned from this study. The first, which was more a reinforcement than a discovery, was the commitment of Extension educators to help others – in this case, me. In State1, it was amazing to see the speed and unanimous “yes” responses received when the invitations were sent to Extension educators to participate in the study. Timing in State 2 may have contributed to some of the delayed and negative responses. Either way, more Extension educators in both states than originally intended were interviewed.

It was also amazing how thoroughly the Extension educators prepared for the interviews. Thinking about how they do their work is important to them, even though some of them said they really hadn’t taken time to think about it until they received the questions. They expressed appreciation that the study made them think about the topic. It would be interesting to see if any of the Extension educators made changes to how they operate because of this increased thought and reflection on the subject.

It was also impressive with the level of preparation that the Extension educators put into the interviews. Extension educators were very interested in the topic. They wanted to share their thoughts and were interested in learning the results of the study. One Extension educator sent written copies of their responses that we could refer to while we visited. Another Extension educator shared his document during the web-conference and then sent it as a follow-up. One Extension educator shared that in preparation for the visit he had looked at his calendar for the past year to better understand the number of programs where he used the different models. Finally, another Extension educator scheduled her interview for after hours. It was assumed this was to fit her schedule, but when we met, she explained that she wanted to be sure she had plenty of uninterrupted time to visit with me. She wanted to do the interview when the office was closed. Her interview was one of the longer interviews conducted, exceeding the allotted ninety minutes, but very meaningful. She had a lot of thoughts, and questions, about engagement in Cooperative Extension.

Even though the study was designed to find Extension educators who used the engaged model of program delivery, it was amazing to see the number of Extension educators in this study who preferred this model to the expert model. This emphasized that it is very important that Extension educators and their perspectives in discussions about increasing engagement that occurs at the university, state and national level. Extension educators have a lot to contribute based on their experiences with engagement at the local level. The university will benefit from the Extension educator's insight as it considers greater engagement. The move to greater engagement for the university will

require organizational change in many levels. University and Extension leadership need to consider how this move changes the role of the Extension educator as well as other faculty members and how to provide support during the transition. There is opportunity for the university to build on the local connections that Extension has established.

A lot of the literature suggests that there are only two possible models of program delivery used in Cooperative Extension. The study identified a third model, the hybrid model, which is also used in Cooperative Extension. This model combines the community involvement of the engaged model with the expertise of the expert model. However, in this hybrid model, expertise is derived from many sources. The university becomes just another expert, rather than being the sole expert. Being situated within engagement, the hybrid model allows local communities to identify the problems to be solved. The community is strengthened as residents work together, drawing on multiple sources of expertise, toward sustainable solutions.

Finally, it was surprising that program areas do not appear to be a good indicator of model preference. Instead, it appears that preference for a model is more of a personal attribute. This suggests that screening of candidates to identify this preference may be an important step in increasing engagement in Extension and the university. Further research might consider this possibility.

Summary of findings

The research questions, which guided this study, are (1) How is an engaged model of program delivery defined within Cooperative Extension, (2) How is engagement

implemented and more specifically when and why is an engagement model used as opposed to an expert model, and (3) Are there barriers and drivers associated with Extension's move towards a more engaged model? This section provides a synopsis of the findings related to these three questions.

Defining the Engaged, Expert, and Mixed or Hybrid Models of Program Delivery in Cooperative Extension

Research question one was how to define an engaged model of program delivery in Cooperative Extension. This is based on research theory one which stated that definitions of engaged and expert models of program delivery existed and were operationalized within Cooperative Extension.

Based on the interviews there do appear to be operationalized definitions of engaged and expert models of program delivery. This study also identified a third model, the hybrid. There appears to be variety in how these models are interpreted by individual Extension educators. There is also a range of possibilities in how these models are used in Extension work. There appear to be times when one model is preferred over the other. Overall, it appears that these two models may lie on either end of a continuum and that Extension educators may move along that continuum depending on their interest and the situation. If we adopt the continuum model, then a hybrid definition would include everything within that continuum so may not be necessary. The continuum seems to be a very simplistic approach to defining a very complex relationship. Additional research is

needed to determine the true nature of the relationships between these three models of Extension program delivery.

Proposed definitions for the three models, based on the findings of this study are provided in the next section. These definitions for an engaged, expert and mixed or hybrid model of program delivery for Cooperative Extension are considered within the context of the findings and the conceptual frameworks for the engaged and expert models. Further work within the organization to clarify and develop these definitions would be beneficial.

The next section considers how the Extension educators use the three models in their work. This includes why they might choose to use a particular model, who partners are, the roles associated with the partners and different delivery methods that they use with each of the methods. This information helps to shape understanding of how the models are implemented.

The final section considers the barriers and drivers which Extension educators identify as being associated with increasing engagement in Cooperative Extension. These are identified at both the local and the organizational level. This section helps Cooperative Extension and the university to understand how they can better support Extension educators in the move to greater engagement.

The engaged model of program delivery

Extension educators suggested there was a need to develop a definition for the engaged model that set it apart from the expert model of program delivery. In addition,

one Extension educator acknowledged that engaged program delivery goes beyond emphasis on active learning or “learner engagement” in educational settings. Learner engagement has been a statewide focus for State1. Another Extension educator suggested that somehow the use of networks be emphasized with the definition.

Components of the definition of the engaged model included community involvement in all aspects of program development, shared expertise, and shared learning. This section begins with a reflection on what community means. Then community involvement in the various components of program development is considered. This is followed by an exploration of shared expertise and shared learning. Finally, a proposed definition for an engaged model of program delivery for Cooperative Extension is presented.

Community involvement

Extension educators agreed that community involvement is a critical component of the engaged model of program delivery. But there is need to work within the organization to clarify what is meant by community. The interviews suggest that community extended beyond the people that benefit from educational activities provided by Cooperative Extension. Community also goes beyond traditional advisory groups, encompassing all members of the area served, revolving around a common interest. This is consistent with collective impact (Kania & Kramer, 2011) which defines community as originating around shared interest. In addition, consistent with this theory, ongoing communication was emphasized as taking place in both formal and non-formal situations, in person and in virtual environments.

Community involvement in the various components of program development

The interview findings suggest need for further investigation around evaluation in an engaged model. Collective impact has evaluation as an ongoing activity with all participants involved in the development of the problem statement and identifying measurements to be used in defining success as the group works towards a solution to the problem (Kania & Kramer, 2011). In some ways, this may be consistent with the logic model used in Extension planning where short-term and intermediate goals are identified as they relate to intended long-term impact. However, the logic models tend to describe a more linear process than is defined by collective impact. Logic models are effective tools for program planning, which is their intended use. They are not as effective for resolving complex issues. Involving the community in developing these goals and in working collectively in evaluation is different from what is seen in most Extension programs as highlighted by the interviews. Participatory evaluation methods need to be explored and shared with Extension educators through demonstration of the process as a means of professional development.

Finally, one Extension educator shared that to her “all aspects of program development” should include obtaining resources through grant writing. One of the differences between the diffusion of innovations and the collective impact theories is the role of program funders. In the diffusion of innovations, funders are sponsors providing funding to projects that are then carried out by Extension. In collective impact, funders are partners, actively involved in all aspects of program development. This represents a

major shift in the view of funding for Cooperative Extension and opens tremendous possibilities related to how work is done and supported.

Multiple touches and interactions or on-going interaction was suggested as an addition to the definition. One Extension educator shared that this was sustained long after the educational program was developed and delivered using an engaged approach. The AR/PS/EO definition (Peters et al., 2010) highlighted two-way communication and ongoing communication is a tenet of collective impact (Kania & Kramer, 2011). These appear to be consistent with what the Extension educators reported in practice. Finally, Extension educators suggested that quality learning experiences were important to the definition of the engaged model.

Shared expertise

The primary challenge in accepting shared expertise is from the members of the Extension organization that prefer the expert model of program delivery. In many ways, being the source of expertise seems to define these Extension educators' role. Other Extension educators and the Extension directors emphasized that sharing expertise did not mean they were giving up their expertise. Instead, different members of the community were contributing different types of expertise.

From the interviews with the Extension directors, the Extension professional may be providing the research-based expertise provided by the university or may be providing expertise in process depending on the community need. And in some cases, the local Extension professional may have the expertise or may be serving as a broker for expertise housed within the university. Some possible types of expertise provided by the

participants in the engaged model are depicted in Figure 5-1. As stated by one of the Extension directors and Byrne (1998, 2016), we may need to be as attentive to our “inreach” as to our “outreach.” This allows local and campus-based employees of the university to become more aware of the full range of resources, and expertise, available to support engagement in local communities.

