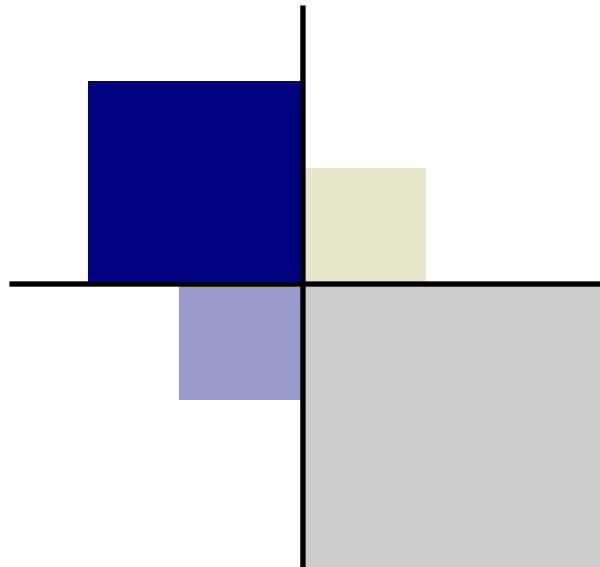


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Special Issue:
The Cooperative Extension Program Development Model

Nancy Franz and Barry A. Garst, Guest Editors

Donna J. Peterson, Editor

Table of Contents

Special Issue: The Cooperative Extension Program Development Model

Editor's Introduction to This Special Issue (pp. 1–2)

Donna J. Peterson

The Cooperative Extension Program Development Model: Adapting to a Changing Context (pp. 3–12)

Nancy Franz, Barry A. Garst, & Ryan J. Gagnon

Programming for the Public Good: Ensuring Public Value Through the Cooperative Extension Program Development Model (pp. 13–25)

Nancy Franz

Solving Problems, Ensuring Relevance, and Facilitating Change: The Evolution of Needs Assessment Within Cooperative Extension (pp. 26–47)

Barry A. Garst & Paul F. McCawley

Connecting the Dots: Improving Extension Program Planning with Program Umbrella Models (pp. 48–67)

Mary E. Arnold

Factors Impacting Program Delivery: The Importance of Implementation Research in Extension (pp. 68–82)

Ryan J. Gagnon, Nancy Franz, Barry A. Garst, & Matthew F. Bumpus

From Farm Results Demonstrations to Multistate Impact Designs: Cooperative Extension Navigates its Way Through Evaluation Pathways (pp. 83–107)

Allison Nichols, Stephanie M. Blake, Scott Chazdon, & Rama Radhakrishna

Extension Stakeholder Engagement: An Exploration of Two Cases Exemplifying 21st Century Adaptions (pp. 108–131)

Charles French & George Morse

Developing Extension Professionals to Develop Extension Programs: A Case Study for the Changing Face of Extension (pp. 132–155)

Scott R. Cummings, Kevin B. Andrews, Katy M. Weber, & Brittney Postert

Cooperative Extension Program Development and the Community-University Engagement Movement: Perspectives from Two Lifelong Extension Professionals (pp. 156–169)

Karen Bruns & Nancy Franz

Looking Ahead: Envisioning the Future of the Extension Program Development Model (pp. 170–176)

Ryan J. Gagnon, Barry A. Garst, & Nancy Franz

Editor's Introduction to This Special Issue

Since its formal authorization by the Smith-Lever Act in 1914, Cooperative Extension (Extension) in the U.S. has focused on “taking knowledge gained through research and education and bringing it directly to the people to create positive changes” (U.S. Department of Agriculture, n.d., para 1). Extension delivers non-formal education and other learning activities, often called *programs*, in both rural and urban areas to multiple audiences, including children, youth, families, agricultural producers, consumers, businesses, and communities. Extension's stakeholder-involved, grassroots approach has allowed Extension to be responsive to issues facing its targeted audiences throughout its history. Utilizing a model that integrates program planning, design and implementation, and evaluation is essential for successful programs that achieve desired outcomes and impacts.

This issue of the *Journal of Human Sciences and Extension* focuses on the Extension Program Development Model first presented by Seevers, Graham, Gamon, and Conklin in 1997. Nancy Franz, Barry A. Garst, and Ryan J. Gagnon served as Co-Editors for this special issue. The articles in this issue discuss components of this model and present recommendations for adapting the model to ensure the continued success of Extension programs.

- In the first article, Nancy Franz, Barry A. Garst, and Ryan J. Gagnon provide an introduction to the use of program development models and the Extension Program Development Model.
- The second article, authored by Nancy Franz, describes Extension's public value movement and steps for public value success through the Program Development Model.
- In the third article, Barry A. Garst and Paul F. McCawley present a history of needs assessment and discuss implications for the future of Extension needs assessment.
- The fourth article, authored by Mary E. Arnold, describes the implications of umbrella program models using the 4-H Youth Development Program as an example.
- In the fifth article, Ryan J. Gagnon, Nancy Franz, Barry A. Garst, and Matthew F. Bumpus share core concepts and factors related to successful Extension program implementation.
- In the sixth article, Allison Nichols, Stephanie M. Blake, Scott Chazdon, and Rama Radhakrishna trace the history of evaluation in Extension and identify challenges for the future of evaluation in Extension.
- The seventh article, authored by Charles French and George Morse, discusses stakeholder engagement efforts through the use of two case studies.
- In the eighth article, Scott R. Cummings, Kevin B. Andrews, Katy M. Weber, and Brittney Postert explain the importance of professional development for Extension professionals related to program development and highlight professional development efforts of various Extension institutions.

- The ninth article, authored by Karen Bruns and Nancy Franz, describes the need to align the Extension Program Development model with community-university engagement models.
- In the final article, Ryan J. Gagnon, Barry A. Garst, and Nancy Franz summarize key points from this special issue and offer recommendations for the evolution of the Extension Program Development Model.

The Extension Program Development Model serves as a framework for Extension programming and can be adapted to changing contexts in the future. To remain relevant through the next 100 years, Extension must continue to engage and serve multiple and diverse audiences, document outcomes and impacts, and demonstrate public value. Professional development for Extension professionals at all levels will be critical to ensure that Extension can continue to provide trusted, practical education for individuals, businesses, and communities that will help them solve problems, develop skills, and build a positive future.

This issue of *JHSE* joins the following Extension texts as critical professional development resources for current and future Extension professionals:

- *Education Through Cooperative Extension* (3rd ed.) by Seevers and Graham (2012)
- *Program Evaluation in a Complex Organizational System: Lessons From Cooperative Extension* by Braverman, Engle, Arnold, and Rennekamp (2008)

Donna J. Peterson, Editor
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The Cooperative Extension Program Development Model: Adapting to a Changing Context

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For over 100 years, Cooperative Extension in the United States has used a consistently articulated program development model including program planning, design and implementation, and evaluation that involves stakeholders in the process. This issue of the Journal of Human Sciences and Extension examines the history and evolution of the program development model for successful Extension work and adaptations to that model that have emerged due to the changing educational context. This issue provides information on how elements of the model have changed over the last 100 years; delves into contemporary issues and challenges; and provides important analysis, implications, lessons learned, and applications for current and future success of Extension programs. In this article, we provide a definition of a program, the rationale for using a program development model in Extension work, the Extension Program Development Model, other program development models used by Extension professionals, and the changing context surrounding Extension work that impacts the Program Development Model.

Keywords: Cooperative Extension, Extension, program, program development model, context, Extension professional, program development

For over 100 years, Cooperative Extension (Extension) in the United States has used a consistently articulated program development model including program planning, design and implementation, and evaluation that involves stakeholders in the process (Baker, 1984; Boyle & Mulcahy, n.d.; Forest & Baker, 1994; Franz & Townson, 2008; Heckel, 2004; Seevers et al., 1997, 2007, 2012; Vines & Anderson, 1976). This issue of the *Journal of Human Sciences and Extension* (1) articulates the historical Program Development Model on which successful Extension work is based and adaptations due to the changing educational context; (2) provides information on how elements of the model have changed over the last 100 years (technology, audiences, etc.); (3) delves into contemporary issues and solutions/adaptations; and (4) provides important analysis, implications, lessons learned, and applications for current and future success

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of Extension programs. In this article, we provide a definition of a program, the rationale for using a program development model in Extension work, the Extension Program Development Model, other program development models used by Extension professionals, and the changing context surrounding Extension work that impacts the Program Development Model.

Definition of a Program

Extension professionals use the word *program* in a variety of ways to describe their efforts. They may call a meeting or single educational event a program (i.e., I am holding a pesticide safety program tonight), a series of educational opportunities a program (i.e., I am teaching a five-part program on financial management), or a comprehensive effort aimed at addressing a particular issue a program (i.e., I am working on a youth leadership development program). The definition of *program* used for describing the Extension Program Development Model in this special issue of the *Journal of Human Sciences and Extension* is “the product resulting from all activities in which a professional educator and learner are involved. For example, it would include need analysis, planning, instruction, promotion, evaluation, and reporting” (Boyle, 1981, p. 5). Patrick Boyle, the originator of this definition, served as a Chancellor of the University of Wisconsin Extension and promoted this definition throughout the country for Extension and adult education. SeEVERS et al. (1997, 2007, 2012) used Boyle’s definition in their textbook on Cooperative Extension. When the term *program* is used in this issue of the *Journal of Human Sciences and Extension*, it describes a comprehensive approach to addressing an issue with education. It does not describe single Extension educational opportunities, one time projects, or a series of educational events.

Why Profess and Use a Program Development Model

The use of a particular program development model in Extension programming has been promoted for a variety of reasons. Buford, Bedeian, and Lindner (1995) suggest using a program development model to improve Extension program success, direction and purpose, program performance, and the Extension professional’s ability to cope with change. Forest, McKenna, and Donovan (1986) find using a program development model in Extension work results in the best use of fiscal resources, efficiently addresses client problems, helps Extension professionals respond to shifts in organizational direction, enhances accountability, and shows return on investment of public funds for public officials. Similarly, Boyle and Mulcahy (n.d.) indicate using a program development model enhances program relevance and allows for concentrated resources to be focused on the most serious, contemporary needs of a large number of people. This in turn shows value to relevant stakeholders, decision makers, the community, Extension, and the Extension professional. Baker (1984) and Forest and Baker (1994) believe a program development model helps Extension professionals address problems that are increasingly complex; better meet the rising educational levels of learners; compete with programs offered by

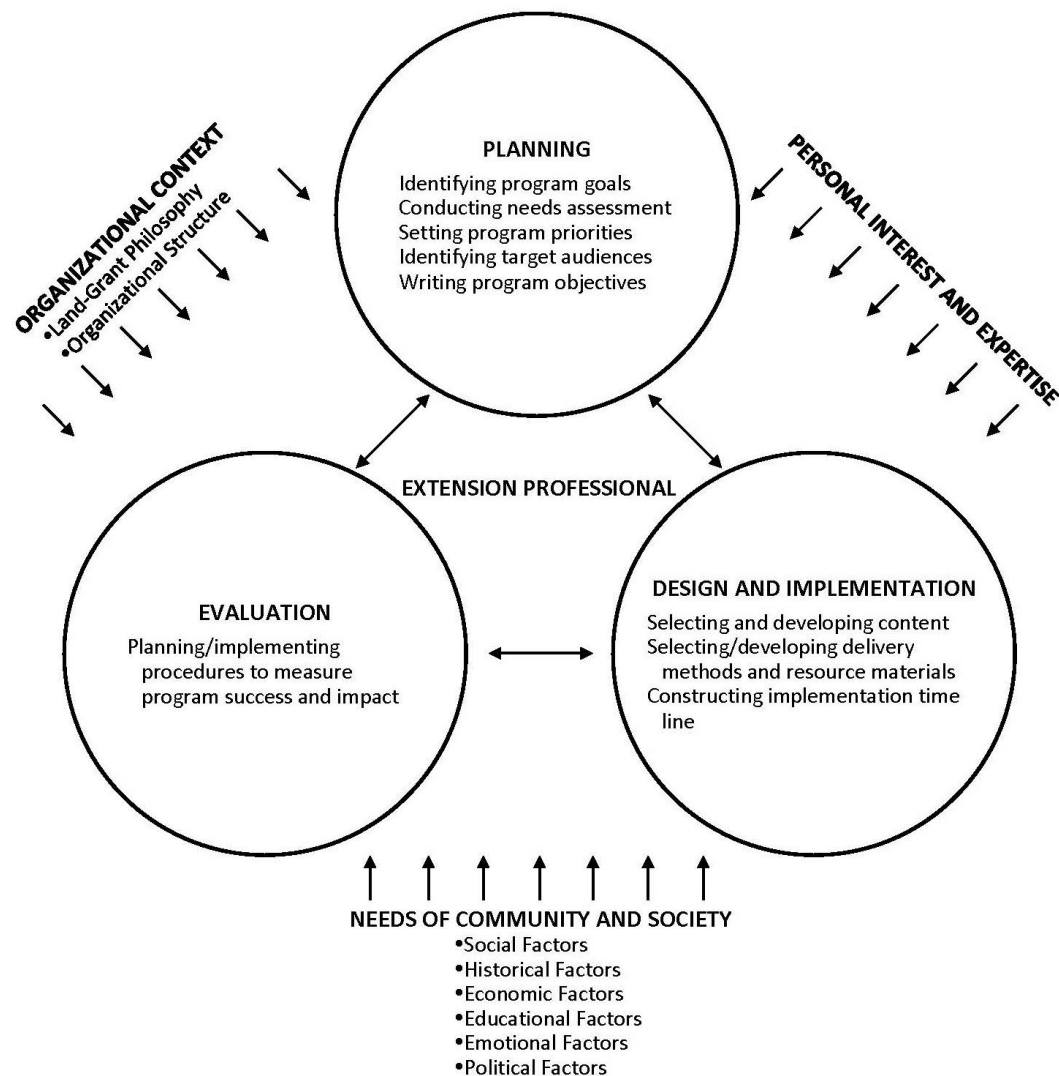
other organizations; and improve program effectiveness, relevance, and efficiency. Seevers and Graham (2012) propose that using a program development model helps Extension professionals reach intended audiences, use time efficiently, and improve stakeholder buy-in and support for programs.