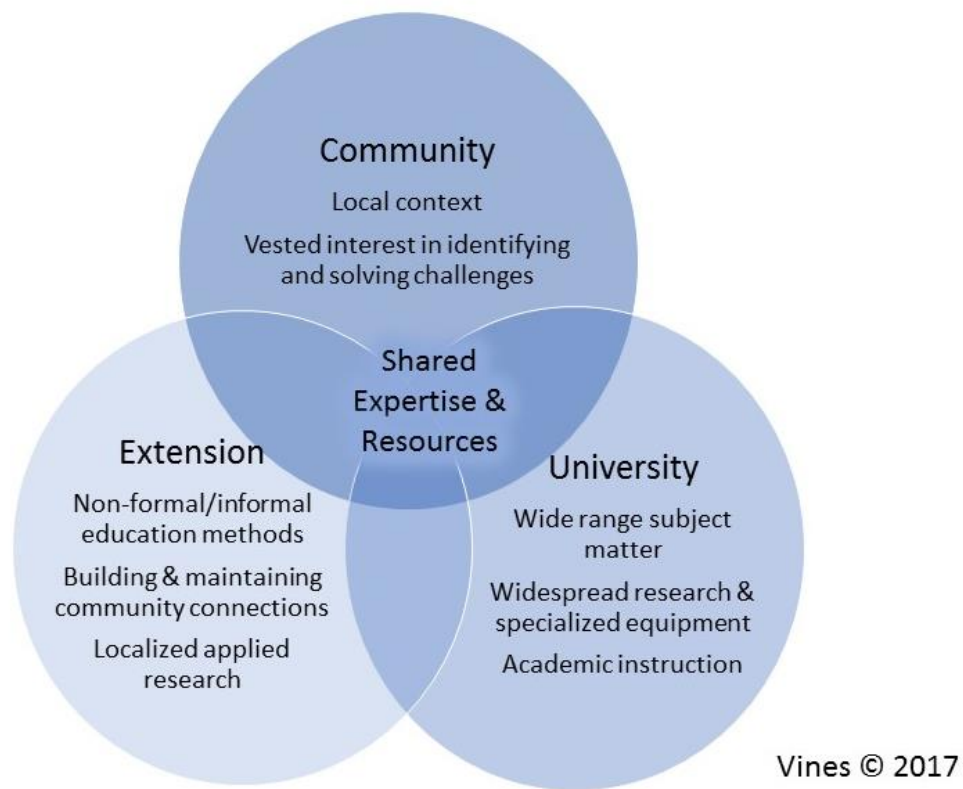


Figure 5-1. Different types of expertise and resources are shared and come from multiple sources

For the engaged model of Extension program delivery to be effective in meeting community needs there are times we may be partnering with the community in addressing needs outside our traditional areas of expertise. This emphasizes Extension’s

role as a backbone organization (Kania & Kramer, 2011) and the role of the Extension educator following the AR/PS/EO normative tradition (Peters et al., 2010), with greater emphasis on the action researcher part of that role. In some cases this may allow the Extension educator to share the benefits of their extensive network of “experts” in multiple areas that reside both in and out of the university (Lubell et al., 2014). This also emphasizes the engaged educational approaches of facilitation and transformative education described by Ewert (Franz & Townson, 2008). Based on the interviews, the concept of shared expertise may be challenging for some Extension educators, so thought needs to be given to how to help them transition to this approach.

Shared learning

The Extension educators that talked about shared learning saw it not only to improve their knowledge, but a way to relate to the people in the community. There was not much discussion about it, although several Extension educators indicated shared learning is a part of their practice. Further inquiry into the prevalence of shared learning would be useful in determining whether this area warrants further attention.

The proposed definition for the engaged model

Based on the findings of this project, the proposed definition of the engaged model of program delivery in Cooperative Extension is as follows:

The engaged model of program delivery in Cooperative Extension is characterized by community involvement in all aspects of program development, sharing in the identification of issues to be addressed, developing a process for implementation and development of knowledge, evaluation and securing funding.

Expertise and learning processes are shared. In the engaged model, Extension serves as a conduit between the community and the university. The engaged model is based on relationships with the community developed through continual interaction, partnerships and collaborations. Relationships and learning extend beyond traditional program boundaries. Learning experiences using an engaged model are robust and rich, as the community works in both formal and informal settings to identify problems and develop solutions.

Some of the components of the definition are also clarified, based on the study.

- Community includes basically everyone – all the time, going beyond traditional clients, program participants or audiences. Community also means organizations and partners, community boards, and industry. Advisory committees, program committees, unspecified committees, and program volunteers are also a part of this community. Community may be tied to a physical location or exist in a virtual environment through use of technology. The common denominator of community is shared interest.
- Shared expertise means that each person brings their unique expertise, perspectives, and judgments. University expertise is often research-based or process-focused. Clientele provide multiple forms of expertise, including their experiences and local perspectives.
- Shared learning may also be referred to as co-learning or two-way learning. This learning is on-going, extending beyond the confines of an educational program.

This proposed definition is consistent with the Carnegie Classification for Community Engagement being used by the APLU Task Force on The New Engagement. In addition, the interaction and connectedness that is provided by Cooperative Extension provides a strong basis for achieving the “mutually beneficial exchange of knowledge and resources” through existing partnerships in communities and with local government that provide for shared knowledge development (APLU Task Force on The New Engagement Planning Team, 2016, p. 5).

The expert model

Components of the definition of the expert model provided to the Extension educators included a one-way flow of information, the university through Extension as a singular source of expertise, the role of the expert in providing guidance and responding to questions, and the internal processes associated with program planning, implementation and evaluation. Responsibility for needs assessment was not assigned to either Extension or the community in the definition. This section begins with a reflection on each of the components included in the original definition of the expert model. Finally, a proposed definition for an expert model of program delivery for Cooperative Extension is provided.

One-way flow of information

The Extension educators believed the classification of the expert model as only using one-way communication was too extreme. They indicated that this model does include some two-way interaction and opportunities for discussion and questions from clientele. Extension educators also shared that there may be times when the expert model is the appropriate model to use. Extension educators found use of this model consistent with top-down programs that are initiated at the university or mandated programs that they deliver for third parties. While some Extension educators suggest these programs may be used to introduce some clientele to Extension or to engage programming in Extension, there is a danger that other clientele may see this programming as Extension's only role. In the Ewert model, these activities are consistent with the content transmission educational approach which emphasizes content over process (Franz & Townson, 2008).

Programs emphasizing content only can be delivered through use of online delivery, or other more efficient, less resource-intensive measures. This will meet the needs of the sponsoring organizations while allowing Cooperative Extension more flexibility for developing other programming.

The University through Extension as a singular source of expertise

As identified by the interviewees, the university clearly is a source of expertise in many areas. Some Extension educators suggested that this role was that of the specialist. This ties into the concept that shared expertise does not mean all people provide the same expertise, but that other sources of expertise be recognized and valued for the contributions they make as well in solving critical issues.

The role of the expert

The roles of the expert Extension educator included providing guidance, responding to questions, and supplying scientific, “research-based” information directly to the taxpayers. Often this information is presented in a timely manner to prevent negative consequences. Extension educators present use of this model as giving them opportunity to be proactive rather than reactive. Seasonal issues, safety issues, food safety and community issues were identified in this area. The challenge in using this model is the readily available access to other research-based information from other sources. Extension is no longer the primary source of information, even research-based information. Also, today, some people do not recognize the value of the research basis, so often they settle for information alone. In today’s connected and information rich society, Extension educators must ensure they are adding value when performing their work.

Program development processes

The consensus in both states was that Extension educators using the expert model often did gather input from clientele in needs assessment. However, as mentioned earlier, they contended that sometimes the clientele or community members did not really know what they needed. In these cases, they must interpret what is being said and use their expertise to deliver what is really needed. This seems to be a patronizing approach, except in cases, where Extension educators indicated their role was that of providing professional services, on demand. The long-term benefits of giving communities and clientele voice, as occurs with the engaged model, should be carefully evaluated since this does not appear to be provided using the expert approach. Extension must promote inclusivity of diverse perspectives at the local level in order to truly meet all community needs. Administrators need to be aware that this may be a shift in some communities to provide Extension educators with the necessary support, as needed.

Another Extension educator from State2 suggests relationship building with clientele was still important, even when providing programming using the expert model. He said:

But, it's hard to implement that [expert, top-down programming] completely without some relationships being built within your community. But, the good part is, if you have a relationship in other areas, it still lends itself to helping with that expert model. I think, truly an expert model still involves a certain amount of relationship building and engagement.

In the expert model of program delivery, Extension educators seemed to emphasize this relationship building occurring more in working with individuals in addressing their specific challenges. This contrast with the engaged model, where Extension educators said relationships were developed through the shared processes of program development and resolution of issues of interest to the community.

Extension educators using the expert model may use a pedagogical, teacher-centric approach to program delivery. This provides them with greater control and more prominence as the sole expert. Another Extension educator emphasized his program delivery when he responded to the definition. He said, “Again, I don’t think it’s [my definition] much different because I kind of hear more of a one-way kind of program delivery method.” However, active learning methods can also be included with a program that is based on the expert model of program delivery.

The proposed definition for the expert model

Based on the findings of this study, the proposed definition of an expert model in Cooperative Extension is as follows.

The expert model of program delivery in Cooperative Extension emphasizes a one-way flow of information, although interaction with clientele exists in the form of discussion, questions and feedback. The university through Extension serves as the expert. In this role Extension provides guidance and information, and responds to questions. Expertise provided by the university is research-based, and the providers of expertise are carefully vetted representatives of the university. The community may be involved in the identification of program needs. Program

planning, implementation and evaluation are internal activities of Extension.

Other terms used to refer to this model are outreach, a bucket-filler approach, and top-down programming.

The hybrid model

One response provided in the survey of the panel of experts was that Cooperative Extension uses both the engaged and expert models of program delivery. In fact, none of the Extension educators reported using a single model all the time during the interviews, even if they prefer a model (See Figure 5-2). This is consistent with the concept of model fluidity presented by one Extension educator in defining the engaged model. One of the Extension directors proposed that the engaged and expert models were points on a continuum on which Extension educators could move back and forth between the models based on the situation. This model was not discussed as thoroughly as the other models in the study because of its emergent nature. Further research around this concept is warranted.

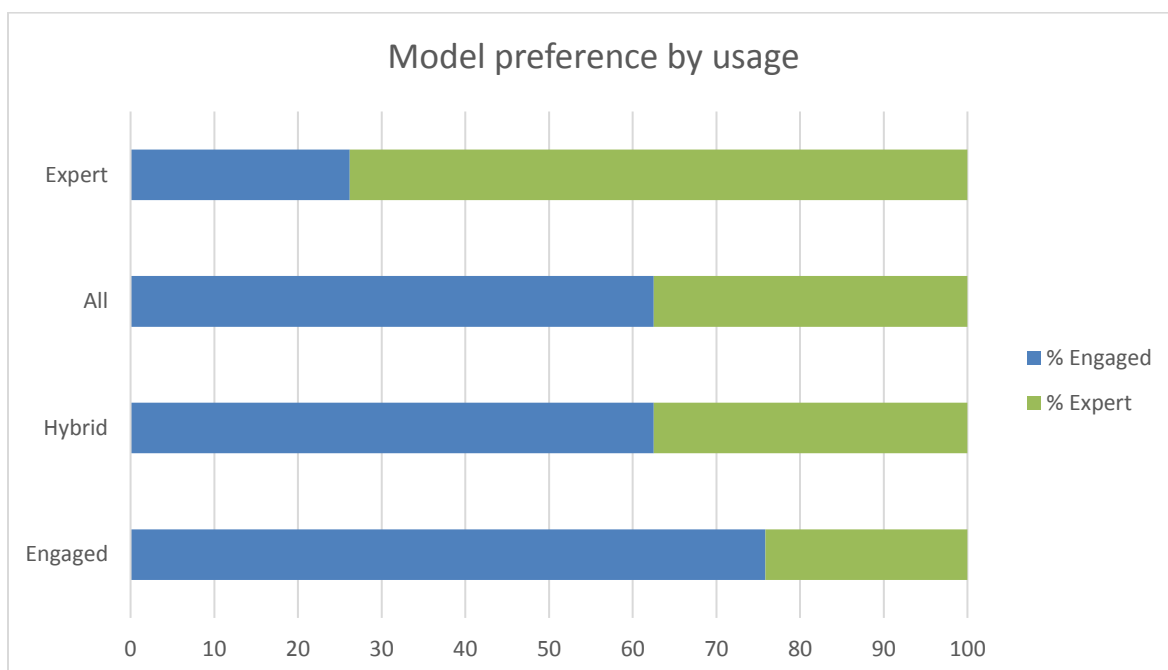


Figure 5-2. Average percentage use of engaged and expert models as estimated by Extension educators.

The proposed definition for the hybrid model

Based on the findings of the study, the proposed definition of a hybrid model of program delivery used in Cooperative Extension is as follows.

The hybrid model of program delivery in Cooperative Extension is used to involve clientele in the delivery of programming that meets local needs.

The model emphasizes shared expertise which comes from the university, stakeholder organizations, and individual stakeholders. Stakeholders are also considered to be partners. Partners are involved in multiple aspects of programming, and their role may vary based on location. There is emphasis on continual interaction between Extension and the community throughout the programming process. In this model, the university

provides state interest teams, data on trends and research while the local community is responsible for application. The community is defined by interest rather than geography. In this model, an expert approach may be used initially to increase community awareness in a subsequent, more engaged programming approach.

Implementation of program delivery models in Cooperative Extension

Through the study, Extension educators identified the reasons for using the specific models as well as how the models were implemented. Table 5-1 summarized the (1) reasons provided for use of the models, (2) sources of expertise identified by the Extension educators when discussing the specific models, (3) program delivery methods associated with the different models, and (4) partner roles.

The primary benefits of using the engaged model, not provided by the expert model of program delivery, are the development of solutions in complex situations, building and strengthening relationships and social networks, and developing and improving program support (See Table 5-3). This model permits Extension to address the complex issues that communities are facing. The relationships and social networks developed are both a product and process that allow resolution of these issues. Program support is a measure of accountability that indicates societal approval to continue in an engaged manner.

Table 5-3. Examples of use of the engaged model of program delivery to meet program objectives

Program objective	Examples of use in engaged model
To develop solutions in complex situations	Answer unsolved questions, complex situations, dynamic situations, emerging issues, don't have knowledge base, community-wide issues, industry-specific issues, on-farm research
To build and strengthen relationships and social networks	Working with closed communities (e.g., Amish), create comfort with and showing respect for clientele, develop long-term relationships, establish trust and confidence, increase partner involvement, to make the Extension office a destination, create long-term benefits
To develop and improve program support	Increase community involvement in the process, build "fans" of your program, gain community buy-in, increase participation, benefit from word of mouth marketing, increase program reach and diversity, increase program credibility, sustainability for program beyond the Extension educator, community respect, survival of Extension, support research, remain competitive, reach future generations, provide accountability

There are some areas in which Extension educators' reasons for use of the models can be categorized with similar program objectives. These are highlighted in Table 5-4. Extension educators believed specific types of topics were better suited to one model or the other. In both models, there was an objective to address specific needs of clientele or audiences. The Extension educators describing their use of the engaged model talked about how they interacted with clientele to develop customized learning experiences to meet those needs. Extension educators in the expert model were often responding to requests for specific programs that were already developed or in areas in which they already had knowledge. While one-on-one interaction was a component of the engaged model, many of the customized approaches revolved around groups with shared interest.

Table 5-4 Examples of use of the engaged and expert models of program delivery to meet overlapping program objectives

Program objective	Examples in use of engaged model	Examples in use of expert model
To address specific types of topics	Areas in which Extension educator does not have a knowledge base, subject matter that supports peer-to-peer or co-learning, more open to personal interpretation, programming not mandated, local foods and food security	Information delivery, mandated programs, present research, to provide information addressing common questions, to address statewide themes identified by the University, to work towards broad societal goals, to address emerging issues, to provide professional service, emerging issues – invasive pests
To meet specific clientele, audience or community needs	One-on-one interaction with clientele, after school programs, women returning to the workforce, video editing, on-farm research, Women in Agriculture, needs assessment, online environments	Requests for specific speaker/topics, responding to homeowner questions, to present safety issues, with young audiences (K-12), in areas of expertise, online environments, large audiences
To achieve specific outcomes/To provide education for specific purposes	Increase learning, better quality of learning, change behavior, application of knowledge in personal life and business decisions, achieve impact, long-term benefit to the learner, novel solutions, achieve economic impact, ongoing relationships, long-term success, acknowledgement of learning	Certification, credits, compliance, to increase awareness of new ideas and concepts, get people “to think outside of the box”, introduce a new product, to reduce emotion in controversial situation, “amaze and overwhelm” people with science, to introduce engaged programs, follow-up questions and visits

Program objective	Examples in use of engaged model	Examples in use of expert model
To meet needs based on Extension's role	4-H, when Extension is not in charge, to connect local groups to other sources of expertise both in and out of the university, to make things happen, to facilitate process, "to bring the knowledge of the university and the people together to solve problems"	Mandated programs, present research, to address statewide themes identified by the University,

Although Extension educators using both program models were using the models to provide specific outcomes, the outcomes they were seeking to achieve are vastly different. The reasons for use of the engaged model were improved learning outcomes, deeper learning and application of learning in addition to behavior change and long-term impact. The outcomes associated with the expert model were to provide answers to clientele questions, provide awareness and basic knowledge and to provide training leading to certification or licensing. Extension educators providing expert programs also indicated they hoped those programs might encourage people to contact them with additional questions or to participate in future programs. Some Extension educators also said they used the expert model when Extension was not in a leadership role, or when an outside agency contracted with Extension to provide training. The benefit of the programming in the expert model appeared to be more individually-focused, while the benefits in the engaged model extended to the community.

The only category identified solely as a reason for use of the expert model was because of the attributes of the Extension educator or position. These included

geographic separation from other Extension educators, area of expertise, to get things done, to save time, to improve time management, expert programming is easier to do, control how the program is presented, and to have greater comfort through less threat to exceed the area of expertise.

The reasons given for using the hybrid model were to use both the expert and engaged models, to combine expert and active learning experiences when working with audiences, because of the expertise of the Extension educator and the university, to increase the Extension educator's expertise, and to implement complex programs.

These findings suggest there are tremendous benefits for clientele and Extension programs that result from use of the engaged model. The goal in Cooperative Extension has always been to provide improvement in people's lives and communities that occurs when behavior is changed and impact is achieved. Awareness and knowledge may provide a starting point but are not enough. Those using the engaged models emphasized the fact that learning occurs at a much higher level and is generally applied resulting in behavior change or impact. Sustained behavior change at the community level then leads to impact. The hybrid model of program delivery should provide the benefits associated with both models. Further study of the hybrid model is warranted.