The most comprehensive rationale for using an Extension program development model was articulated by Duttweiler (2012). He suggested use of the model creates (1) improved outcomes, (2) a focus on intended outcomes, (3) a basis for resource planning and management, (4) documentation of the educational process for understanding and accountability, (5) reflection and assessment for personal and organizational growth, (6) a framework for diagnosing disappointments, (7) a framework for replicating success, (8) a basis for Extension professionals to negotiate expectations, and (9) a way for Extension professionals to communicate impact.

A Widely Articulated Extension Program Development Model

Program development has been defined by the Extension Committee on Organization and Policy (ECOP) as “a continuous series of complex, interrelated processes which result in the accomplishment of the educational mission and objectives of the organization” (Seevers & Graham, 2012, p. 103). The program development model most often used by Extension professionals includes (1) needs assessment, (2) program design and implementation, (3) program evaluation and reporting, and (4) stakeholder involvement (Franz & Townson, 2008). Seevers and Graham (2012) popularized this model across the country in their Extension textbook as (1) planning; (2) design and implementation; and (3) evaluation informed by organizational context, personal interest and expertise, and the needs of the community and society (Figure 1). Because many Extension graduate and undergraduate students, as well as practitioners, start with the model articulated by Seevers and Graham (2012) when studying and practicing Extension program development, it is the basis for discussion in this special issue of the *Journal of Human Sciences and Extension* and will be examined throughout the issue.

In the last two decades, Extension has increased its focus on program evaluation and reporting in program development due to cuts in public funding and increased accountability for the use of these funds (Franz, 2009, 2011; Franz, Arnold, & Baughman, 2014; Kalambokidis, 2004, 2011). Wells-Marshall (2012) also found Extension staff are more committed to using evaluation results, analyzing data, and focusing evaluation. All Extension systems overtly articulate using the main three elements of Conklin’s (1997) model – planning, design and implementation, and evaluation (Figure 1). However, the other elements in the model are less often emphasized or are seen as assumptions of Extension program development.

Figure 1. A Basic Program Development Model

Source: Conklin (1997). Used with permission from Seevers and Conklin (2012).

Other Program Development Models

Program development models vary. Extension professionals often learn about and use program development models differently than described above. For example, they may discover program development models through graduate coursework in adult education or through curriculum and instruction or other professional development opportunities. They experiment with these models, or even parts of these models, with different levels of depth and with varying degrees of integration. Many Extension professionals blend a number of program development models to fit their context, interests, and values. The program development models described below have much in common with the Extension Program Development Model articulated by Seevers and

Graham (2012); all the models described address needs assessment, program design and implementation, and program evaluation but have differing emphasis on specific aspects or operationalization of the model (Boone, Safrit, & Jones, 2002).

Ralph Tyler's (1949) program development model analyzed the educational program of an institution by asking (1) What educational purposes should be attained, (2) What educational experiences can be provided to meet those purposes, (3) How can these educational experiences be effectively organized, and (4) How can it be determined whether these purposes have been attained? Tyler's (1949) model focuses on the desired results of curriculum and instruction in formal educational settings. He provided few suggestions for involving stakeholders in program development, but he did suggest a series of questions to guide program evaluations.

Boone et al. (2002) provided a conceptual programming model from a systems approach for organizational improvement. In this model, the program planner is seen as a change agent and decision maker through program facilitation, implementation, and evaluation. Program development is viewed as complex and technical. The main steps in this model include understanding the organization and its renewal process, linking the organization to its publics (i.e., community), designing the planned program, implementing the planned program, evaluation, and accountability. Program development is comprehensively addressed at macro and micro levels, but no decision-making power is given to stakeholders, and diversity of stakeholders is not addressed.

Using a lifelong learning perspective, Boyle (1981) proposed that there are developmental, institutional, and informational programs with varying goals, sources of objectives, use of knowledge, involvement of the learner, roles of the programmer, and standards of effectiveness. He suggested these steps for programming: (1) establish a philosophical basis for programming; (2) analyze problems and needs or concerns of people and communities; (3) involve potential clientele; (4) determine intellectual and social development levels; (5) select sources to investigate and analyze in determining program objectives; (6) recognize organizational and individual constraints; (7) establish criteria for determining program priorities; (8) decide on degree of rigidity/flexibility of planned programs; (9) legitimize and obtain support of formal and informal power situations; (10) select and organize learning experiences; (11) identify instructional design with appropriate methods, techniques, and devices; (12) utilize effective promotional priorities; (13) obtain resources necessary to support the program; (14) determine the effectiveness, results, and impact; and (15) communicate program value to appropriate decision makers. Boyle (1981) fully included stakeholder involvement in his program development process.

Caffarella and Ratcliff Daffron (2013) provided an interactive model of program planning for adult education reflecting the dynamism of the changing educational context. They suggested

their planning concepts are not used in a particular order – discerning the context; building a solid base of support; identifying and prioritizing ideas and needs; developing program goals and objectives; designing instruction; devising transfer-of-learning plans; formulating evaluation plans; selecting formats, schedules, and staffing programs; preparing and managing budgets; organizing marketing campaigns; and coordinating details. This applied model focuses on the Extension professional as an instructor on a micro level and does not take into account complex situations.

Cervero and Wilson (2006) proposed a people-centered model of program planning based on responsible planning theory. Their model focuses on politics, ethical obligations, power, interests, communication, and language as important contexts for the success of programs. In this model, programming is a social activity requiring constant negotiation with stakeholders. The program planner negotiates the program's needs assessment; the educational, management, and political objectives; instructional design and implementation; administrative organization and operation; and formal and informal education strategies and curricula. If all of these elements are negotiated, the learners are empowered to meet their needs and their voices are fully heard and acted upon. Therefore, the planner is primarily concerned about the management and politics of outcomes through power relations of program stakeholders. This model has little emphasis on program evaluation and reporting.

Klein and Morse (2009) described business plans developed and used by 54 Extension teams for statewide programs. Elements of the plan included an executive summary, list of program team members, educational goals, target audience, market research on target audience needs, promotional plans, logic model and research base, public and private value, implementation plan, evaluation plans, and financial plan. This approach intends to reach out to audiences as a community of interest around a topic for learning rather than a geographic community of learners. This process also creates an analysis of comparative advantage (i.e., competing educational programs), improved collaboration between educators and specialists, articulation of financial stability of programs, and meeting of organizational needs for detailed statewide information on programs.

The University of Wisconsin – Extension (2003) logic model is often used as a program development tool in Extension. The logic model describes the program's situation, inputs, outputs, outcomes, assumptions, external factors, and evaluation to visually show how the program is supposed to work. A logic model is most often used by Extension professionals as a tool to describe their program to stakeholders and rarely used as a program development model (Braverman & Engle, 2009). Logic models are often used to develop more detailed program and evaluation plans (Rennekamp & Arnold, 2009). The logic model as a planning tool often does not take into account the complex context of program development. For a full critique of the logic model in Extension program planning, see Arnold's (2015) critique later in this issue.

The program development models used by Extension professionals often rely on the approach and simplicity of use of the model. Tyler's (1949) approach is a classic model most often used directly or as the basis for all program development models. For example, Tyler's (1949) four programming questions can be directly cross-walked with the planning model presented by Seevers and Graham (2012) and the logic model (University of Wisconsin – Extension, 2003). Boone, Safrit, and Jones's (2002) model is the most comprehensive and complex of the models used by those wanting to address programming from a systems perspective. Boyle (1981), Caffarella and Ratcliff Daffron (2013), and Klein and Morse's (2009) models are attractive to Extension professionals who prefer a micro and simplified approach to program development (i.e., a checklist of specific actions), while Cervero and Wilson's (2006) model appeals to Extension professionals who value programming with social justice goals. The interests of Extension professionals and their programming context, including their organizational history, tend to determine which program model or models they use to guide their educational efforts.

Changing Context

The ever-changing context surrounding Extension work impacts the Program Development Model. These changes include a move from discipline-specific programming to interdisciplinary program expectations, changes in program funding sources and expectations of funders, and increased interest of funders to implement evidence-based programming that reflects high quality fidelity of program delivery. As a result of these changes, Extension's relationship with stakeholders includes increased accountability for program value and the need for increased capacity building of paid and volunteer staff. Extension systems have also developed and used specific criteria to select programs to pursue and maintain, such as program attractiveness, competitive position, alternative coverage, program urgency, funding limitations, and emerging issues (Franz, 2005).

This Issue

The articles in this special issue of the *Journal of Human Sciences and Extension* explore how Extension has adapted to a changing context and associated changes in the Program Development Model. Each article highlights a particular component of Extension's Program Development Model, including program development and Extension's public value, needs assessment, program design, program implementation, program evaluation, involving stakeholders, the importance of professional development of Extension professionals for Program Development Model success, and Extension's role in community-university engagement. The final article provides a synthesis of the special issue and recommendations for future directions for Extension.

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Programming for the Public Good: Ensuring Public Value Through the Cooperative Extension Program Development Model

Nancy Franz

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Effective Cooperative Extension programs produce important private and public value for individuals, families, businesses, and communities. However, the public value of Extension programming often goes unmeasured and unarticulated. Extension needs to reclaim its role as a key provider of public value for Land-Grant Universities through strong educational programs driven by infusing public value into all elements of the Extension Program Development Model. This article describes Extension's public value movement including organizational, professional, program, and scholarship development efforts to enhance public good effectiveness articulation. Lessons learned, implications, and next steps for Extension's public value success through a strong program development model are also shared.

Keywords: public value, Cooperative Extension, Extension, professional development, program development model, evaluation, scholarship

In contemporary United States culture, society demands proof of Cooperative Extension (Extension) and Land-Grant Universities as valuable public goods (Kalambokidis, 2014; McDowell, 2001). Extension has been increasingly engaged with the public value movement first embraced by government administrators (Moore, 2014) to change thinking and programming from a private value perspective to one based on contributing to value for the broader public. Kalambokidis and Bipes (2007) define public value as “the value of a program to those who do not directly benefit from the program” (p. 12). Extension can no longer rely solely on private customer satisfaction to provide the support needed to exist as a viable organization. Kalambokidis (2014) observes:

Historically, the Extension Service relied on evidence of their programs' private value, or direct benefits to program participants, but this has proved inadequate in a political environment in which most of a state's legislators are elected by people outside of the Extension Service's traditional audience. (p. 521)

Focusing on the public value of Extension work began with Dr. Laura Kalambokidis's (2004) efforts to identify the condition changes towards which Extension programs contribute from her perspective as an Extension economist. She states, “Over the last 10 years, the Cooperative

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Extension Service has been using public sector economics principles to make a case for its programs' public funding" (Kalambokidis, 2014, p. 521). Extension's adoption of a public value lens of articulating economic, environmental, and social change has been driven by a variety of factors, including decreasing public financial and program support across the country at local, state, and national levels. This trend has motivated Extension to help stakeholders develop a wider understanding of and support for the organization within and outside of Land-Grant Universities. The return on investment interests of funders, as well as the evidence-based and standards-based educational movements, fuel Extension's need to measure and articulate its public value.

Extension systems have begun to work intentionally to measure and articulate the social, economic, and environmental impacts of their projects and programs to demonstrate their public good effectiveness independently and as part of Land-Grant University missions. For example, Extension systems in Iowa, Minnesota, Missouri, Nebraska, New York, and Virginia have institutionalized the use of public value statements and stories for describing program impacts. Extension's public value movement has begun to change the way some Extension professionals approach the Extension Program Development Model (Seevers & Graham, 2012) as they plan, implement, measure, and report educational efforts to more fully become positioned as a valuable source of public good for their Land-Grant Universities.

As an organization in decline, Extension needs to further establish its public value (Franz, 2011a). Public value stories developed through the program development process and shared with stakeholders are one way to do this. These statements and stories help stakeholders better understand Extension's invaluable contribution to the public good and how it helps Land-Grant Universities deliver on their mission. Stakeholders for these stories include external funders such as taxpayers, potential program participants, government officials, and other Land-Grant University partners, internally and externally.

Extension's Public Value Movement

Kalambokidis (2004) suggests four public values toward which Extension contributes: (a) narrowing information gaps, (b) fairness or justice of resource distributions, (c) reducing costs or increasing benefits for stakeholders, and (d) public good. These efforts differ from private value or gain derived from Extension education. For example, when Extension programs help youth and adults develop leadership skills, this is private value, but when those youth and adults increase their civic participation, they provide public value in their communities (Franz, 2011a).

Although some Extension professionals are effectively measuring and articulating the private value of their educational work (i.e., learning and behavior change in clients), many find it difficult to articulate the public value of their work (i.e., economic, environmental, or social

condition change). For example, Extension agricultural professionals often articulate fiscal savings from producers changing behaviors learned from Extension education efforts, but the professionals do not tie this impact to economic results for the producer's community. The complexity of Extension as an organization, the changing expectations for Extension, measurement expectations, and the value articulation landscape all provide a variety of public value evaluation challenges (Franz, 2014; Franz & Townson, 2008). To help Extension professionals fully adopt public value articulation of projects and programs, Extension systems have been focusing on organizational, professional, program, and scholarship development that promotes determining, measuring, and sharing Extension's public value (Franz, 2011a, 2013; Kalambokidis, 2011).

Organizational Development

Cooperative Extension systems across the country have tried a variety of approaches to enhance public value measurement and articulation by faculty and staff (Franz, 2014). These efforts include following recommended steps to create public value thinking and action, adding or realigning evaluation and reporting positions, adding performance expectations and metrics, providing public value revenue generation expectations and incentives, developing public value impact reporting systems, and creating materials to respond to public value requests from stakeholders. Extension institutions have chosen to adopt efforts that best fit their situation.