Extension educators using the engaged model also emphasized how this model provides accountability through improved program support. Contributing to this are the relationships and social networks that are built and strengthened using the engaged model. Extension educators talked about how solutions developed in the engaged model were more sustainable over time. In addition, they noted these solutions were not

dependent on the Extension educator's continued presence. There were many more partners identified in the engaged programs. Extension educators also indicated that one of the benefits of having programming partners was increased program buy-in and marketing assistance.

Ewert's educational approaches

Ewert defined Extension's educational approaches based on the emphasis of process and content (Franz & Townson, 2008). Other factors that may strengthen the approaches within the context of the engaged and expert model of program delivery are interaction and desired outcomes. These are indicated in Table 5-5.

Table 5-5. Connecting findings to Educational Approaches for Extension program delivery as defined by Ewert in Franz and Townson (2008)

Model Represented	Educational Approaches	Program examples from semi-structured interviews	Desired outcomes
Expert	Service –1-way communication, pro bono or fee-based, committees, content and process are both low	“Ask the Expert” website, 4-H curriculum, Contracted training	Short term
	Content transmission – 1 way communication, deliver information, face-to-face or online audiences, content is high and process is low	Subject matter focused presentations, consumer/producer questions, crop production clinics	Short term
Engaged	Facilitation – process oriented, requires 2-way interaction, content is low and process is high	Business retention and expansion, community sustainability, fruit school planning	Long term, impact
	Transformative education – requires 2-way interaction, shared learning, intended to change perspectives, content and process are high	Beef ranch practicum, Women in agriculture, on-farm research	Long term, impact

Using the expert model of program delivery, both service and content transmission characterize a one-way communication between the Extension professional and clientele. In many cases, when Extension educators described a method of transmission associated with the expert model, they shared that they did encourage participant questions or follow-up visits. However, this interaction still seems to very much emphasize a situation in which there is not a lot of discussion. Examples were provided where both the engaged and expert models worked well with delivery via

technology. Greater mechanization of content transmission methods is another opportunity to aid Cooperative Extension and universities in providing educational content in a manner that is efficient for both Extension and clients. Desired outcomes for use of these approaches based on the interviews were short term, related to knowledge gain and awareness. Extension educators specified that they were uncertain whether knowledge was ever applied, resulting in behavior change or impact.

From the engaged program delivery perspective, both facilitation and transformative education require two-way interaction among and between participants and with the Extension professional. In both, the knowledge that is being presented comes from all the participants and is based on their personal perspectives and experiences. This provides space for the sharing of research perspectives, which many Extension educators felt could best be shared in an expert model. Research becomes another piece of information that can be used as those involved work together to increase their collective understanding of the subject. One Extension educator emphasized that sometimes a group may also identify expertise that is not provided by the members and will request that expertise to achieve their intended outcome. The engaged model emphasizes interaction and the development of relationships over time. This contributes to the development of sustainable solutions and the development of community. Relationships are key to community viability. Extension educators indicated that they used the engaged model to achieve behavior change and impact.

Again, a hybrid model which combines the educational approaches of both the engaged and expert model of program delivery would most likely achieve a combination

of the outcomes associated with both models. Further study, emphasizing program interactions and outcomes associated with the hybrid model is encouraged.

Theoretical approaches

As identified previously, the primary areas in which differences exist between the diffusion of innovations and collective impact theories are the desired outcomes, source of need or problem identification, the public starting point, the role of the funder and the role of the participants (See Table 5-6). The way Extension provides community support also differs depending on the model and type of desired outcome. The conditions and stages of development describe the way work progresses. Using the theory of collective impact will provide the Extension organization with a road map that can be used to guide a move to a more engaged model.

Table 5-6. Connections between diffusion of innovations and collective impact

	Diffusion of Innovations (Rogers, 1995)	Collective Impact (Kania & Kramer, 2011)
Desired outcome	Innovation – defined as “an idea, practice or object perceived as new by an individual or other unit of adoption.” (p. 35)	A solution or solutions to complex, social issues
Source of need identification	Political process or scientist perception of a future or current problem	The community
Public starting point	Innovation or solution	Problem
Conditions	1) an innovation 2) communication over channels 3) takes place over time 4) involves “members of a social system”	1) common agenda or problem 2) shared measurement systems 3) mutually reinforcing activities 4) continuous communication 5) backbone support organization
Funder	Sponsor	Partner

	Diffusion of Innovations (Rogers, 1995)	Collective Impact (Kania & Kramer, 2011)
Support	Change educators (extension educator), opinion leaders (advisory groups) and aides (program assistants)	Backbone organization
Situation of best use	Technical problems – ideas, practices or objects	Social rather than technical problems – technical problems solved by isolated impact
Stages of development	Innovators encourage early adopters who encourage the early majority. Total buy-in is not expected.	From partnerships to relationship building to encourage progress to shared objective
Role(s) of participants	Multiple based on tendency to adopt innovation – innovators, early adopters, early majority, late majority and laggards	Co-creators

There was great consistency across the board by Extension educators related to the use of the expert model to deliver mandated programs. One Extension youth educator specified that he didn't use the expert model, but that if he did it would be to deliver programming where people were required to participate for certification or credit. The mandated programs represent an example of an adaptation of Rogers' diffusion of innovation where adoption is required rather than being left up to the characteristics of the individuals. Most Extension educators indicated the participants were not extremely enthusiastic about those programs, and they generally were just presenting the canned program as they had been trained.

Several programs that were mentioned seem to fit well within the collective impact framework. The example provided by the Extension educator of the project that never really ends exemplifies the need for a different approach to evaluation with this

model. In her interview, she emphasized the value of relationships in programming, which are also important in collective impact. She talked about the serious consequences for future work when relationships are not supported. One Extension educator shared another relevant example of developing child-care training to promote access to childcare for young residents to prevent brain drain in a rural community. Another example was that of the beef practicum. In this situation, the community would be based on shared interest in improved beef production. The example emphasized the shared learning that occurred within the community as people moved to apply their knowledge in their operation. On-farm research came up in both states and serves as an example for integration of research and education in an engaged manner.

A pertinent distinction related to the theoretical approaches is based on the role of Extension. If Extension is content to provide educational programs that provide solutions at the individual level that may aggregate to create impact, then Rogers' (1995) diffusion of innovations will suffice. These programs can be delivered using an expert model. The challenge is identifying the appropriate audiences where this is needed and making sure the appropriate expertise is available within the organization. The most likely funding sources are industries that benefit from use of these innovations.

If Extension seeks instead to provide solutions that improve communities, then they will want to use an engaged model based on obtaining collective impact (Kania & Kramer, 2011). Extension's work in this model becomes more complex in working as a partner to guide the process and make connections between partners that provide different sources of expertise and play different roles. This does not necessarily mean that

Extension is the sole leader of the process. However, it can still provide leadership as a backbone organization. The benefits of this approach will extend beyond the individuals and funders involved to the benefit of the community. The funders' role changes as they become partners in the process. The number of potential benefactors of the program is much more diverse and distributed.

Barriers and drivers associated with use of the engaged model of program delivery

Research question three sought to identify barriers and drivers associated with Extension's move toward an engaged model of program delivery. The underlying research theory was that barriers and drivers do exist in the organization. A summary of barriers and drivers associated with the use of the engaged model of program delivery in Cooperative Extension was provided in Table 5-2.

Barriers associated with use of the engaged model

The primary barrier to use of the engaged model identified by the Extension educators was time. This challenge was related to the conflict the Extension educators felt in devoting time to an engaged model, while they felt their work was evaluated based on the number of contacts they made and programs they conducted. The need to consider a new approach to evaluation with the engaged model has already been suggested and may help alleviate this constraint. Both program evaluation and personnel performance evaluation should be considered as this is addressed.

One of the Extension directors shared that one of the challenges in his organization was that district directors had too many people to supervise. It would be ideal if changes to evaluation processes also simplified the role of the district director while increasing the emphasis on use of the engaged model. Perhaps the district director could become another resource, working collectively with the Extension educator to help them in their work with communities to address the most crucial challenges. Because of their role, they could help strengthen connections to resources at the university level and within the districts. The unit of evaluation may need to shift away from reports themselves and more to direct observation.

Perhaps evaluation should focus on progress related to process rather than contacts and programs. What are Extension educators doing to ensure that all community voices are being heard? What steps are they taking that provide support for the community to arrive at relevant solutions? Rather than emphasizing the number of contacts the Extension educator has made, the focus might instead be on the number of people affected by long-term program impact. From a program perspective, what are the goals and sub-goals established by the community? How is and can Extension contribute to the accomplishment of these? Is there research that needs to be conducted? How can the community be involved in that research? How can students at the university learn from what is happening at the local community through both their curricular and co-curricular activities? Changing how programs and performance are evaluated should make the time spent on engaged programming more an expectation and not a deterrent. If Extension educators feel that they are being measured more on long-term outcomes,

short-term perfection achieved through greater control of the immediate delivery may be less important.

One Extension educator expressed need for a clearer, more practical definition of an engaged program. Another Extension educator expressed need for continuing education so that Extension educators could be more comfortable with tools, communication strategies and program development in an engaged model. Based on the Extension educators' comments, professional development needs to demonstrate an engaged model of delivery for them as well. This is an opportunity for the organization to demonstrate that achievement of improved outcomes is worth the additional time, coordination, and relationship building that are required using the engaged model. This should help to promote increased use of the engaged model.

Many Extension educators indicated that mandated programs delivered to large audiences required use of the expert model. However, another Extension educator shared how she was reaching two thousand people each year through a mandated online program. She indicated that her clients were achieving great benefit because of good interaction with her. This and other programs like it, using technology to provide interactive programming in different ways, should be considered to replace programs currently using the expert model for other mandated programs. These programs could be centrally developed and in some cases, be shared nationally so that the resources used to develop them result in the greatest benefit to all of Extension. This would free up Extension educators to expend more time and effort in engaged program delivery.

Drivers associated with use of the engaged model

The drivers encouraging use of the engaged model suggest opportunities for success as we move programs toward a more engaged model. Recognition that programs are stronger and that the outcomes they provide are much greater should be reason enough to emphasize use of this model. In addition, the outcomes presented provided benefit not only for individuals but also provided impact for communities.

Extension educators mentioned the organizational support they felt in using a more engaged approach. This support will hopefully expand in time. In State1, there were two specific ways in which they mentioned that organizational support was being provided. The first was through the demonstration of the statewide needs assessment and prioritization of needs. I got the sense that community engagement ended at this point as the state issues teams took over with planning, implementation and evaluation, which appears more consistent with use of the expert model. From the comments, it is evident that there has been a lot of emphasis on active learning methods, educational activities, and learning experiences. These are great steps toward providing an example of engagement between the university and communities. It would be wonderful to see the communities continue involvement in determining how the issues should be addressed at the local level.

The program development process that was discussed with the educators was very linear with specific activities planned to achieve the desired outcome based on a logic model, which has been the starting point for Extension programs now for many decades. However, if we think about encouraging shared expertise and shared learning, collective

impact appears to be a better approach and would allow residents of communities the opportunity to help in identifying the problems and determining the steps along the way to achieve a solution. Educational activities or learning experiences will likely be a part of the process, but the need for these will be determined as the group moves forward towards achieving the outcome. One of the Extension educators observed that the work of these teams may never be done. As one outcome is achieved, there will likely be others identified that contribute to the overarching challenge as well. The educators cited numerous reasons that involvement of community is important in providing program support. Another reason that comes from the literature that was not identified is the strengthening of the community as members become involved in the process of community involvement. This is something that would be extremely beneficial in our society today.

The other source of organizational support for the engaged model cited in State 1 was changing job descriptions to include 20% time in community activities. The description of service as an educational approach by Franz and Townson (2008) included membership on community organizations and boards in the expert model. I believe these connections are important and can lead to engaged programming, if the participation goes beyond membership to considering how these organizations encourage communities to embark in the process of working towards collective impact.

From both states, it is apparent that what leadership communicates as important does make a difference in providing an organizational move towards greater engagement. Extension educators are using engaged practices and are excited to have this support.

States should pay attention to the messages that are conveyed as they provide professional development and define how the local Extension teams interact with their communities around program planning and resolution of complex issues. Methods of program and performance evaluation need to be carefully evaluated and revised to accommodate using an engaged model of program delivery.

In addition to the organizational support, Extension educators also feel support from their communities as they move to greater engagement. Extension educators using the expert model have not expressed the same level of community support for Extension as was expressed by Extension educators using the engaged model. In the expert model, when Extension educators spoke about support, it was more personal support for them and their credibility. In the engaged model, Extension educators spoke of support that went beyond themselves providing support for the Extension organization at the community level. Many of the engaged members talked about how local community government is part of their engaged process. This is important since a high percentage of the operating funds provided for Extension come from local government. Based on these observations, it agreed with those who indicated using an engaged model bodes well for the future of Cooperative Extension.

The Flint water crisis example of university engagement including degree-seeking students

Virginia Tech's approach to the Flint Water crisis serves as a good example of how engagement in higher education can be carried out with local communities to resolve

complex issues. This case describes benefits to all missions of the university – research, service and academic instruction at the undergraduate and graduate level (Adams & Tuel, 2016). Following the collective impact approach, there is no doubt that the issue in this case fits the definition of a complex, social issue on many levels.

This issue was identified at the community level. This case does not include the local connection as was described by our Extension educators in State1 and State2. Instead, the connection between the community and the university came about as the citizens worked to resolve the issue to no avail through prescribed local channels. Through the process, an expert, Marc Edwards at Virginia Tech, was identified as someone that could help resolve the issue. In this case, expertise was needed around the federally accepted measures of water quality. However, he did not just answer the question of whether there was a water quality issue. He involved the community, his colleagues and his students in the process of answering the question through direct interaction and sample collection.

The ongoing sample collection and education served as a mutually reinforcing activity. Participants were in direct, on-going participation. The university, as a backbone support, provided expertise around water quality, access to specialized equipment to measure water quality and the students to assist the community in carrying out sample collection and analysis. Because of the interaction, relationships were built and the participants achieved mutual benefit. The students and residents both expressed the intangible benefits they received through participation in the project. The project has also been used as a case study providing instruction to other graduate students in an

Engineering Ethics and the Public course, offered annually. An NSF grant and over \$100,000 in team support raised by the team's student leader are sources of funding mentioned in the article.

While Extension does not appear to have been involved in this example, could they have been? Could the issue have been identified and resolved more quickly if the community had established relationships and connections with the university on which to draw. The interviews of State1 and State2 provided a model in which Extension can work with communities to identify research that is needed to resolve local issues. However, the connection was not made between Extension and academic instruction of undergraduate and graduate students. The story of Flint, Michigan demonstrates how this can be achieved.

Conclusions

This section provides conclusions and recommendations based on this study. Implications are provided related to increasing engagement in Extension, higher education and to provide more “authentic agency” and sharing of power throughout the US. Finally, areas for further study are identified.

Implications

This study provides recommendations for an operationalized definition of the engaged, expert, and hybrid models of program delivery for Cooperative Extension. The

definition for the engaged model is consistent with the definition of engagement provided by the Carnegie Classification for Community Engagement. Both expert and engaged models of program delivery are used in Cooperative Extension and there is some agreement on what they entail. These may more appropriately be combined to form the hybrid model of program delivery. This model may provide greater representation of what is used and what is desirable because of the way in which it accommodates shared expertise.

Examples of the use of the engaged and expert models of program delivery are consistent with the educational approaches for Extension program delivery identified by Merrill Ewert (Franz & Townson, 2008). The classification of these approaches as engaged or expert as presented in this project, also appear consistent with practice. Degree of interaction and desired outcomes may contribute to defining these approaches, in addition to process and content. Being able to identify the educational approaches within the Extension organization will be useful in making strategic decisions about resource allocation and delivery methods.

The theory of collective impact (Kania & Kramer, 2011) is consistent with the engaged work being carried out by Extension educators at the local level. Communities appear to be heavily involved in needs assessment with Cooperative Extension. There is opportunity for Extension to move beyond the traditional programming model, to the more fluid model of problem solving depicted by this theory. This will require modeling this program delivery method while providing professional development training for Extension professionals. Organizations need to determine how this changes program and

performance evaluation practices. In addition, how are ongoing communication and evaluation supported in this model?

Finally, the engaged model of program delivery used by Cooperative Extension provides strong relationships on which universities can build as they seek greater engagement. This is especially true when considering the research and outreach missions of Land-Grant Universities. Greater attention needs to be paid to how students are incorporated into the engaged work of Cooperative Extension.

Recommendations

Resources should be allocated to provide for development of expert-model of programs delivery where they are necessary to provide a high-quality product that encourages interaction of the participant with the content through their local Extension program. From the engaged perspective, there is need to invest in on-going professional development activities and reward systems that encourage greater understanding of how Extension works to facilitate challenging discussions and support the transformational education processes that the engaged approaches make possible. Based on the findings of this project, it is recommended that Extension work at the local community level to focus on engaged approaches for the longevity of the Extension organization, and for Extension to provide entrance to the community for our other partners at the university level. A hybrid model may be the best way to describe the interdependency that exists between the engaged and expert models to achieve the greatest benefits of both models.

There are barriers and drivers associated with use of the engaged model. Many of the barriers can be overcome by building on already existing organizational and community support. Extension educators need to be given assurance that the time investment in an engaged model is recognized and appreciated. Changes in evaluation processes need to be made throughout the university to reflect emphasis on community engagement. Evaluation measures of Extension faculty at the community level will probably need to look different than for faculty at the university level. The emphasis for faculty evaluation at the university level may be more related to content, while at the community level in an engaged model, evaluation may relate more to process. University organizations need to accept this and support measures that are most appropriate to the work that is expected based on the faculty role.

The research assumption that program area assignment serves as either a barrier or driver to an engaged model of program delivery is supported by some administrators within the Extension organization. However, this did not appear to be the case based on the interviews in this project. Use of an engaged and expert model of Extension program delivery appears to be more a product of the individual, their experiences and preferences coupled with the situation. This suggests that Extension and the university need to work to identify individuals that have a propensity for engagement as hiring decisions are being made. Another point to consider is how different leadership styles might encourage or discourage engagement. This may have implications related to hiring in roles throughout Extension and higher education.