Franz (2011a) suggested several steps for creating public value thinking and action in an Extension system including (1) understanding the differences between public and private value, (2) creating the case and urgency for public value, (3) moving from embracing private or personal value to embracing public value, (4) listing and prioritizing Extension public values, (5) developing public value storytelling templates, (6) developing public value stories, and (7) describing and sharing public value. Some Extension systems have instituted these steps through work teams, in program areas, or across the organization.

In recent years, Extension systems have added staff or faculty capacity in program evaluation, communication, and economics to more fully determine and share the public value of projects and programs. Extension systems have added program evaluation capacity focused on program quality and program impact (Lambur, 2008). Communications and public relations staff are helping Extension professionals articulate the public value of their work for news releases, social media posts, and reports. Extension economists have helped program teams measure the return on investment, conduct cost benefit analysis, or create other economic measures of program impact. Extension professional development staff have also begun to infuse public value thinking and practices into instruction about and support for using the Extension Program Development Model.

Universities such as Michigan State, Penn State, and North Carolina State University are using performance expectations and promotion and tenure processes that require Extension professionals to include evidence of measuring and articulating the public value of projects and programs. Faculty and staff are expected to document and share success stories that focus on behavior changes in clients from faculty and staff efforts that lead to social, environmental, or economic condition changes. One recent study found the primary reason Extension professionals conduct program evaluation is *persuasive use* to persuade others about the value of their programs (Baughman, Boyd, & Franz, 2011). This appears to reflect accountability pressures rather than an interest in using evaluation to improve programs. Salary increases have also been tied to the Extension professional's ability to measure and articulate public value, and in some Extension systems, incentives have been provided to enhance program team evaluation and reporting of public value from programming (Franz, 2014).

Funders have created revenue generation expectations for Extension aligned with the public value movement to measure and articulate the impact of funding on public conditions. For example, logic models and evaluation plans are now required for many grant and contract proposals including eXtension, the U.S. Department of Agriculture (USDA), and the National Science Foundation (NSF) to clearly link the social, environmental, and environmental condition changes to the funded efforts. Some Extension directors provide internal mini-grants or strategic funding to support teams and projects that demonstrate increased public value for their organization. A few Extension systems integrate public value considerations into their professional development opportunities on the Program Development Model.

Extension program reporting systems have become increasingly focused on demonstrating the public value of Extension efforts. The Extension Committee on Policy (ECOP) Measuring Excellence in Extension Database (Archer et al., 2007) recently added program narratives describing public value derived from programs. Extension institutions have made similar adjustments to their program reporting systems. For example, North Carolina Extension embeds a formula in its reporting system that calculates the decrease in health care costs using data submitted from each professional conducting nutrition education programs. The public value focus for Extension has increased emphasis on the program evaluation and reporting element of the Program Development Model across the country.

As requests for describing the public value of Extension programs have increased from stakeholders, public value materials have been developed by communicators and administrators. Annual reports no longer solely focus on program inputs, outputs, and learning outcomes. The reports now also include demonstration of behavior and condition change resulting from program inputs, outputs, and learning. For example, the 2013 Iowa State University (ISU) Extension and Outreach Annual Report (<http://www.extension.iastate.edu/our-story/content/quick-facts>) documents Extension's assistance to 1,600 companies that helped add 5,600 jobs in Iowa that

generated \$389 million of economic impact. Stakeholder requests for public value documentation tend to focus on proof that Extension has impact on a particular public issue, a specific program connection to impact (i.e., participation in 4-H decreases youth violence).

Professional Development

Several Extension systems provide professional development on measuring and articulating public value for faculty, staff, and in a few cases, Extension volunteers (Franz, 2009b). Kalambokidis (2011) initiated face-to-face and online workshops to help Extension professionals create public value statements about their educational programs to share with stakeholders. Over the last decade, public value professional development expanded through additional workshops and presentations at annual conferences, professional association meetings, work team meetings, new Extension professional orientations, and other venues to share and apply specific practices and tools to better measure and articulate public value. The workshops often included development of public value story templates and program evaluation designs to measure public value of programs (Franz, 2011a). In addition, workshops often included specific tips for infusing public value measurement and articulation into all elements of the Program Development Model, not just through program evaluation and reporting. For example, in 2013, ISU Extension and Outreach hosted a Public Value Summit of Extension professionals, administrators, and communicators. This event documented program and project public value efforts to date; invited reactions from an ISU sociologist, economist, and educational statistician; and established future goals for enhancing public value documentation for the organization through better integration of public value into the Program Development Model.

Extension professionals throughout the country have created resources to help staff and faculty develop and share program or project public value. Kalambokidis maintains a *Building Extension's Public Value* blog at <http://blog.lib.umn.edu/kalam002/publicvalue/>, and Franz hosts the *Extension Public Value Network* Facebook page. Extension program evaluators across the country also provide state and national workshops for staff on outcomes-based evaluation to support measuring program public value (i.e., social, environmental, and economic condition change outcomes) by infusing evaluative thinking into all elements of the Program Development Model. The American Evaluation Association Extension Education Evaluation Topical Interest Group; eXtension's Program Evaluation Community of Practice; the National Association of Extension Program and Staff Development Professionals (NAEPSDP); and the Association for Communication Excellence in Agriculture, Natural Resources, and Life and Human Sciences (ACE) have created additional public value presentations and tools for Extension professionals.

Program Development

Extension's efforts to enhance measuring and articulating program and project public value through organizational and professional development has resulted in an integration of public value thinking and action into all elements of the Program Development Model. This includes integrating public value considerations into needs assessment, program design, program implementation, and program evaluation and reporting. For example, some Extension program teams and individuals create public value stories to measure and report their efforts (Boyer et al., 2009).

The value of Extension as an information disseminator has waned due to the Internet and other factors. This context forces Extension to evolve due to changes in how the public consumes information, increased competition from other organizations and businesses, and urbanization of the United States. Society's changing values now require a focus on contributing to economic, environmental, and social condition change rather than simply disseminating information or conducting educational activities (Franz, 2014; King & Boehlje, 2000, 2013). Extension professionals who approach the Program Development Model from a transformative learning approach often find public value easier to measure and articulate than service, content, or facilitation approaches. Transformative learning requires educators to pay deep attention to educational processes and content, rather than just content, since transformative learning creates change in perspective, resulting in more holistic decision making (Franz & Townson, 2008; Mezirow, 2000).

Some Extension program areas are more engaged with determining and sharing public value than others. This focus is often determined by program funding sources, political contexts, and other factors. For example, community and economic development programs and nutrition education programs more often tend to articulate public value due to grant-funded projects. Public value articulation is also a high priority for programs and professional associations where funding or other public support is declining (Franz & Van Ginkel, 2011).

Scholarship Development

As the public value movement matures, universities and Extension systems are expecting proof of this value embedded in engaged scholarship (Franz, 2011b). Engaged scholarship defined by the Academy of Engagement Scholarship (ACES; 2014) is "scholarship that—in active collaboration with participating community partners—has a positive impact on complex societal needs and issues" (para. 2). This change in focus has been addressed in state and national workshops to help Extension faculty and staff prepare successful promotion and tenure dossiers (Franz, 2011b). Research has also been conducted with community-engaged faculty (some with Extension appointments) that revealed faculty want the following to produce public value

scholarship from their work: (1) a campus center that helps them engage with communities, (2) incentives to carry out projects with public value, (3) training to work effectively with communities, and (4) engaged scholarship counting as fully for tenure and promotion as the scholarship of teaching and research (Franz, Childers, & Sanderlin, 2012).

To create public value scholarship, faculty and staff want a holistic approach and practical ways to plan, implement, and reflect on public value for their productivity expectations (Franz et al., 2012). A holistic model of engaged scholarship that supports public value articulation has been developed that provides six public value storytelling points across higher education's mission. According to this model tested with a How Farmers Learn research and Extension project, public value can be articulated when (1) discovering new knowledge; (2) developing existing knowledge more fully; (3) disseminating knowledge; (4) demonstrating changes in student learning; (5) documenting changes in student behaviors; and (6) describing changes in social, environmental, and economic conditions (Franz, 2009a). The public value movement provides opportunities and motivation for Extension faculty and staff to reposition their engaged scholarship and their approach to the Extension Program Development Model to more fully share the public good of their work at Land-Grant Universities.

Lessons Learned

A review of the Extension public value movement literature suggests several lessons developed over the last decade to successfully build and sustain articulation of the public value of Extension's projects and programs through a strong program development model. Organizational development efforts to embrace public value tend to stall or diminish over time unless an ongoing and intentional effort is made to help the whole organization use a strong program development model to determine, measure, and articulate public value across all organization units and functions (Franz, 2011a). Waiting for a budget cut to catalyze public value is often too late to make culture changes. A top-down approach to public value, which often fails to change the culture, is less effective than a cross-organization and cross-program approach that involves staff, faculty, administrators, clients, and other stakeholders in the process. Moving from an organizational culture focused on private value to one that also expects public value articulation is difficult for many Extension professionals. To decrease this dissonance, multiple positive public value behavior change supports need to be provided to change Program Development Model thinking and actions. Venues for Extension professionals to have deep and meaningful discussion about organizational culture, expected behavior changes, and related Program Development Model supports are often needed to challenge assumptions and initiate and sustain change.

A decade of professional development opportunities on infusing public value thinking and action into the Extension Program Development Model has revealed lessons and practices to enhance

learning and behavior change for Extension professionals and stakeholders about the public value of Extension. First, public value and program development leaders must model effective adult education and instructional practices (e.g., including the use of small group work, activities that build on each other, an agenda that meets participant needs, and building on participant's experience) (Knowles, Holton, & Swanson, 1998). Second, professional development leaders also need to use effective group process techniques and tools that Extension professionals can, in turn, use with clientele to expand public value thinking and action in the program development process. Third, the most effective public value professional development opportunities often require determining specifically who should and should not participate in events and who gets assigned to small groups to work on measuring and articulating the public value of specific Extension programs. Fourth, the inclusion of a variety of perspectives (e.g., clients, communicators, evaluators, economists, sociologists, and statisticians) provides a better understanding of measuring and articulating public value throughout the Program Development Model. Fifth, those designing professional development opportunities need to provide sequential depth in understanding and skill development in the differences between public value and private value; creating public value statements and stories; and developing program evaluation plans, communication plans, and action plans as part of the program development process. Finally, professional development leaders need to create transformative learning environments to catalyze participants in seeing themselves and their work differently as facilitators of public good for their Land-Grant University (Franz, Garst, Baughman, Smith, & Peters, 2009).

Program development public value lessons point to the need to use more social media and other advances in technology to (1) determine the public values to be addressed by programs, (2) collect public value data and stories, and (3) share Extension's public value across a wide variety of audiences. Early adopters embracing public value in program development are leading the way for other Extension professionals who need a variety of examples and tools to help them take action. Public value articulation is most effective when Extension professionals engage economists, communicators, sociologists, statisticians, evaluators, and other perspectives in all elements of the Program Development Model, rather than waiting until the evaluation and program reporting phase. This allows integration of public value considerations for data collection, analysis, and reporting at appropriate points in all aspects of program development for improved data quality. Extension educational efforts focused on information dissemination rarely result in public value since the relationship with the client is often one-way, short-term, and remains in the private realm. Deep learning opportunities and relationships realized through comprehensive program development more often result in social, environmental, or economic public value.

Scholarship development lessons around public value include discovering that research is lacking to demonstrate the link between Extension's educational efforts and social, environmental, and economic public value for youth, families, and communities. Social return

on investment studies have been conducted by a few organizations in the United States and Europe but have not been conducted for most Extension programs. Scholarly productivity of Extension faculty and staff is more effective when it builds on the history and vision of the Land-Grant University and Extension's Program Development Model, rather than replicating scholarship or other productivity expectations for teaching or research. Scholarship articulation in Extension is deeply influenced by recognition and rewards, norms shaped by incentives, and by the promotion and tenure culture in each faculty and staff member's unit (Franz et al., 2012). This context is often void of any knowledge of the Extension Program Development Model in assessing program or professional success.

Next Steps

Extension should implement the following steps to help reorient Land-Grant Universities as a public good through a strong Extension Program Development Model.

Organizational Development

- Designate at least one person in the organization as the champion for public value to work with a steering committee to keep public value efforts viable, vibrant, and integrated into the Extension Program Development Model.
- Improve Extension state and national reporting systems that tie private value to public value with the Extension Program Development Model to create strong statistical and qualitative data for showing the relevance and value of the work.
- Improve relations with Land-Grant University communicators and government relations offices to more fully highlight Extension public value with university stakeholders.
- Institutionalize public value into the organization through job-hiring, performance reviews, budget processes, and other activities that change norms.
- Require Extension grants/RFPs to include a description of how the project will determine, measure, and articulate the public value of the effort. In some instances, specific public values could be the focus of funding proposals.

Professional Development

- Add Extension professional public value coaching as a follow-up to professional development model workshops to deepen and sustain learning and action.
- Expand public value professional development opportunities on the Extension Program Development Model to include university and community partners for a more holistic approach to measuring and articulating Extension's public value.

Program Development

- Connect those who embrace public value integration into the Program Development Model with multiple tools, resources, and other incentives to recognize their effort.

- Engage with partners to create, measure, and report common measures leading to large-scale public impacts.
- Hire and engage economists, sociologists, evaluators, statisticians, and communicators in the program development process to specifically measure and articulate the public value of Extension programs and projects.
- Involve internal and external stakeholders with a diverse set of perspectives in determining, measuring, and articulating the public value of Extension in all elements of the Program Development Model including clients, economists, communicators, statisticians, evaluators, and sociologists.
- Select specific programs and projects to demonstrate public value integration into the Program Development Model since some Extension professionals question inferences between the private and public value of Extension work.
- Use clientele to develop and share public value stories with other stakeholders since they experience the public impacts of Extension projects and programs resulting from successful program development.