There is great opportunity to build upon the engaged model of program delivery used by Extension as institutions of higher education strive to increase their engagement. Extension has the strong community connections and many skilled practitioners in communities that can be used to provide linkages to the university. Within Extension, there is need to provide greater direction in the aspects of program delivery that go beyond needs assessment. Modeling engagement through professional development programs will provide Extension educators with examples they can use in their communities. This will be a major shift for faculty at the university, requiring administrative support and encouragement. There is also need to consider how degree-seeking students at the university can be more fully incorporated in this model at the local level.

Extension educators spoke a lot in their interviews about relationships. One relationship that needs to be built and strengthened is that between Extension educators and university faculty, beyond the colleges in which Extension is located. This will allow Extension educators greater awareness of resources that they may draw on in making connections with the university to address community challenges. Ideas for achieving this might include joint seminar series, community and research center tours and professional development programs. Extension educators need to be aware of the resources represented by the faculty located in the university and vice versa. This will provide opportunity to contribute all the benefits of the university connection when working with communities in situations of shared expertise and learning. Providing opportunities for regular interaction, supplemented with interaction that provides learning about roles and

expertise the community and campus personnel provide should contribute to the building of this internal “community,” like the ways that engagement encourages development of community at the local level. This increases the ability of higher education to meet the needs of communities and society.

Extension educators provided examples, including the on-farm research project, which demonstrate how research can be developed that meets local needs. These projects allow clients at the local level to take ownership of the research findings and assist others in using them to make improvement. This project also provides examples of the connection that can be provided between Extension and research. A connection that was not mentioned by the Extension educators was between students at the university level and the community Extension programs. Cooperative Extension has traditionally hosted student internships. These may need to be revised to encourage greater understanding of engaged program delivery. The example of the Flint water project may provide insight into how this can be accomplished. Today’s students seek involvement in community-focused, engaged activities because of their desire to make a difference (Adams & Tuel, 2016; Fear & Sandmann, 2016).

While this study focused on engagement related to Extension and higher education, there may also be implications for other organizations. Government is one area which specifically comes to mind. There is a large disconnect between citizens and the democratic government that is intended to provide what is best for its citizens. This relates back to the community scenarios identified by Brennan and Israel (2008). The authors identified choice – positive consequence which provides authentic agency as the

ideal situation. The situation in the U.S. today appears to be a choice – negative consequence scenario, or incomplete agency. In this situation, there is a perception that all is well. However, the primary benefits of the community are generally directed to elites. There appears to be social interaction between diverse groups, but it does not result in agreement. Brennan and Israel state that in this situation, “Collective action [among citizens] can threaten local power holders and result in obstacles, conflict, and retribution. (p. 94)” To overcome this, they recommend emphasis on local capacity building to identify and provide access to “additional local or extralocal resources” to “reconcile differences of opinion among diverse local residents, which in turn would lead to the identification of more clearly defined general community needs that all groups could work toward (p. 95).” They warn that “Without broad-based local capacity building, future development efforts may remain unsuccessful, as well as opening the door for manipulation by elites and potentially the emergence of quiescence among those with little power. (p. 95)” “Broad-based local capacity building” is a product of community engagement. Government needs to be more of a partner in learning alongside communities, Extension, and higher education in an engaged environment. This goes beyond financial support, kissing babies, or election appearances to taking time to be a part of the communities, building relationships, and sharing in the identification of the problems and development of the solutions. This will contribute to building of community with authentic agency, providing a stronger democracy.

Areas for further study

Further study is recommended to explore the perspectives of Extension stakeholders, specialists and administrators related to the shift to an engaged model of program delivery. What are the benefits and challenges they identify related to a move to an engaged model? How will their roles differ in an engaged model? What supports do they need to encourage them as Extension shifts to the engaged model? What services do clients need to receive that are currently offered only in an expert model and are there different ways they would like to receive them? In addition, how do leadership approaches and organizational structure change as Extension and higher education move to greater community engagement?

The findings support use of both models in Cooperative Extension and in higher education, but suggest program planning and implementation needs to be most closely aligned with the engaged model of program delivery. Stronger relationships among professionals throughout higher education organizations, including those at local and campus locations will allow higher education to build on the strong community connections maintained by Cooperative Extension. This will not only provide communities with increased access to resources that will help resolve the major challenges they are facing today but will also provide increased capacity in shaping their future. Engagement of higher education can successfully intertwine the three missions of the university: Extension, research and academic instruction.

There may be room for revision in the definition of the engaged model as Cooperative Extension works with communities more towards achieving collective

impact that encompasses rather than focuses solely on educational programs. As previously mentioned, there is also need for further study to define a hybrid model and consider how it works in communities. This blending of the models seems to provide opportunity to combine expertise from multiple sources within the local context to provide more appropriate, sustainable solutions. How do the structures of communities, Extension, and higher education best support use of this model? What types of personalities and leaders does Extension need to support this blended or hybrid model of program delivery?

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Appendix A - Panel of Experts Survey Questions

Extension Delivery Models: Expert and Engaged Models

Q1 Thank you for agreeing to serve as a member of the panel of experts for my Ph.D. dissertation research project. The purpose of this research is to increase understanding of how engaged and expert models of Cooperative Extension program delivery are implemented and why they are used. Your response to this survey will assist me in 1) developing an operational definition for engaged and expert models in Cooperative Extension and in 2) identifying the states and program areas that are most and least successful in adopting engaged models of program delivery. The states and program areas will be used to identify key informants to participate in semi-structured interviews within a single state in an embedded case study to aid in answering the research questions related to how, when and why engaged models are implemented, and barriers and drivers associated with Extension's move towards a more engaged model. Please let me know if you have questions or would like more information about this study (kvines@vt.edu, 540-231-XXXX).

Q2 I am defining an engaged model of Extension delivery as a model in which community involvement exists in all aspects of program development, sharing in the identification of issues to be addressed, developing a process for implementation and development of knowledge and evaluation. Expertise and learning processes are shared through a two-way exchange of information. I define the expert model as emphasizing a one-way flow of information. The University through Extension serves as the expert and provides guidance and responds to questions. Programs needs are identified and program planning, implementation and evaluation are internal activities, managed primarily by the University.

Q3 Are you comfortable with the general definitions of engaged and expert models as I have presented them?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Maybe (3)

Answer If Are you comfortable with the general definitions of engaged and expert models as I have presented them? No Is Selected

Q4 You indicated that you do not agree with these definitions for the engaged and expert model of program delivery in Cooperative Extension. Please indicate in the text box below how you define these. (My definitions are included for reference.) Engaged model - a model in which community involvement exists in all aspects of program development, sharing in the identification of issues to be addressed, developing a process for implementation and development of knowledge and evaluation. Expertise and learning processes are shared through a two-way exchange of information. Expert model -

primarily a one-way flow of information. The University through Extension serves as the expert and provides guidance and responds to questions. Programs needs are identified and program planning, implementation and evaluation are internal activities, managed primarily by the University.

Answer If Are you comfortable with the general definitions of engaged and expert models as I have presented them? Maybe Is Selected

Q5 What changes would you recommend to these definitions for engaged and expert models in terms of Extension program delivery? (My definitions are included for reference.) Engaged model - a model in which community involvement exists in all aspects of program development, sharing in the identification of issues to be addressed, developing a process for implementation and development of knowledge and evaluation. Expertise and learning processes are shared through a two-way exchange of information. Expert model - primarily a one-way flow of information. The University through Extension serves as the expert and provides guidance and responds to questions. Programs needs are identified and program planning, implementation and evaluation are internal activities, managed primarily by the University.

Q36 As we talk about engaged program delivery, what particular state Extension organization(s) come to mind?

Q37 As we talk about expert program delivery, what particular state Extension organization(s) come to mind?

Q39 Please select the traditional program areas that use the engaged and expert models of program delivery most frequently.

	4-H/Youth Development (1)	Agriculture (2)	Community Development (3)	Family & Consumer Sciences (4)	Natural Resources (5)
Most frequently uses an engaged model (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most frequently uses an expert model (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q29 Now for a little about you - how many years have you been employed by Extension?

Q30 How many years have you served in an administrative role in Extension?

Q31 What is your current role in Extension?

- ☐ Associate Dean (1)
- ☐ Associate Extension Director (2)
- ☐ Associate Vice President (3)
- ☐ College Dean (4)
- ☐ Extension Dean (5)
- ☐ Extension Director (6)
- ☐ Vice President (7)
- ☐ Vice Provost (8)
- ☐ Other (9)

Answer If What is your current role in Extension? Other Is Selected

Q19 Please define your other current role(s) not listed previously.

Q35 Please indicate all of your previous roles prior to your current role?

- ☐ Academic Department Head (1)
- ☐ Associate Dean (2)
- ☐ Associate Extension Director (3)
- ☐ Associate Vice President (4)
- ☐ Extension Agent (5)
- ☐ Extension Dean (6)
- ☐ Extension Director (7)
- ☐ Extension District or Regional Director (8)
- ☐ Extension Specialist (9)
- ☐ Research Faculty (10)
- ☐ Teaching Faculty (11)
- ☐ Vice President (12)
- ☐ Vice Provost (13)
- ☐ Other (14)

Answer If Please indicate all of your previous roles prior to your current role? Other Is Selected

Q20 Please define your other previous role(s) not included in the previous list.