Scholarship Development

- Commission rigorous research to determine the public value contributions of Extension programs to social, environmental, and economic condition change that matches public decision makers and funder agendas.
- Expand the portfolio of acceptable scholarly products that count for tenure and promotion to include public value measurement tools, processes, and products.

Conclusion

Focusing on integrating the public value of Extension into the Extension Program Development Model can reorient Extension as a valuable public good by articulating the social, environmental, and economic impact of the university locally, regionally, and at the state and national levels. Only Extension has the infrastructure, history, and Program Development Model to provide this public value pipeline of program and project impacts across multiple levels. Extension as a primary provider of public good information about the university also helps universities and community partners find common ground on what matters for elected officials, community members, administrators, academics, and other university public value stakeholders.

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Solving Problems, Ensuring Relevance, and Facilitating Change: The Evolution of Needs Assessment Within Cooperative Extension

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Helping people solve the practical problems of everyday life while maintaining contemporary relevance describes the mission of Cooperative Extension. To achieve that mission, Extension professionals have increasingly relied on information gathered from stakeholders to identify relevant problems and potential educational solutions. The methods, efforts, and activities to understand people and their problems are collectively referred to as needs assessment. This article explores the history and evolution of needs assessment in Cooperative Extension, as well as in a broader educational context. While tracing needs assessment through the decades, this article examines the needs assessment opportunities and challenges faced by Cooperative Extension. Emerging trends and implications for the future of Extension needs assessment are also discussed.

Keywords: needs assessment, Cooperative Extension, situation analysis, environmental scanning, program development, stakeholder input

The mission of Cooperative Extension (Extension) has always been simple — to solve the practical problems of everyday life and to improve the lives of Extension stakeholders, defined as those who have a legitimate stake in the outcomes of a program and who are vested in the program (Greene, 1988; SeEVERS & Graham, 2012). Congress created the Extension system a century ago to address exclusively rural, agricultural issues and needs (National Institute of Food and Agriculture [NIFA], 2014). In those days, more than 50% of the U.S. population lived in rural areas, and 30% of the workforce was engaged in farming. By serving the needs of rural America, Extension made possible the American agricultural revolution (NIFA, 2014) at a time when legislators feared the food supply would eventually fail to keep up with urban demands (Carlson, 1970). Asbury F. Lever of South Carolina, one of the key legislators responsible for the creation of the Cooperative Extension Service, argued in 1914 that the agricultural colleges had accumulated knowledge “...which, if made available to the farmers of this country and used by them, would work a complete and absolute revolution in the social, economic, and financial condition of our rural population” (U.S. Congress, 1927).

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Pursuing this practical mission while maintaining contemporary relevance is the current challenge for Extension, a point noted by Franke-Dvorak, Kelsey, and Royer (2010) when they posed the question, “Is [Extension] relevant when [stakeholders] can Google a topic and download high quality information quicker and more efficiently than phoning or driving to the county [Extension] office to consult with the county educator?” (p. 55). Although incorporating stakeholders into the process of planning for programs, products, and services may be inconvenient, costly, and time-consuming (Kelsey & Mariger, 2002), Extension remains relevant by identifying and developing programs, products, and services that address the problems, issues, and concerns of local communities. This article provides an overview and traces the evolution of needs assessment across the history of Cooperative Extension, from its early emergence alongside the popularization of Maslow’s hierarchy, to integration with mandated and legislated assessments, and finally to contemporary hybrid approaches that blend needs assessment with asset/capacity building.

Determining Needs

More than sixty years ago, Leagans (1964) credited the strength of the Extension Program Development Model to its flexibility in helping people adjust to needs imposed by a changing environment. Needs assessment is the first step in the model (SeEVERS & Graham, 2012). At the most basic level, a *need* is a measurable gap between two conditions, what something is now compared with what it should be (Altschuld & Watkins, 2014). Progressing from one condition to the other requires comparing now to what stakeholders would like to see in the future. Extension professionals work to understand stakeholder needs by examining two interesting characteristics. One, needs depend on a person’s point of view (Royse, Staton-Tindall, Badger, & Webster, 2009). What one person identifies as a need might be irrelevant to another person. Two, needs reflect the perspective of an individual or group based on a moment in time, and those needs are subject to change over time (Altschuld & Watkins, 2014). Needs have also been conceptualized according to a number of dichotomies, including needs versus wants, needs versus solutions, absolute versus relative needs, and individual versus group needs. See Altschuld and Watkins (2014) for a full explanation of these differences.

Defining Needs Assessment

Needs assessment generally refers to the methods, efforts, and activities involved in or used for identifying needs (Royse et al., 2009). Put simply, needs assessment answers the question, “Who needs what according to whom?” (Etling & Maloney, 1995, p. 8). McCawley (2009) provided a more thorough explanation of needs assessment as “a systematic approach to studying the level of knowledge, ability, interest, or attitudes of a defined audience or group involving a particular subject. A needs assessment also provides a method to learn what has already been done and what gaps in learning remain” (p. 3). The goals of needs assessment are twofold: (1) to

learn about stakeholders' problems, issues, and/or concerns, and (2) to understand how we can respond with programs, products, and services. These programs, products, and services become relevant and marketable (McCawley, 2009) because they are based on identified needs, which increases Extension's viability and relevance. Etling and Maloney (1995) identified eight reasons why needs assessment is important (Table 1).

Table 1. Reasons for Needs Assessment (Adapted from Etling & Maloney, 1995)

<i>Necessary part of program planning</i>	We need to know where we are going before we plan how to get there.
<i>A principle of democracy</i>	People should be involved in decisions that affect them and should help plan programs where they are expected to be participants.
<i>Motivation</i>	Theories tell us we should appeal to individuals' basic needs and interests.
<i>Accountability</i>	Increasing demands are being placed on Cooperative Extension on all levels by our many publics.
<i>Support</i>	Program support depends on how well we meet documented needs in the community (from members, parents, decision makers, donors, and others).
<i>Anticipation of conflicts</i>	This is done by understanding needs.
<i>Needs change</i>	We can never assume we have the final word on people's needs.
<i>Complex society</i>	As societies become more complete, people tend to depend more on others to meet their needs.

Increasing Access and Relevance Through Needs Assessment

Needs assessment enhances the Extension Program Development Model by improving the accessibility of programs and services to a variety of people, providing information about present conditions and specific needs of people in a community, identifying opportunities to develop or expand existing programs, assessing public opinion about goals and priorities, and building stakeholder interest in programs or decisions (Seevers & Graham, 2012). Extension professionals are trained to *meet people where they are*, or in other words, develop programs based on the current and immediate needs of individuals and communities. Meeting people where they are is critical to the success of Extension programs and services primarily because participation in Extension offerings is usually voluntary. As such, these offerings are only successful to the extent to which they attract participants because they meet identified individual, family, community, or societal needs. Because Extension programming inevitably uses valuable resources, the needs assessment process (Table 2) also allows Extension professionals to make informed decisions about the use of or investment in resources needed to create, maintain, or expand programs, products, and services.

Table 2. Needs Assessment Steps (Adapted from Royse et al., 2009)

Step 1:	Define stakeholder needs (problems, issues, and/or concerns)
Step 2:	Assemble a study group, task force, or committee
Step 3:	Evaluate available resources (time, funding, people, and so on)
Step 4:	Determine current information about the problems, issues, and/or concerns
Step 5:	Select the data collection strategy and methods
Step 6:	Determine the sampling approach
Step 7:	Design and pilot the collection instrument
Step 8:	Gather data
Step 9:	Analyze data and determine major findings
Step 10:	Synthesize major findings and create reports
Step 11:	Disseminate report

Stakeholder involvement in the needs assessment and prioritization process is critical because securing stakeholder support for and acceptance of Extension programs, products, and services requires understanding local needs. By involving people in needs assessment, Extension professionals can not only address problems or issues, but also mobilize support for current and future initiatives and overcome resistance to proposed programs (Seevers & Graham, 2012). Witkin and Altschuld (1995) suggested three levels of people who experience needs. The first level includes individuals who receive a program, service, or product (i.e., consumers). The second level consists of individuals who provide the service, program, or product to the consumers. The third level is categorized as decision makers, administrators, and others in leadership positions. According to this three-level view, for a needs assessment to be successful, information should be gathered in multiple stages and from several different individuals at all levels.

Collecting information regarding stakeholder needs can be challenging when stakeholders are unaware of program and service options. Royse et al. (2009) identified four factors that influence whether or not new programs, products, and services are needed, including: *awareness* (i.e., Do stakeholders know that a program, product, or service exists?), *availability* (Is there an adequate supply of the program, product, or service?), *accessibility* (Is the program, product, or service available in a place and time where it can be easily accessed by the target audience?), and *acceptability* (What are the target audience's attitudes toward Extension's provision of the program, product, or service?). After needs are identified, the next needs assessment step is categorizing and prioritizing the needs to determine what comes next. When needs are assessed, some needs may be identified as more important or more urgent to address with the resources available (Altschuld & Watkins, 2014).

Needs Assessment Terms

Needs assessment is sometimes used synonymously with the terms *situational analysis* and *environmental scanning*, and although these processes are related, they are in fact different. *Situational analysis* can be a component of a needs assessment. Specifically, the results of a needs assessment enable the educator to complete a situational analysis. Situational analysis, the description of the setting and circumstances, informs the educator about the environment for programs, products, and services (Seevers, Graham, Gamon, & Conklin, 1997). *Environmental scanning*, a process of studying and analyzing the current and emerging forces that exist within an organization's environment (Boone, Safrit, & Jones, 2002), includes situational analysis as one component. Environmental scans have become an emergent approach to identify key issues and set program priorities (Caravella, 2006; Guion, 2010). Guion (2010) used a 10-step environmental scanning process to understand county issues for Extension programming in North Carolina. The process included (1) conducting a situational analysis using secondary data; (2) listing important issues based on secondary data analysis; (3) conducting situational analysis using primary data from major stakeholder groups; (4) mapping the county to obtain primary data from a cross-section of the population; (5) collecting primary data in each mapped area; (6) listing issues that surfaced as important in the prior steps; (7) conducting external assets assessments; (8) prioritizing issues; (9) examining the complex nature of priorities; and (10) entering priorities, assets, and programming strategies to address the issues into a county program priority database.

In the private sector, the similarity between needs assessment and *market research* is notable (Morse & Coyle, 2009; Rossett, 1987). The same basic goal is involved—determining customer needs and wants to inform the development of products and services. In this vein, other interchangeable terms include needs analysis, market analysis, front-end analysis, and discrepancy analysis (Rossett, 1987).

Historical Emergence and Growth of Need Assessment

Before the 1960s – Birth of Extension to Address Embedded Needs

During Extension's first half-century, identifying and prioritizing programs for clientele was guided, in large part, by the *Extension Service Handbook on Agriculture and Home Economics* (U.S. Department of Agriculture [USDA], 1927). As part of their job description, Extension professionals were expected to "carry the work of research departments to the people on the farm and in the home" (USDA, 1927, p. 57). In practice, Extension program content was based on the expertise of Extension professionals who maintained currency in their discipline and with practices and technologies that enhanced agricultural productivity, resource protection, food preservation, and the multitude of other topics of educational programming. Consultation with

advisory groups during the first 50 years was common, but local groups were thought to be more valuable to help “plan how objectives were to be met” (USDA, 1927, p. 65) rather than to help identify and prioritize those objectives.

In the first decades following the creation of Extension with the Smith-Lever Act in 1914, needs were addressed without a formal assessment process. The purposes of Extension programs included improving crops and animals, fighting diseases and pests, beautifying homes and communities, establishing 4-H clubs, advancing public health and nutrition, developing community arts and recreation programs, establishing community gardens, and responding to emergency relief needs associated with war and depression (Peters, 2002b), an impressive list of pre-determined needs. Since the 1950s, needs assessment has become increasingly integral to planning in a range of educational settings, and a proliferation of models and approaches to identify and prioritize needs continues to emerge. Altschuld and Watkins (2014) developed a timeline of needs assessment milestones from the 1950s to the modern era that helps us understand the evolution of needs assessment practices used in Extension work.

1960s and 1970s – Social Action Legislation Period

The 1960s focused on the rationalization of government decision making through the use of scientific information. This practice was greatly impacted by Robert McNamara’s influence on Department of Defense planning systems which slowly influenced state and federal agencies (Pigg, 1980). In 1965, passage of the Elementary and Secondary Education Act emphasized public-school assessments and the determination of needs (Altschuld & Watkins, 2014). The Act established that children from low-income homes required more educational services than children from affluent homes. During this time of limited funding, Extension professionals noted that it took more than money to solve most problems. By the 1970s, Extension acknowledged that systematic collection of information about learner needs was important to prioritize the limited educational resources and to maintain relevance for an ever-broadening set of user interests. State Extension Services deliberately adopted more sophisticated protocols to gather information about clientele needs (Altschuld & Watkins, 2014).

Among the first assessment methods promoted within Extension was the Nominal Group Technique (NGT) first described by Delbecq and Van de Ven in 1968 (Delbecq, Van de Ven, & Gustafson, 1975). Widespread adoption of NGT by Extension reflected its participatory nature and the ease with which the method could be used with local advisory groups already established across the country. The NGT continues as a common method to assess stakeholder needs. Since the 1980s, NGT has been widely studied and modified for specialized audiences and specific goals. Other group techniques such as brainstorming, focus groups, and Delphi processes were also broadly used by Extension beginning in the 1970s. Each of these methods had unique advantages and disadvantages. Among these group methods, focus groups retained the greatest

amount of utility and persist as part of Extension needs assessment projects (Duncan & Marotz-Baden, 1999; Gamon, 1992; Vanderford, Gordon, Londo, & Munn, 2014). The continuing use of focus groups and variants of NGT has institutionalized the use of *key informants* or individuals selected to provide informed input for Extension needs assessment because of their personal knowledge of an issue.

As the needs assessment concept emerged in the 1960s and 1970s, marked criticisms appeared. Altschuld and Watkins (2014) pointed out that many models emerging during that period were heavily top-down approaches that treated stakeholders as subjects instead of collaborators. Pigg (1980) noted the strong demand during this period for *harder* evidence of program effectiveness based on systematic or scientific methods. This demand for evidence extended to identifying and meeting public needs. A key question in needs assessment at this time was, “Does this program meet the needs of those it was intended to serve?” (Pigg, 1980, p. 10).

In the late 1970s, Robert Kaufman, often known as the *father of needs assessment* (Lee & Reeves, 2009), began to conceptualize his Organizational Elements Model (OEM) of needs assessment. Kaufman’s model identified gaps in needs at the societal level. Articulating the importance of needs assessment in the process of providing programs and services, Kaufman and English (1979) reflected, “Intervention or meddling? Tinkering or change? Useful or benign? Positive or disruptive? Whenever we presume to change something, we run the risk of not accomplishing that which we set out to accomplish” (p. 7).

1980s – Funding Challenges and Big Data

In a call for a more formalized approach to needs assessment for Extension, Caffarella (1982) illustrated the kinds of problems arising when Extension experts are the sole source for identifying learner needs. Caffarella’s (1982) article provided one of the first reviews of assessment methods useful for Extension. Catalogues and descriptions of needs assessment methods used by Extension have been detailed, modified, and expanded by numerous authors since then (Etling, 1995; McCawley, 2009), effectively packaging needs assessment resources for organizational and community use (Britnell, 2002; University of Kansas Community Tool Box, 2014).

The next twenty years included significant growth in the use of needs assessment practices within Extension. However, these decades also brought challenges. Significant funding constraints curtailed Extension programs and services in the 1980s (Conone, 1991). The University of Rhode Island studied the impact of the economic climate on Extension programming and found that developing programming in line with local needs assessment was one of the practices most impacted by reduced funding coming out of the 1980s (Mallilo & Millar, 1992).

While stakeholder input had become standard practice in the conduct of needs assessment, Extension's tight budgets in the 1980s may be partially responsible for the adoption of more cost-effective methods to involve larger groups of stakeholders. Extension professionals began using surveys to gather input from larger groups of stakeholders than was practical through individual and group meetings. Dillman's *The Total Design Method* (1978) provided detailed procedures for conducting mail and telephone surveys. That book and subsequent editions have been widely cited by Extension professionals. Because survey questionnaires have obvious advantages (e.g., low cost per response, access to very large numbers of people, permanent record of data gathered, and replicability of results), surveys were initially adopted by Extension to analyze large-scale needs such as State Extension Priorities (Beckley & Smith, 1985).

The situation in Ohio provides an example of how states responded to economic challenges in the 1980s. The Ohio Cooperative Extension Service appointed a Strategic/Long-Range Planning Task Force in 1986 to recommend how to use limited resources to meet the public's educational needs. Using the theme, *People Listening to People*, Extension gathered quantitative and qualitative information from 3,223 users and nonusers of Extension by asking, "What are the most important problems in your (1) home and family life, (2) work and business, and (3) communities?" (Conone, 1991, para. 2). Through the years, the designs of surveys in Ohio and across the Extension System have been scaled down for use in needs assessment projects within a single county, or even a neighborhood, and for use with targeted interest groups, key informants, and other limited audiences.

1990s – Issues Programming, Integrated Approaches, and Capacity Building

In 1988, Sofranko and Khan noted important deficiencies when solely relying on asking people about their needs. They recommended assessing needs from multiple information sources and angles, one of which is the individual. The authors recommended bringing back the expertise of the Extension professional into the assessment by applying their knowledge of local problems, through analysis of secondary data and conversations with key informants. These observations coincided with the promotion of issues-based programming approaches also emerging during the late 1980s and early 1990s. As described by Taylor-Powell and Richardson (1990), issues programming focused on the public's broad social concerns. Most often the objective of issues programming was to reach outside of existing Extension structures to involve a wide segment of the population in identifying priority issues as the basis for program prioritization.

Although the issues programming approach was successful in some states (Taylor-Powell & Richardson, 1990), the approach was sometimes challenging. Using focus groups comprised of community leaders and Extension professionals, Baker and Verma (1993) studied the adaptation of issues-based programming by Louisiana Cooperative Extension and discovered considerable resistance to that approach. Focus-group members, who included both Extension faculty, as well

as local leaders, were concerned about poorly-timed initiation, unfamiliarity with the process and procedure, overlapping responsibilities, and professional rivalries. However, group members also felt that issues programming was successful when it was actually implemented: Extension became better recognized in local communities, had better ties with local governments, and became better networked with other agencies.

During this period, Kaufman solidified his OEM model, which defined three different levels at which a person could identify gaps between current and desired conditions. *Mega* planning addressed needs at the societal level, *Macro* identified needs at the organizational level, and *Micro* identified needs at the individual and/or small group level (Witkin, 1994). Another approach that emerged during this time was the use of clustering to examine needs across multiple counties (Cropper & Merkowitz, 1998).

Combining focus groups, mail surveys, and professional expertise was valuable for Extension professionals tackling complex issues such as community development and youth development. In 1997, Nieto, Schaffner, and Henderson described a process to engage stakeholders directly in an assessment of community development needs. During the past 20 years, concepts of community assessments evolved among Extension projects to encompass a wide array of data-gathering techniques. The process also served as a springboard for community members to learn about their own issues and be better motivated and prepared to participate in actions that led to improved conditions (Fisher, Tribe, & Apsley, 2006).

The concept of community-based research seems a natural extension from capacity assessment activities. In the arena of public health, Israel, Schulz, Parker, and Becker (1998) documented calls within that profession for “a renewed focus on an ecological approach that recognizes that individuals are embedded within social, political, and economic systems that shape behaviors and access to resources necessary to maintain health” (p. 174). Israel et al. (1998) concluded that “challenges notwithstanding, community-based research offers a means to reduce the gap between theory, research, and practice that has been problematic in the field” (p. 194).

One such ecological approach to needs assessment introduced during the 1990s is *asset mapping*. This process captures assessment of needs based on the presence or absence of community or environmental supports and systems needed to make desired changes. Asset mapping has been well documented as a useful tool for needs assessment related to community development (Kretzmann & McKnight, 1993) and has been widely adopted by community organizations and agencies, as well as by Extension, with many asset mapping toolkits and guidelines available online. Asset mapping has also been adopted by professionals working in youth development, family development, and nutrition (Jones & Perkins, 2003; Ostrom, Lerner, & Freel, 1995; Robinson, Vineyard, & Reagor, 2004) and has been promoted for use in social work settings (Hillier, 2007).

2000 to the Present – Technology Adaptations, Participatory Research, and Public Values

Proactive needs assessment has become well integrated into Extension programming. Duttweiler (2008) studied 675 evaluations published in the *Journal of Extension* from 1998 to 2007. Each study was assessed according to its evaluation level, including: needs assessment, program documentation, program fidelity, program improvement, and evidence of effectiveness. Thirty-two percent of the evaluations he studied cited needs assessment as a primary purpose. As formal needs assessments are conducted in ever-widening and ever-changing situations, new methods continue to be tested in Extension programs and best practices continue to evolve.

Significant effort has been devoted to building the use of technology into the design and implementation of needs assessments. Initial efforts included using the internet to conduct needs assessment surveys to learn about demand for and capacity of Extension to incorporate information technology (IT) platforms into program delivery (Gregg & Irani, 2004; Kelsey, Dougherty, & Hattery, 2002) or to discover the professional development needs of Extension professionals (Conklin, Hook, & Kelbaugh, 2002). Other examples of Extension professionals using the internet as a needs assessment platform included adapting existing assessment worksheets and practices to IT platforms (Barron, 2009; Mayfield, Wingenbach, & Chalmers, 2005; Peterson & Prillaman 2000). Technologies that have found a place in Extension needs assessment toolkits include an array of geographic information systems (GIS) technologies, often associated with asset mapping and capacity assessments, and audience response devices for real-time data collection, visual display, and data storage in an interactive setting (Carlson, 2014; Jones & Perkins, 2003; Merry, Bettinger, & Hubbard, 2008).

Participatory research and other client-centered approaches to needs assessment are especially enticing for many Extension professionals for several reasons summarized by Franz (2013) including to enhance community buy-in, reinforce human and community development, and authenticate data interpretation. Some exciting models for participatory research in Extension needs assessment include approaches for co-learners to really understand the issues, such as the data party approach (Franz, 2013).

Photovoice technique, first reported by Wang and Burris (1997), has emerged as another compelling approach for participatory needs assessment. Photovoice data are collected by and through the eyes and cameras of stakeholders, providing a database of rich, descriptive information. In an analytical review of photovoice projects, Catalani and Minkler (2010) summarized findings from 46 studies of public health needs assessment projects using participant photography to collect information. The authors found that outcomes reported for these projects fell into three categories: (a) enhanced community engagement in action and advocacy; (b) improved understanding of community needs and assets, which in turn, could have community or public health benefits; and (c) increased individual empowerment.

Needs assessment has been particularly challenging during major restructuring, during which some Extension programs were delivered by regional Extension professionals. Morse and Coyle (2009) describe how Minnesota used a combination of matching needs assessments, short-run market research, and long-run market research to determine program focus while building stronger ties to statewide communities of interest and serving traditional audiences. In this use of market research for statewide programs, the target audience was identified as a community of interest before doing any of the other steps in exploring needs. The entire needs assessment/market research was a part of a larger program business-planning effort (Klein & Morse, 2009).

During the past decade, Extension has sought ways to identify and communicate the benefits of Extension programs for those who are not directly served (Hoag, 2005; Kalambokidis, 2004). Using needs assessment to articulate public value is a broader trend within educational evaluation (Altschuld & Watkins, 2014) and has proven valuable for Extension because nonparticipants understand indirect benefits to society and are more likely to support public funding (Kalambokidis, 2004).

Trends and Implications

As we look ahead to the future of Extension, a number of factors will shape Extension needs assessment. Although some of these dimensions are just emerging, others have been critical issues within Extension needs assessment for a number of years and their relevance is expected to continue to increase.

Avoiding Pitfalls

Different data collection protocols have strengths and weaknesses. Mistakes when collecting data can be avoided by recognizing that different methods may work in one organization, community, or situation but not necessarily in another. Conceptual flaws in needs assessment, as summarized by Reviere, Berkowitz, Carter, and Ferguson (1996), most often involve “problems with sampling, failing to gather the right information to measure the desired components of need, and using methods inappropriate to justify the conclusions. These weaknesses reflect a basic failure to develop a conceptually coherent, logical, and well-integrated plan for conducting the needs assessment” (p. 70). Other common needs assessment challenges include failing to measure the primary target population (e.g., not asking stakeholders about services and programs they are already accessing, holding needs assessment meetings at inconvenient times and/or locations), using only one method for gathering information, assuming needs are the same or similar across different levels of target groups, and confounding needs with wants or means (solutions) with ends (outcomes) (Soriano, 1995; Witkin, 1994). [See Altschuld and Waktins (2014) for a full description of methodological concerns in contemporary educational needs

assessment.] Within Extension, it is a common mistake to design instruments that seek answers because it would be *good to know* even though the information does not contribute to the goals of the needs assessment. Problems that arise may include a glut of superfluous data that confounds the analysis and diminishes attention or engagement by stakeholders. Following recommended protocols including thoughtful review, pilot testing, and imagining possible outcome scenarios are methods to minimize these mistakes (McCawley, 2009).

Co-Learning and Transformative Learning

Participatory research techniques, data visualization techniques, and hybrid needs assessment approaches seek to understand social-environmental conditions surrounding community challenges and issues. The emergence of these methods are appropriate responses to engage stakeholders who have ready access to vast amounts of information but who may need guidance about how that information relates to complex issues. Engaging stakeholders as co-learners, beginning with the needs assessment, contributes to the transformative learning process, a goal of Extension education (Franz, 2007). Engaging with stakeholders expands the role of Extension professionals beyond that of information providers to partners in learning – working with people to make change (Peters, 2002a; Roth, 2006). It also compliments the ability for Extension to facilitate broader understanding and learning by acting as convener and facilitator than can be accomplished through traditional delivery modes (Bassett & Reardon, 2007; Franz, 2003). For two examples of participatory research in Extension, see the experience in Minnesota’s community-driven business retention and expansion programs and New Hampshire’s Community Profiles Visioning Program (French & Morse, 2015).

Data Visualization and Representation

Data visualization has emerged as an important tool for translating research into useful information for stakeholders (Bridges, 2008; Seeger & Hertel, 2009). Data visualization has also helped stakeholders better understand the issues they have helped to identify using techniques such as photovoice and audience response systems. Altschuld and Watkins (2014) pointed out that technology-integrated systems such as Google Maps® allow for inexpensive mapping of needs, assets, and interest groups that offer “helpful visual elements to the analysis and interpretation of data you collect in your assessment” (p. 108). Seeger and Hertel (2009) designed a community needs survey enhanced with Google Maps® to visualize public concerns regarding a community’s water and sewer quality while revealing patterns indicative of potential water quality problems. The researchers noted Google Maps® allowed for easy sharing of the data and results without requiring end users to have more than basic Internet-browsing skills. Data visualization tools such as these will allow Extension to bring needs assessment and other findings from research to life in a way that is convenient and meaningful to Extension stakeholders and decision makers.