Q33 Do I have your permission to do the following:

	Yes (1)	No (2)
Identify you as a member of the expert panel without sharing your responses in my dissertation. (1)	<input type="radio"/>	<input type="radio"/>
Identify you as a member of the expert panel without sharing your responses in publications. (2)	<input type="radio"/>	<input type="radio"/>
Contact you if I have additional questions. (3)	<input type="radio"/>	<input type="radio"/>

Q34 Please provide your name and contact information below. Thank you!

Q32 Is there additional information you would like to share with me about this project?

Standard thank you message in Qualtrics™ acknowledging submission.

Appendix B – Semi-structured Interview Protocol - Extension Program Delivery Models: Expert and Engaged

Semi-structured Interview Protocol (*IRB #STUDY00005225*) **PROTOCOL**

The interviewer will follow a standard protocol for each interview that includes:

- Welcome and opening remarks
- Implied consent review
- General Guidelines
- Questions and answers
- Wrap-Up

WELCOME AND OPENING REMARKS

Hello, I am Karen Vines. I am a doctoral student in the Agricultural and Extension Education program at Penn State. Thank you for agreeing to participate in this interview related to the current status of your Cooperative Extension organization. I look forward to hearing how you define your organization relative to expert vs. engaged models and the implications you see for each of these. This project is using implied consent based on your collaboration in helping to schedule this interview. You may choose not to participate at any time in this process by indicating this to me. Failure to participate in this project will not have any impact on any opportunities for future work we may do together. Do you have any questions related to your consent to participate in this research at this time?

This interview will be recorded with a digital audio recording device to ensure I capture all of your thoughts and suggestions. I will not link your identity to any of your comments. Recordings will be transcribed for analysis. In the event that you inadvertently reveal your identity or the identity of your organization, this information will be redacted in the transcripts. Your identity and the identity of your state and program area will be carefully protected in findings, presentations and publications that result from this study.

I am going to define “engaged model” of program delivery and “expert model” of program delivery in Cooperative Extension. The engaged model is characterized by community involvement in all aspects of program development, sharing in the identification of issues to be addressed, developing a process for implementation and development of knowledge and evaluation. Expertise and learning processes are shared. The expert model emphasizes a one-way flow of information. The University through Extension serves as the expert and provides guidance and responds to questions. Programs needs are identified and program planning, implementation and evaluation are internal activities.

I will go through the set of questions which I provided you at least one week ago. I will be recording our interview, using the pseudonym you identified. I may ask for additional information or clarity to be sure I fully understand your responses. Please answer as fully as possible. Please let me know if there are questions you would prefer not to answer.

IMPLIED CONSENT REVIEW

You received a copy of the consent form outlining the implied consent process being used for this part of this study with the invitation email. Do you have any questions about this?

Warm Up Questions

1. How long have you been in your present position?
2. Can you briefly outline changes in your career over time?
3. What do you consider to be the greatest influences in your career?

Structured Interview Questions

1. There has been a lot of talk about the need for Extension to move from an expert to an engaged model of program delivery.
 - a. How do you define an engaged model for Extension program delivery if different from my definition?
 - b. How do you define an expert model for Extension program delivery if different from my definition?
 - c. Which model do you use the most in your programming?
 - i. How often do you use this model?
 - ii. In what circumstances do you use this model?
 - iii. How do you use this model?
 - iv. Why do you use this model more frequently?
 - v. In what circumstances might you use the other model?
 - vi. How would you use it?
 - d. What prevents you from using an engaged model for your program delivery, from both a local and organizational perspective?
 - e. What encourages you to use an engaged model for your program delivery, from both a local and organizational perspective?

Wrap-Up

This concludes my questions. I want to sincerely thank you for your time and input. Do you have any questions or further statements you would like to make at this time?

I will be providing a transcript of your responses from this interview within the next week by email. Please review it and let me know if any revisions are necessary.

Thank you again for your assistance on this.

Appendix C - Email recruitment for semi-structured interviews

E-mail to be sent to potential participants in semi-structured interviews

Dear <name>,

You were recommended by your District Director to participate in research I am conducting for my PhD dissertation entitled Extension Program Delivery Models: Expert and Engaged. This research is being conducted to define engagement within Cooperative Extension in specific program areas within the context of a state Extension organization and to better understand how engagement is implemented by these individuals. This will improve the understanding of Extension and provide insight into possible future direction. I appreciate your participation in helping us gather this information from your perspective.

The interview will last approximately 90 minutes. I would prefer to conduct them in-person, but we can also visit by phone if necessary. The following dates are available. Please let me know your preferred date, time and location that work for you. The location should be a place where you can comfortably and confidentially respond to my questions.
July 18, 19, 20, 26, 27, 28, 29

August 1, 2, 3, 4, 5, 8, 11, 12

If you are willing to participate but not available during any of these dates, please let me know and I will see if we can find another date that works for both of us. Please respond and let me know if you are willing to participate by <date2>. Attached is a consent form for your review.

Please let me know if you have questions or would like additional information about this research project.

Thank you!

Sincerely,

Karen A. Vines
Continuing Professional Education Specialist (Virginia Tech) and Ph.D. Candidate (Penn State University)
Department of Agricultural, Leadership & Community Education
288 Litton-Reaves Hall
175 West Campus Drive
Blacksburg, VA 24061
kvines@vt.edu
540-231-xxxx

Appendix D – HRP-590 – ORP Consent Guidance for Exempt Research

HRP- 590 - ORP Consent Guidance for Exempt Research (v.02/22/2016)

Consent for Exempt Research The Pennsylvania State University

Title of Project: Extension Program Delivery Models: Expert and Engaged

Principal Investigator: Karen Vines, Ph.D. Student in Agricultural and Extension Education Program

Telephone Number: 540-231-xxxx

Advisor: Dr. Connie Baggett

Advisor Telephone Number: [814-863-xxxx](tel:814-863-xxxx)

You are being asked to voluntarily participate in this research study. This summary explains information about this research.

- This research is being conducted to define engagement within Cooperative Extension in specific program areas within the context of a state Extension organization and to better understand how engagement is implemented by these individuals.
- A semi-structured interview will be used to determine how agents in these program areas define engagement, when they employ and engaged model and to identify barriers and drivers towards a more engaged mode for Cooperative Extension. If you agree to participate in the interview, you will participate in an audio-recorded, semi-structured interview intended to last approximately 90 minutes. You will receive the questions at least one week prior to the interview. At the time of the interview, you will be asked to select a pseudonym that can be used to identify your interview contributions. This will be connected to your interview number. Separate files on the researcher's password-protected computer will connect the pseudonym to the interview number and the interview number to your identity. Following the interview, the researcher will provide a transcript of the interview for your review and ask you to make any necessary revisions. Revisions are to be made within one week of your receipt of

the transcript. Changes indicated in this manner will be made. If no revisions are received at the end of the week, the researcher will take this as indication that no revisions are necessary.

- The information concerning your participation and the participation of the state Extension organization in the study will be kept entirely confidential with data and identity protected as identified above. If you disclose information that identifies you or your institution during the interview, it will be redacted in the transcript. At no time will the researchers release the data from the study in a way that identifies you as a part of this study to anyone other than individuals working on the project without your written consent. Your participation and responses will not affect your participation in any future research or other activity. Your interview will be audio recorded to facilitate accurately record your statements. The audio files will be kept on the researcher's password-protected computer until the transcripts are accepted as identified above. At that time, they will be deleted. Only the researchers will have access to the files containing the transcriptions.

If you have questions or concerns, you should contact Karen Vines at 540-231-xxxx. If you have questions regarding your rights as a research subject or concerns regarding your privacy, you may contact the Office for Research Protections at 814-865-xxxx.

Your participation is voluntary and you may decide to stop at any time. You do not have to answer any questions that you do not want to answer.

Tell the researcher your decision regarding whether or not to participate in the research.

Appendix E – Codes used for data analysis

This document contains the super codes identified through research and for use with the interview questions along with the axial codes. The axial codes were identified by reading through the pilot interviews and the first 14 interviews from State1 and identifying emerging themes prior to the beginning of coding for analysis. Only codes associated with the research questions are identified here.

Summary of codes used for data analysis.