Globalization

Extension needs assessment takes place within an increasingly global and interconnected environment. Because of the profound effect of globalization on society, Extension has been challenged to develop programs and services that help people deal with these changes (Smith, Moore, Jayaratne, Kistler, & Smith, 2009). Specific to needs assessment, globalization has increased cultural awareness in terms of who we engage with and how we engage with them. As noted by Altschuld and Watkins (2014), “From considerations on how to work survey items to be culturally sensitive to selecting appropriate focus group facilitators for different audiences, the changing diversity in workplaces and communities means we must be keenly aware of our actions” (p. 109). A failure to pay attention to the influences of globalization can skew needs assessment results from not paying appropriate attention to who was left out of the process, or by not conducting needs assessment in ways that resonate with the cultural perspectives and backgrounds of a diverse population.

Hybrid Models

Increasingly complex issues facing communities have led to the development of more dynamic needs assessment techniques. Good examples of robust new approaches often are illustrated in the areas of community development and community food systems. In 2001, Feenstra described experiences working beyond typical needs assessment to engage with practitioners on applied solutions to food system problems and opportunities for change. Thomson, Radhakrishna, Maretzki, and Inciong (2006) concurred that understanding needs related to local food systems is insufficient to determine program focus and that collaboration and community participation is absolutely necessary for this programming. These highly integrated problems have led to a new type of needs assessment approach which looks at assets and the capacity for growth in combination with identified needs. Described as a hybrid, this approach blends needs assessment and asset/capacity building (Altschuld & Watkins, 2014). Altschuld and Watkins (2014) proposed that:

a new hybrid must determine needs and assets in independent yet intertwined ways. It has to be open to the two perspectives and responsive to the voices and guidance of the community or group(s) involved. It should be empowering, not dependency-oriented, and use multiple methods for data collection. (p. 93)

Hybrid models have been effective for community development programs and have flourished when Extension has partnered with multiple organizations and agencies to integrate the assessment of community needs with the mapping of its assets. In Idaho, the Community Reviews Project engages Extension and other economic development professionals with community members to conduct the needs analyses (Idaho Rural Partnership, 2011). The

University of California supports a project to integrate global initiatives, agribusiness communications, and rural livelihoods to help understand and prioritize needs for sustaining agriculture (Agricultural Sustainability Institute, 2013).

Multiple Level Assessment

Historically, needs assessment aimed to learn what people already know, do, or believe, to create interventions that improve their lives. However, during the past two decades, Extension professionals have conducted needs assessment to enhance and inform other activities to support that primary mission. These efforts included documenting the current situation to demonstrate change and impact; creating awareness and cultivating support to address a problem; and learning more about the target audience to ensure program relevance, acceptability, and success. Today, assessment is conducted for multiple purposes, on multiple scales, and with multiple methods. Each type and combination of assessment methods (i.e., surveys, interviews, group process, capacity assessments, participatory research, etc.) is characterized by certain strengths and weaknesses related to purpose, scale, cost, clarity of the data, and credibility. Selection of appropriate methods and designs for a given problem requires substantial review and analysis.

Raising Awareness and Broadening Service

Ingram and Syvertsen (2005) encourage those conducting needs assessment to ask the questions, “Who’s not being served?” and “Who’s not at the table?” Over the past decade, Extension has quickly diversified how it delivers programs and services to meet stakeholder needs, particularly urban audiences. Gould, Steele, and Woodrum (2014) pointed out in a 100 year review of Extension’s history, that “with an increased emphasis on issues pertinent to urban clientele, Cooperative Extension has maintained its support of traditional programming while assisting many more people in different environments than previously considered possible” (para. 7), but much more can be done to raise the awareness of urban audiences to Extension resources. When Yang, Fetsch, McBride, and Benavente (2009) used direct assessment to study changing community needs, they found 7 out of 10 citizens knew nothing about Extension. They proposed that this finding was due to urbanization of the county. Extension continued to be perceived as having an agricultural focus, not as an organization that is “a source of omnibus research-based expertise for communities, rural and urban” (Yang et al., para. 41). Nevertheless, NIFA (2014) articulates the goal of Extension programs and services—“to meet public needs at the local level” (n.p.). Although there has been a decline in the overall number of local Extension offices over the years, and some county Extension offices have been consolidated into regional offices or centers, approximately 2,900 Extension offices remain nationwide (Bowen-Ellzey, 2014). These offices are expected to serve an ever-growing, increasingly diverse constituency often with fewer and fewer resources. At the same time, Extension is challenged to serve the needs of an information-saturated public that has easy access to a wide range of information. Gould et al.

(2014) wondered about Extension's role in our society and how Extension will find relevance in an increasingly technology-focused society. Hoag (2005) proposed that the "appropriateness of the original public Extension model is weakened because people are more educated and information is easy to gather. People simply don't need that kind of help much anymore" (p. 408). But just because information is easy to access does not mean the information is reliable, credible, or applicable. Extension's ability to translate research into practice, and more importantly, to provide face-to-face support in meeting community needs will always be an asset that sets Extension apart (Hoag, 2005).

Technology Integration

New methods and data collection tools will continue to shape Extension needs assessment. From GIS to social networks and mobile applications, technology integration is quickly becoming a characteristic of successful needs assessment efforts (Altschuld & Watkins, 2014). Social media tools, including Facebook, Twitter, Google+, Kickstarter, and others have been heralded as new ways for Extension professionals to connect with stakeholders (Altschuld & Watkins, 2014). Qualman (2009) noted 96% of Generation Y have joined an online social network, particularly Facebook, Twitter, and LinkedIn. Users of social media likely represent the vast majority of Extension's contemporary stakeholders. Although social media has yet to be established as a common tool for Extension needs assessment, we do see evidence of social media being used to connect with stakeholders. For example, the University of California Cooperative Extension used social media to successfully solicit donations in support of Extension research (Kocher, Lombardo, & Sweitzer, 2013). The next few years will likely feature more published research on the integration of recent and emerging technologies to support needs assessment efforts.

Conclusion

In many ways, needs assessment is the most important element of the Extension Program Development Model. Our ability to successfully identify stakeholder needs, and thus be empowered with the necessary information to design programs, products, and services to meet those needs, will forever define the public's perception of our value relative to other programs and services. Extension's ability to understand and access stakeholder concerns and issues, while recognizing their inherent strengths and assets, may set us apart from most other providers during the needs assessment process. Methods to assess needs will certainly be dynamic, incorporating a range of emerging technologies and advances in how data can be represented, visualized, and shared. The future of needs assessment is rich and diverse, technology-driven, yet embedded in social interaction.

At the same time, needs assessment has become an important tool to engage stakeholders in the learning process and to broaden their understanding and motivation to solve complex societal

issues. Needs assessment has provided a means for Extension professionals to transform their own role into that of convener and partner in situations that require a more in-depth approach to problem solving. In many ways, contemporary needs assessment represents the best of both worlds: a respect for traditional relationships that have existed between local Extension offices and the public they serve, and a recognition of the global, technological, and blended approaches that will continue to advance how we will partner to solve the problems of tomorrow.

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Connecting the Dots: Improving Extension Program Planning with Program Umbrella Models

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This paper builds on the Extension program planning framework presented by Seevers, Graham, Gamon, and Conklin (1997) in an effort to enhance and improve program planning in Extension. Using the 4-H Youth Development Program as an example, the paper considers the importance of program theory of change and theory of action in program planning, and the need for the translation of research into practice in order to elucidate the theory. In addition, the paper explores the utility of “umbrella” program models, based on sound theory and translated research, for guiding and supporting the program planning efforts of local Extension professionals. Umbrella program models have important implications for the renewed utility of the Seevers et al. (1997) framework, as well as Extension program planning training needs. Implications that extend beyond the 4-H Youth Development Program to other Extension program areas are explored as well.

Keywords: program planning, logic models, theory of change, theory of action, program models, umbrella models, 4-H youth development, positive youth development

The Extension program development framework presented by Seevers, Graham, Gamon, and Conklin (1997) provides a comprehensive method for Extension professionals to think holistically about the programs they plan and implement. The model highlights the critical connections between the program plan, design, implementation, and evaluation. Furthermore, the framework is clearly situated in the context of the overall Extension program (e.g., the Land-Grant mission and structure of the Extension organization) and the needs of the community in which the program is taking place. In addition, this framework considers the expertise and interest of the local Extension professional, thus emphasizing that designing Extension programs is a complex and multifaceted process, and highlighting the potential for great variation among programs designed to address similar concerns.

This program development framework, in varying forms and with varying emphasis on its components, is still used in the Extension system today, a testimony to its validity and utility. In its complete form, the model represents the ideal process of engaging local communities in planning and conducting Extension programs to address local concerns in an effective way.

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While the Extension ideal remains strong, and the principles proposed by Seevers et al. (1997) remain useful, contemporary Extension program planning is more often a rushed process, with an emphasis on conducting activities with little attention to a complete program plan. While these traditional Extension program development strategies are sound and useful, they reveal, whether intentionally or not, that program development is often conducted in relative isolation by professionals at the local level. This leaves professionals to sort through the many facets of program planning on their own, often with little expertise or confidence to utilize the program planning framework effectively.

The individual approach to Extension program development was taken even further through the emphasis on logic modeling for program planning that swept Extension in the early 2000s, primarily due to the program planning and evaluation capacity-building efforts led by the team at the University of Wisconsin – Extension. While many professionals now understand the concepts of inputs, outputs, and outcomes as a result of this effort, there is little evidence that this understanding resulted in better program planning practices among Extension professionals. The research conducted suggests a trend towards the use of logic models to improve program planning, and thus evaluation. For example, Workman and Scheer (2012) documented the increase in evaluation studies reporting outcomes rather than outputs that occurred after 2000, which they attribute to the increased emphasis on logic modeling across the Extension system. At the same time, they note, however, that the most frequent measurements in the subsequent program evaluations were at the knowledge and practice change level, without ever determining a full sense of the program's impact. So, while logic modeling has been more commonly utilized in Extension program planning in the past 15 years, the utility falls short of the intended goal to plan programs that lead to robust program impact.

One reason for this underutilization is because logic modeling, as it was taught through capacity-building efforts, left local professionals to invent their own programs. Professionals often developed programs without a sufficient understanding of the research base to do so and without a clear understanding of the program theory that is essential for putting the *boxes* of the logic model into motion in order to achieve the articulated outcomes. In addition, except for a few institutions, logic modeling was not fully understood or valued by Extension administrators, resulting in inadequate capacity-building support that professionals needed to develop sound program plans. Building capacity for program planning and evaluation requires organizational support (Taylor-Powell & Boyd, 2008), an understanding articulated by Preskill and Boyle (2008) in their model of evaluation capacity building that details the synergistic relationship between evaluation capacity building (ECB) efforts and the organization pushing for better program planning and evaluation practice.

Articulating and understanding a program's theory underscores processes through which the program can achieve its stated outcomes (Chen, 2004). Patton (2002) points out that the purpose

of a logic model is to *describe* the program, while a theory of change model is both *descriptive* and *predictive*. Program logic models help professionals define the logical connections between programs and outcomes, and *imply* an underlying program theory (McLaughlin & Jordan, 2004); Extension logic models often fall short of *articulating* program theory (Patton, 2002). According to Chen (2004), program success depends on the accuracy of the program's assumptions regarding the proposed logical connections. Without an understanding of a program's underlying theory, the program's success is left largely to chance, and measurement of the resultant outcomes is suspect at best.

In addition to articulating the connections between program activities and outcomes, program theory needs to provide an explanation of how the activities contribute to the realization of the results (Funnell & Rogers, 2011). To do this, two additional aspects of program theory need to be unpacked. The first is the program's *theory of change*, which is the way in which the desired change comes about (Funnell & Rogers, 2011). The second is the program's *theory of action*, which refers specifically to what actions need to happen, at what level of success, for the program to reach its intended outcomes (Funnell & Rogers, 2011). Logic models alone are insufficient for adequate program planning without careful attention to these two elements. Because of this, articulating program theory of change and theory of action are increasingly considered to be an important part of Extension program planning (Arnold, Davis, & Corliss, 2014; Arnold & Nott, 2010; Braverman & Engle, 2009; Patton, 2002). In doing so, some professionals are discovering that the linear logic model based on reasonable assumptions may not take into account important root causes, multiple contexts, or mediating variables that influence the outcome of a program (Arnold et al., 2014; Arnold & Nott, 2010; Lerner et al., 2014). For example, a program designed to address childhood obesity based on increasing children's physical activity level alone does not take into consideration the role of diet, food availability, or family economics related to purchasing healthy food.

Another aspect of Extension program planning that has changed considerably since Seevers et al. (1997) published their work is the immediacy of access to the research base upon which Extension programs are developed. Most professionals now have remote access to online university databases, and research articles can be sought and delivered electronically almost instantaneously into the hands of Extension professionals. Access to the research that underpins a program and examples of the use of that research to develop a program are two very different things. While access to research has improved, the use of research to develop sound Extension programs is limited – primarily due to a missing necessary step: the translation of research into educational practice.

The goal of this paper is to build on the Extension program planning framework presented by Seevers et al. (1997) to enhance and improve program planning in Extension. Using the 4-H Youth Development Program as an example, this paper considers the importance of program

theory in planning and the need for the translation of research into practice to elucidate the theory. In addition, this paper explores the utility of *umbrella* program models, based on sound theory and translated research, for guiding and supporting the program planning efforts of local Extension professionals. The creation of umbrella program models has implications for the program planning responsibilities of local Extension professionals, as well as implications that extend beyond 4-H to other Extension program areas.

From Logic Models to Program Theory

Many Extension professionals are familiar with Bennett's (1975) hierarchy that is credited as the first framework for planning Extension programs. This model sets the stage for program implementation and evaluation through an articulation of the relationships between program elements and outcomes at several levels. By the 1990s, Bennett's hierarchy was the cornerstone of nascent Extension program planning and evaluation efforts and was included by Seevers et al. (1997) as a key framework for program planning practice. While Bennett's hierarchy provided an effective and easy-to-understand way to describe and organize program planning and evaluation, with an emphasis on the *steps* and the connections between them as one moves up the hierarchy, it lacked any emphasis on articulating, let alone testing, program theory. This left the connections between program components and outcomes to be based on the professional's intuitive or *logical* assumptions, often with little evidence to support the accuracy of the connections. Furthermore, Bennett's framework facilitated a focus on evaluating outcomes rather than the processes that make up the program's theory.

Federal drivers for accountability set the stage for an increased singular focus on outcome measurement. For example, the 1993 Government Performance Results Act (GPRA), which focused attention on accountability for publicly-funded programs, and the 1998 Agriculture, Research, Extension and Education Reform Act (AREERA), mandated that annual plans of work and reports demonstrate the achievement of medium-term outcomes and long-term impacts for Extension programs. This mandate set the stage for an increased singular focus on outcome measurement. As a result, the national Extension System invested heavily in educating its workforce in the development of program logic models, a system of program planning that paralleled Bennett's hierarchy for program planning (Knowlton & Phillips, 2009; W. K. Kellogg Foundation, 2004). Leading this effort was a team from the University of Wisconsin – Extension who provided intensive workshops and train-the-trainer sessions for many state Extension services. Within a few years, *inputs*, *outputs*, and *outcomes* became commonly used terms among Extension professionals. State and Federal program planning and reporting systems became developed based on logic modeling (Taylor-Powell & Boyd, 2008), and states placed increasing responsibility for accountability on local Extension professionals (Baughman, Boyd, & Kesley, 2012).

However, as Patton (2008) pointed out in his reflection on program planning and evaluation efforts in Extension, many program logic models are built on the “*assumption* that new knowledge leads to attitude change, which leads to behavior change” (p. 108, emphasis added). At the very least, the sometimes simplistic program plans developed in Extension, when they are developed at all, focus on creating change without considering the pervasive systems in which that change happens and the influence the system can have on whether changes take place (Patton, 2008). While the logic model templates typically used in Extension do highlight the importance of environmental factors (Rennekamp & Engle, 2008), the practice of logic modeling in Extension rarely moves beyond a simple linear presentation of the model components based on unsupported assumptions of the causal links between the components (Patton, 2008). At the very worst, logic models are developed based on erroneous assumptions and unsound theory, which leaves the measurement of program outcomes incapable of demonstrating program impact.

It is interesting to note that the logic modeling movement in Extension appears to have lost some traction. As Rennekamp and Arnold (2009) point out, Extension needs to move from logic modeling as a *fill-in-the-box* exercise toward paying more attention to the plausibility of the connections within the model, and even more ideally, to articulating program theory. This push to create accurate and meaningful logic models meant that even more program planning capacity efforts were needed to ensure that local Extension professionals could develop sound program plans. Instead of increased focus on capacity building, however, many states began to reassess the direction of program planning and evaluation, and turned attention elsewhere. For example, some states moved evaluation responsibilities to a higher level in the organization, which resulted in less need to build program planning capacity among professionals (Arnold & Cater, in press).

Despite the lack of efforts to increase local professional capacity for program planning, the call for better program theory continues. The need to understand a program’s intent and articulate it in a sound manner underscores the popularity of teaching logic modeling as a first step in building program planning capacity (Arnold, 2006). Beyond just connecting the boxes, the processes implied, but rarely articulated, in logic models should provide testable causal links (Arnold et al., 2014; Arnold & Nott, 2010; Chen, 2004; Hunter, 2006; McLaughlin & Jordan, 2004). These testable links in turn should provide evidence for the accuracy of the program planner’s “knowledge and intuition of what works” (Monroe et al., 2005, p. 61.). All of this underscores the detailed program planning necessary to define program activities and processes that lead to plausible outcomes, which in turn can be evaluated. For as Rossi, Lipsey, and Freeman (2004) stated, the basic question underlying most program evaluation: “Is what’s supposed to be happening, actually happening?” (p. 93). How can we answer this question if we are not clear what it is we are trying to accomplish?

As mentioned earlier, Extension capacity-building efforts have lost traction in the past few years, despite the increased need for better Extension program planning. One reasonable explanation is the reduction in staff that has occurred across the Extension system as budgets tighten and priorities for staffing evolve. Another explanation is the slow erosion of Extension evaluation expertise as past leaders in this area retire or move on to other positions. Some Extension evaluators are rethinking their approach to capacity building for program planning and evaluation, however, and are asking what the appropriate burden for program planning is that should be placed on local Extension professionals (Arnold & Cater, in press). Local professionals are struggling with expectations to be skilled at program development, management, and evaluation, as they juggle increased workloads and expectations with less support. All of this means a limited utilization of traditional program planning practices at the local level, and meanwhile, Extension programs chug on, trying to meet local needs without a firm foundation of how or what is happening to create the change. To continue to insist that quality program planning is the responsibility of local professionals as presented in the Seevers et al. (1997) model is to continue the support of lackluster programming conducted by Extension professionals who feel inadequate and pressured in program planning and evaluation. In so doing, Extension misses the chance to measure and share the impact of the considerable public investment in its work, a misstep that we continue to facilitate to the organization's peril (e.g., Borden, Perkins, & Hawkey, 2014).

There is another way, however, that has potential to reinvigorate the quality of Extension programs and relieve some of the burden on local professionals, and that is through the use of *umbrella* program models that define program theory and process, under which local professionals can plan more effective programming.

Program Models: A 4-H Youth Development Example

Extension priorities and programs do, and should, continually evolve (Bowling, 2001). For example, programmatic changes are frequently driven by the interests of local stakeholders (e.g., Allen, Bowker, Stamper, Owusu-Amankwah, & Davis, 2014). Changes are also driven by emerging social concerns that require creative methods to address them (e.g., Benke et al., 2013), as well as evolving organizational structures and priorities (e.g., Braverman, Franz, & Rennekamp, 2012). Despite changing needs and evolving priorities, the 4-H Youth Development Program has remained strikingly static in its description of itself over the years. Surely, part of the consistency is driven by over 100 years of tradition and the intergenerational transmission of 4-H program experiences, values, and expectations. In addition, organizational structures that include 4-H National Headquarters at the National Institute for Food and Agriculture (NIFA) and the private foundation, National 4-H Council, set the national agenda for programming and funding priorities for 4-H. Furthermore, the 4-H program has a vibrant and engaged national professional development association, The National Association of 4-H

Extension Agents (NAE4-HA), directed by 4-H professionals that hosts a robust annual conference, providing opportunities for unifying 4-H programs and practice across the system. These entities, together with their ongoing engagement of 4-H professionals on committees and task forces, simultaneously unify the tradition of 4-H and set the stage for new program directions.

Given these factors, it is not surprising that the description of the 4-H program presented by Seevers et al. (1997) and updated by Seevers and Graham (2012) could be presented in the same manner today with very few modifications. According to Seevers et al. (1997), the 1991 National 4-H Strategic Planning Conference defined the mission of 4-H as “helping youth become productive citizens” who are “self-directing, contributing members of society” (pp. 78-79). In 2012, 4-H National Headquarters described the purpose of the 4-H program as “support[ing] the positive and successful development of youth” (Seevers & Graham, 2012, p. 83). Throughout the years, 4-H has been defined as providing a supportive environment for culturally diverse youth to reach their full potential and opportunities for youth to learn experientially to become self-directing. 4-H also helps youth set and achieve goals, and keep records of their achievements. All the while, youth in 4-H are learning content about subjects in which they are interested; building *life* skills, such as decision making and communication, developing character through leadership; and becoming better citizens on the way to a healthy and productive adulthood (Seevers et al., 1997).

A perusal of contemporary 4-H artifacts and publications shows the 2015 version of 4-H is still based on these enduring program principles. However, 4-H has changed considerably, especially in the past 15 years with the emergence of the scholarly body of work related to positive youth development (PYD). The 2012 description of the 4-H program presented by Seevers and Graham reveals a considerable descriptive update for the 4-H program from the 1997 version, with a particular emphasis on the program environment and life skill development, yet nowhere does it describe 4-H as a positive youth development program. The PYD perspective has gained momentum because of the work of developmental scientists who have focused on the adolescent years in particular, landing collectively on the principle that youth are resources waiting to be developed (Silbereisen & Lerner, 2007). An emphasis on PYD represents a bold departure from a focus on intervention and prevention models that had already emerged.

Silbereisen and Lerner (2007) emphasize that enhanced adolescent development occurs when the strengths of youth are aligned with resources for healthy growth that are possible in the home, school, and other community settings. Furthermore, positive opportunities set the stage for the “systematic promotion of healthy positive development over time” (Silbereisen & Lerner, 2007, p. 7), which is frequently referred to in the literature as *thriving* (Benson & Scales, 2011; Lerner, Lerner, von Eye, Bowers, & Lewin-Bizan, 2011). In addition, contemporary PYD theory emphasizes the centrality of developmental relations in which youth and their contexts mutually

inform and enhance each other (Overton, 2015). Of particular interest is the context of out-of-school programs, like 4-H, in which youth voluntarily participate (Lerner et al., 2014). As the field of PYD continues to grow, an increasing number of youth-serving organizations are framing their programmatic approach as PYD, leading to greater clarity of program focus, purpose, and outcomes. In addition, the 4-H program has been at the center of the most comprehensive research on PYD to date in the *4-H Study of Positive Youth Development* conducted by Richard Lerner and his colleagues at Tufts University (Lerner & Lerner, 2011). Conducted in seven annual waves, this study longitudinally assessed key characteristics of PYD across adolescence and provided the data necessary to construct a testable structure of PYD (Geldhof, Bowers, & Lerner, 2013). Indeed, much of the current scholarship related to PYD is based on data from this study (Hamilton, 2014), which has positioned the Extension 4-H Youth Development Program forefront in the positive youth development field.

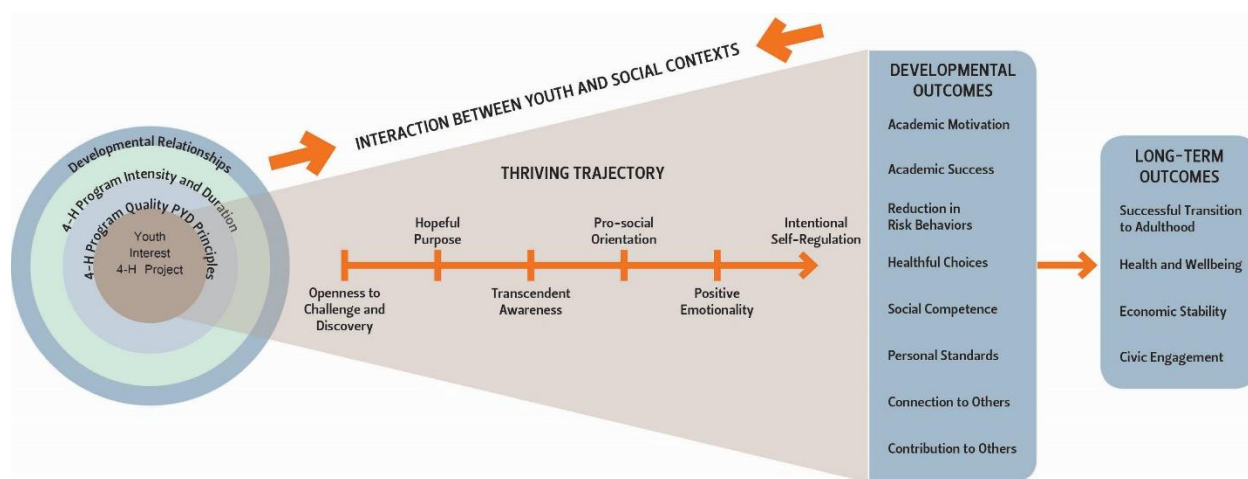
Ironically, despite being the program of focus for much of the PYD research, there is still no cohesive, clear theory that guides the 4-H Youth Development Program. Another perusal of 4-H program websites finds a conglomeration of program descriptions and goals, such as developing life skills (Hendricks, 1996), the *Community Action Framework for Youth Development* (Gambone, Klem, & Connell, 2002), and the *4-H Essential Elements*, which is based on the *Circle of Courage* put forth by Brendtro, Brokenleg, and Van Bockern (2002). Perhaps most common is the *Five C's* (Confidence, Competence, Character, Caring, and Connection), which is the structure of PYD brought forth through the 4-H Study of Youth Development (Lerner & Lerner, 2011). Currently, these principles, constructs, methods, and outcomes are used interchangeably throughout literature related to 4-H, with little consensus on what is what. In no case are these concepts brought forth into any form of program model that elucidates program theory to set the stage for high-quality program development, implementation, and evaluation.

What is missing is the critical and practical translation of the abundance of PYD research and theory into a practical program model that articulates the 4-H program theory of change and chain of action to guide program development and implementation from the most remote county programs to the national level. Is not the translation of research the idea upon which the Extension system was founded? Furthermore, the clear articulation of program theory can provide local professionals with a concrete understanding of how the program must be implemented at the local level. Fidelity to implementation and attention to program quality are things over which local professionals have most control. [See also Gagnon, Franz, Garst, and Bumpus (2015) in this volume for a further examination of program fidelity.] Research shows that focusing on improving youth program quality at the local site level is a key link to program success (Smith et al., 2012) – if local professionals know what they need to do.

Program Umbrella Models: A 4-H Example

Today's 4-H program operates on many of the same principles outlined by Seevers et al. (1997) and Seevers and Graham (2012). This consistency reflects the fact that 4-H has done a lot of things right in the area of youth development. But the program can benefit from a better connection to current youth development research; research that supports the principles and practices of 4-H and ensures a strong translation of current research into practice as the key aspect of Extension's Land-Grant mission. In an effort to do just that, I propose a new 4-H program *umbrella* model (Figure 1) that reframes traditional aspects of 4-H into contemporary PYD understandings. The term *umbrella* is used for this model because it serves as an overarching model under which local 4-H programs can be planned. In addition to connecting 4-H to PYD nomenclature, the model illustrates three important elements that will assist local professionals in program planning. First, a clear program theory of change is presented based on our understanding of how youth develop in the context of out-of-school time programs. Second, the model reveals a chain of action that is needed for the theory to work. Third, it provides multiple opportunities for program evaluation that includes implementation, as well as outcome measurement. A few highlights help illustrate the usefulness of this model for program planning.