Research Question	Super codes & meaning	Axial codes	Emerging codes
RQ1 - How is an engaged model of program delivery defined within Cooperative Extension?	DefEng - Relates to the definition of the engaged model of program delivery.	General Model fluidity No change Bigger than learner engagement Local connection Shared expertise	Andragogy Co-learning Evaluation Learner engagement Multiple touches/interactions Needs assessment Stakeholder involvement
	DefExp - Relates to the definition of the expert model of program delivery.	General Proactive No change Hierarchical program development	Hierarchical program development Needs assessment University centric
	Def Hyb - Relates to an emerging hybrid model of program delivery.	General	Extension role Needs assessment Partners Shared decision making
RQ2 - How is engagement implemented and more specifically when and why is an engagement model used as opposed to an expert model?	WhenEng - When is the engagement model used for program delivery?	General Complexity	
	WhenExp - When is the expert model used for program delivery?	General	
	WhenHyb - When is	General	

Research Question	Super codes & meaning	Axial codes	Emerging codes
	the hybrid model used for program delivery?		
	WhyEng - Why is the engagement model used for program delivery?	General Co-learning Credibility Improved learning outcomes	Audience specific Community vision Complex issues Connect to greater University Customized education Develop social networks, community, relationships Future of Extension Mandated program Marketing Personal gratification Position dependent Prior knowledge Program area specific Program support Rural v. urban Timeliness Tradition
	WhyExp - Why is the expert model used for program delivery?	General Control Controversial issue Higher purpose Mandated training Research basis Timely issue	Administrative support Audience size Audience specific Awareness Default Emerging issue Higher purpose Information, common questions Introduction to engaged programming Introduction to Extension Personal gratification Research basis Specialty Specific issues, questions Specificity

Research Question	Super codes & meaning	Axial codes	Emerging codes
			Time management Timely issues
	WhyHyb - Why is the hybrid model used for program delivery?	General	
	ProcessEng - How is the engaged model of program delivery used?	General Local level On-farm research Organizational communication Organizational perspective Partners Program delivery Social media State level University level	Advisory groups Clientele Creating dialogue Development of community, social networks Educational program Evaluation Extension, University, state role External expertise Listserv Marketing Multiple communication methods Needs assessment Organizational communication Peer learning Planning process Problem statement Program development Relationships Research Rural v. urban Shared expertise Shared learning Structure Technology support Training collaborators Volunteers
	ProcessExp - How is the expert model of program delivery used?	Internal review Local level University level	Delivery methods Evaluation Introduction Needs assessment Online

Research Question	Super codes & meaning	Axial codes	Emerging codes
			Train the trainer Transition to engaged
	ProcessHyb - How is the hybrid model of program delivery used?	General	Evaluation Funding Implementation, program delivery Needs assessment Partners Shared expertise Shared learning
RQ3 - Are there barriers and drivers associated with Extension's move towards a more engaged model?	EngBarriers - Barriers that prevent use of the engaged model of program delivery.	General Commitment to other programs Definition Emphasis on marketing based on past success Existing expertise Online environment Time Unwilling collaborators	Clientele that just want answers, not education Contact numbers Control Coordination and timeliness Expert knows best Organizational change Personal preference Research basis Unbiased
	EngDrivers - Drivers that encourage the use of the engaged model of program delivery.	General Credibility Enhanced learning Local support Organizational support Organizational survival Societal change Stronger program	Behavior change Buy-in Customization Greater interaction Medium to long-term outcomes Past tradition or success Relationship building Technology support Unexpected outcome

Appendix F - Interrater reliability

Interrater reliability was calculated using ReCal2: Reliability for 2 Coders

(Freelon, n.d.) following initial independent coding and following review, discussion and revision of coding.

Interrater Reliability

Document	Round 1 % Agreement	Round 1 Cohen's Kappa	Round 2 % Agreement	Round 2 Cohen's Kappa	# Cases
Sandy	39.5	-0.423	94.28	0	38
Ruby	19.67	-0.659	94.4	-0.025	44
Pat Bean	76	-0.136	100	Undefined ¹	25
Olive	75	0.185	100	Undefined	32
Silverado	50	-0.314	100	1	68
Suzie	36.2	-0.457	98.6	0.882	69
Catherine	40.4	-0.413	100	1	57
Crazy Cat	50	-0.317	97.5	0.896	40
Healthy Lives	68.2	0.025	100	1	22
Cubs	35.7	-0.456	100	1	42
Lydia	53.1	-0.286	100	1	32
Dodge	56.3	-0.2	100	1	48
Corn	53.1	-0.161	100	1	49
Conan	60.9	-0.01	100	1	46
Bluestem	63.8	-0.177	100	Undefined	47
Rocky	61.5	-0.226	100	1	26
Practicum	52.8	-0.208	100	1	53
Agriculture 58	75	-0.125	100	Undefined	36
Gina	60.5	-0.234	100	1	38
Pike County	76.5	-0.097	100	Undefined	34
Sam	78.6	-0.12	96.4	0	28
Maudine	65.8	-0.193	100	1	38
Sarah	62.5	-0.2	100	Undefined	24
Fenster	51.9	-0.168	100	1	54
Parker	52	-0.296	100	1	75
Penguin	73.1	-0.152	96.2	0.649	26
Zoe	60	-0.246	97.8	0.656	45

¹ Cohen's Kappa is undefined due to invariant values when there is 100% agreement and the same variable is selected for both coders.

Document	Round 1 % Agreement	Round 1 Cohen's Kappa	Round 2 % Agreement	Round 2 Cohen's Kappa	# Cases
Mary	71.4	-0.086	100	Undefined	21
Scarlet	42.9	-0.337	100	1	42
Pookie	67.5	-0.161	100	1	40
Tanner	62.5	0.063	100	1	40
Brick	50	-0.199	100	1	52
Gus	80	-0.106	100	Undefined	25
Missy	40	-0.38	100	1	65

Appendix G - Questions for State Extension Directors

Questions for State1

1. What was your general reaction to the report? Were there findings that surprised you? Were there findings that were missing that you expected to be there?
2. How many people in the different roles make up your Extension program? County-based educators? Extension Assistants/Associated? Extension Office Support Staff? Department Center-based Extension Specialists? Department Center-based Extension Educators? (These numbers will not be reported, but used to provide a comparison with the other state)
3. The organizational structure for your Extension system appears relatively flat. One position that I don't see that we see in a lot of Extension organizations is that of the district or regional director. I expect you have had experience in other states that have this role. How does this structure work compared to those? What works better? What is more challenging? Do you feel this makes a difference in how your organization is engaged with residents of the state?
4. Shared or participatory evaluation with clientele groups seemed to be an area of challenge related to the engaged model in both states. What are your thoughts about this? Do we need a different type of evaluation for the engaged model than what we have traditionally done in the past? Do you have ideas about what this looks like? When and what do you suggest we might be trying to measure? Can our communities assist in identifying the items to be measured, identifying the measures and be equal partners in that evaluation?
5. Do you think there are three models – expert, engaged and a hybrid – or do you think two with modified definitions are sufficient?
6. Are there difference in the need for engaged models and how they are expressed between rural and urban communities?

Questions for State2

1. What was your general reaction to the report? Were there findings that surprised you? Were there findings that were missing that you expected to be there?
2. How many people in the different roles make up your Extension program? County-based educators? Extension Assistants/Associated? Extension Office Support Staff? Department Center-based Extension Specialists? Department Center-based Extension Educators? (These numbers will not be reported, but used to provide a comparison with the other state)

3. The organizational structure for your Extension system appears very complex. Are there any benefits or challenges associated with this structure in working in or towards an engaged model?
4. Shared or participatory evaluation with clientele groups seemed to be an area of challenge related to the engaged model in both states. What are your thoughts about this? Do we need a different type of evaluation for the engaged model than what we have traditionally done in the past? Do you have ideas about what this looks like? When and what do you suggest we might be trying to measure? Can our communities assist in identifying the items to be measured, identifying the measures and be equal partners in that evaluation?
5. Do you think there are three models – expert, engaged and a hybrid – or do you think two with modified definitions are sufficient?
6. Are there difference in the need for engaged models and how they are expressed between rural and urban communities?

Vita

Karen A. Vines

Continuing Professional Education Specialist, Agriculture, Leadership, and Community Education, 175 West Campus Drive, 266 Litton-Reaves Hall, Blacksburg, VA 24061 | (540) 231-xxxx | kvines@vt.edu

Education

Ph.D. | May 2017 | The Pennsylvania State University

Major: Agriculture and Extension Education, Dissertation: Engagement through Cooperative Extension: Towards understanding meaning and practice among educators in two state Extension systems.

M.S. | 1989 | Virginia Polytechnic Institute and State University

Major: Crop and Soil Environmental Sciences, Thesis: [Nitrogen utilization in tall fescue \(*Festuca arundinacea* Schreb.\) pastures fertilized with nitrogen or grown with alfalfa \(*Medicago sativa* L.\) or red clover \(*Trifolium pratense* L.\)](#)

B.S. | 1987 | University of Kentucky

Major: Animal Sciences

Selected Experience

Continuing Professional Education Specialist, Agricultural, Leadership, and Community Education | Virginia Tech | 2014 - present

Senior Extension Associate, Coordinator of College Learning Edge Academic Program (AG LEAP), College of Agricultural Sciences | Penn State University | 2001-2014

Distance Learning Extension Specialist, Coordinator Equine Sciences Minor, Animal Sciences | Penn State University | 2001-2014

Distance Learning Extension Learning Specialist, Beef and Dairy, Animal Sciences | Purdue University | 2000-2001

Selected Publications

- Vines, K. A., Cletzer, D. A., Westfall-Rudd, D., Hunnings, J., Sumner, M., Vines, N. T., . . . Lambur, M. (2016). *Early Career Agent Extension Professional Development Needs Assessment Report: Early Career Agent Extension Professional Development Needs Assessment Report. Committee Report*. Retrieved from <http://www.intra.ext.vt.edu/staffdev/documents/ECAFinalReport.pdf>
- Vines, K. A., Jeannette, K., Eubanks, E., Lawrence, M., & Radhakrishna, R. B. (2016). Extension Master Gardener Social Media Needs: A National Study. *Journal of Extension*, 54(2). Retrieved from <https://joe.org/joe/2016april/a5.php>