Figure 1: A 4-H Youth Development Program Model



The far left side of the model illustrates what takes place in the 4-H program itself, presented as four concentric circles with the young person's interests at the center. The information contained in this part of the model is similar to what is typically included in the outputs section of a logic model, describing what is done and who is reached. Putting the young person in the middle emphasizes a value upon which 4-H has always been defined: Engage a young person in something that interests them, and provide opportunities for learning and growth related to this interest (Benson & Scales, 2011). Those familiar with 4-H will easily see the 4-H project is the mechanism through which youth are engaged. Whether this is a traditional project, such as

raising a lamb, or something new, like ocean conservation, 4-H begins with a young person's interests and builds toward youth development. Benson and Scales (2011) highlighted the idea of a personal *spark*, the importance of helping youth discover their *spark*, and the connection of *sparks* to a thriving trajectory as a key building block of PYD. Engaging youth in activities that captivate them and facilitating their interests is synonymous with the concept of *sparks*. Again, we see something the 4-H program has done for years centrally placed in contemporary adolescent research. Not only does this circle represent the *translation of research* into practice, it also highlights the *theory of action and change* (engaging youth in something they enjoy that is provided in a PYD context) necessary for the model of youth development to unfold.

The remaining three circles represent important aspects of the 4-H program with clear connection to program theories of change and action: (1) Surround the young person with a high quality program built on best practices for youth development (Eccles & Gootman, 2002); (2) Provide sufficient program exposure, the understanding of which is still unclear in the field of youth development [see Gagnon et al. (2015) for a discussion of program dosage]; and (3) Provide developmental relationships (Search Institute, 2014a) that illuminate the various important supportive relationships youth have with adults and other youth. The long-standing program practice of adult volunteer-led 4-H clubs, with abundant opportunity for peer interactions, vibrantly demonstrates the foundational presence of developmental relationships in 4-H Youth Development programs. This concept is also consistent with supporting dimensions of adolescent thriving (Scales, Benson, & Roehlkepartain, 2011).

Together, the concentric circles of the model that illustrate the 4-H program reveal a detailed program theory of change and action. The success of 4-H programs is contingent upon the specific interest and engagement that brings youth to the program. Success is also realized through high program quality that ensures youth have a positive and developmentally-appropriate experience, with sufficient time (dosage) to influence the direction of a young person's life. What constitutes sufficient program dosage is somewhat imprecise and in need of further research. However, a meta-analysis of positive youth development programs conducted by Catalano, Berglund, Ryan, Lonczak, and Hawkins (2004) found that the most effective programs were at least nine months in duration. Other research points to the importance of the quality of the time in the program, not just the quantity (Goleman, 2013). Finally, the outside circle of the umbrella program model illustrates that PYD programs are marked by the presence of developmental relationships that emphasize specific qualities that support and facilitate growth in youth (Search Institute, 2014a).

To the right of the concentric circles that represent what happens in a given 4-H program, the cone-shaped middle section of the model represents a thriving trajectory of youth development, drawn from extensive research conducted by the Search Institute (2014). The thriving trajectory model has been presented in the youth development research to describe how youth develop in a

positive way. Other ways of describing and predicting youth development could be used here, for example the *Five C's* (Lerner & Lerner, 2011) or the *Targeting Life Skills Model* (Hendricks, 1996). The point is that whatever is contained in the middle section of the model needs to describe exactly how a youth will develop as a result of participating in 4-H.

For example, the thriving trajectory portrayed in the umbrella model presented here contains six indicators that define thriving and that encompass the different aspects of positive youth development. Returning to Seevers et al. (1997), 4-H has a long history of encouraging youth to set and achieve goals, based on the principle that doing so helps young people challenge themselves to achieve excellence and learn to navigate obstacles when goals are not easily met. In today's PYD understanding, this is called *adaptive or intentional self-regulation* (Geldhof et al., 2013; Search Institute, 2014b) and is supported by research as a key function of how youth grow. Similarly, encouraging youth to have a *growth mindset* (Dweck, 2006; Yeager & Dweck, 2012) and an *openness to challenge and change* (Search Institute, 2014b) have been demonstrated to be key PYD principles. This middle section of the model reveals the initial outcomes that are typically found on a traditional program logic model, but with the addition of a theory of change (youth who thrive do better than those who do not) and a theory of action (youth who are provided opportunities to develop a growth mindset through 4-H are more likely to thrive). Youth who possess this type of mindset can set goals and adapt to challenges. When combined with the strengths found in the other five thriving indicators, a young person is described as being on a thriving trajectory toward achieving the medium- and long-term program outcomes at the far right side of the model.

Without all of these components working together, the 4-H program falls short of developing a program of best practices for youth development based on research. Yet, how many 4-H program planners have this understanding when they draft a 4-H program to meet a local need? And how many well-intentioned program logic models for 4-H programs carefully consider these critical program ingredients? And perhaps even more to the point, does this theoretical burden properly belong on the shoulders of local Extension professionals to plan high-quality programs? As with the case of program evaluation (Arnold & Cater, in press; Lambur, 2008), I would argue that the proper place for ensuring accurate program theory of change and action lies higher up in the organization. The development of *umbrella* program models, such as the one presented here, provides the program theory under which local professionals can plan effective local programs.

Implications of Umbrella Program Models for Local Extension Professionals

The development of *umbrella* program models to guide program planning efforts of local professionals, indeed professionals at all levels across an Extension program area, has several important implications. First, with an up-to-date program model that elucidates program theory of change and action in hand, professionals are better equipped to plan effective local programs

based on current research. With such models in hand, the framework of program planning outlined by Seevers et al. (2012) can be better utilized. The process of translating research into umbrella program models is not an easy or quick endeavor and requires a team knowledgeable in the subject matter to translate research into program theory. In addition, as further knowledge emerges from ongoing research, program models must be updated regularly to stay current and accurate.

Perhaps of greater concern is the investment needed for ongoing capacity building for professionals to understand, embrace, and utilize a program umbrella model when planning local Extension programs. Turning to the use of umbrella models as the basis for building Extension program planning capacity-building efforts could bring renewed energy and purpose to logic model training efforts in Extension and help local professionals better utilize the program-planning framework presented by Seevers et al. (2012).

One of the enduring principles of Extension education is the creation of local programs to address local needs (Garst & McCawley, 2015). Indeed, Seevers et al. (1997) emphasize the importance of local input and collaboration as a key aspect of Extension program planning. Far from taking away locally-driven programming, an umbrella program model can help strengthen local programs. Let us consider, for example, the results of a local needs assessment that revealed an emerging interest in 4-H programming for middle school youth to ameliorate youth screen time and encourage exploration of local opportunities for outdoor recreation that are plentiful because of the community's proximity to parks, hiking trails, skate parks, swimming pools, and playfields. By using the umbrella program model, the local professional can create a program plan that not only addresses local needs and interests, but also includes elements critical to the program theory of change and action. In addition to planning a series of outings to explore recreation opportunities, the professional can use the umbrella model to define the theoretical action these outings accomplish within the larger program model. What might be an afternoon of hiking with 4-H friends can turn into a deliberately-planned youth development action that contributes to a greater overall youth development program. In this way, the local professional is not just planning a locally-relevant program, but also contributing clearly to the overall effort of the larger 4-H Youth Development Program.

Working from an umbrella program model can also enhance a local professional's ability to *bring the research to the people*. Professionals who are well-informed and clear about a program's theory of change and action, and confident in their understanding of the research base behind it, can help direct local efforts. Returning to the previous example, a community can have well-intended ideas, such as getting youth away from their electronic devices and into the outdoors. A local professional who is well-prepared in 4-H Youth Development theory can help guide that conversation to a broader understanding of the positive youth development that can happen beyond just getting young people outdoors. The umbrella model can be used to explain

what young people need to be successful overall and the important strategies needed to ensure program success. In this way, the community can move from a desire to help youth to a clear understanding of the process of youth development and the important role that youth interaction with their community contexts plays in optimal development. Communities then can move from isolated short-term program activities that may not accomplish much to an understanding of how multiple efforts, when contained within a larger program model of change and action, can lead to more significant change in the health of youth. At the same time, a well-defined program model can help connect a professional's local work to a more robust state- or national-level program based in research, thus increasing the possibility of more sophisticated program evaluation, and ultimately, program accountability (Borden et al., 2014). But this is only possible if the local Extension professional is clear on the theory and action at the start, which has clear implications for Extension professional development efforts related to the dissemination of umbrella models for effective program planning.

Umbrella program models can also help with the perennial Extension problem of priority setting (Forest & Mulcahy, 1976). Using program planning to set program priorities is a large part of Seevers et al.'s (1997) section on program planning. Using an umbrella model centrally when planning local programs can help professionals and stakeholders develop programs that provide the greatest fidelity to the program model (and thus the greatest likelihood of achieving outcomes), which can serve as a determinant for which programs should receive priority.

Perhaps most importantly, umbrella models can provide clarity of focus and purpose for local professionals, and a place to begin planning quality local programs, rather than starting from scratch and without the guidance of relevant research and program theory. If every local professional begins at the same place when planning programs, the potential exists for a workforce that is more unified in purpose and message, which in turn can contribute to the recognition of 4-H, not just because of tradition or the presence of the 4-H Clover, but because of a common articulated program plan that produces consistent and measureable outcomes.

Implications for Other Extension Program Areas

The umbrella model presented in this paper represents only one of the Extension program areas, and admittedly, the 4-H Youth Development Program may be more conducive for the development and use of an umbrella model. Unlike other Extension programs, the 4-H program is fairly well-defined due to the relatively strong agreement of the general program definition, purpose, and method among 4-H Extension professionals. As aforementioned, 4-H programs across the Extension system are embedded in other structures that support and engage 4-H professionals in defining program principles and practices. In addition, research that supports the 4-H program model is principally drawn from the focused area of PYD scholarship, which although complex in its own right, still provides a well-developed foundation for articulating

program theory of change and theory of action. The national 4-H program has also invested considerable time and energy into developing detailed program logic models for its three signature program mandates: Healthy Living, Science, and Citizenship. While still lacking articulated theories of change and action, these models mean that local 4-H professionals do not have to start from scratch when planning programs in these areas.

Other Extension program areas are more complex for a variety of reasons. First, many program areas are interdisciplinary, covering a variety of topics (and thus research bases). For example, Extension family and community programs may cover topics from economic vitality to obesity, to disease prevention, to gerontology, to personal finance, to parenting, all of which have separate research bases. The intention at the core of these programs, however, is to provide education to citizens to change behavior and practice for the better. The programs planned in this area can benefit greatly from a common understanding of the theory of change (How do people change behavior based on new knowledge?) and theory of action (What needs to be done to support people to translate new knowledge into action?) (Anderson, 2005). So, while the specific content may differ, an umbrella model for Extension family and community programs can help local professionals design programs using methods that align with creating change. One such model is the *Transtheoretical Model of Health Behavior Change* (Pochaska & Velicer, 1997) that outlines six stages of change through which humans typically go when adopting a new health behavior. Such theoretical models of change can be included in umbrella program models for Extension programs that address health-behavior change, regardless of the specific health topic being addressed.

Similar understandings of the processes involved in the adoption of new methods and behaviors, as well as the activities that lead to successful behavior change, can form the basis of umbrella program models in other Extension program areas. For example, Tobler, Visschers, and Siegrist (2011) reported a study that examined the willingness of consumers to adopt behaviors that support ecological food consumption, the results of which have theoretical implications for Extension environmental, agricultural, and consumer health programs. This study revealed that certain people were more likely to adopt ecological food consumption than others (i.e., women and individuals who already preferred natural foods). Including this information in program plans targeted at changing food consumption patterns to improve agricultural, environmental, and health-related concerns will help develop a stronger program theory of change, which in turn influences the planned theory of action.

Conclusion

As part of this special issue on updating Extension practice, this paper provided an examination of the utility of the Extension program planning framework by Seevers et al. (1997), which has provided a comprehensive method for planning Extension programs at the local level. As noted,

the framework has continued applicability and utility for today's Extension professionals and still serves as the basis for developing program logic models. However, logic models fall short of full effectiveness if sufficient attention is not paid to articulating the program's theory of change and theory of action. These theoretical aspects of program planning underscore the need for attention to program implementation, specifically in relationship to program fidelity and the critical components and actions that are necessary to ensure program success.

In addition to articulating program theory, the use of an umbrella program model approach was proposed as a method for connecting Extension programs more clearly to the research base that informs them. This calls for an increased focus on the translation of research into Extension practice. While umbrella models that articulate theory have potential for transforming the quality of Extension programs and aiding in the achievement of program outcomes, they will not be adequately used at the local level without a renewed emphasis on program planning capacity-building efforts across the system. In addition, while the emphasis on logic modeling for Extension in the past 15 years has changed the way we think about and report on programs, there is little evidence to support its impact on program quality, unity, or convincing program outcomes. The expectations for Extension program accountability are more pressing than ever, and a renewed investment in program planning and evaluation capacity building is needed. Attention to program theory, translation of research, and umbrella program models are three ways in which capacity-building efforts may be directed.

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Factors Impacting Program Delivery: The Importance of Implementation Research in Extension

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Cooperative Extension is in a unique position, given its relationship with research-based, Land-Grant Universities, to advance the scholarship of implementation research. A stronger shift towards evidence-based practice has been occurring, oriented towards the assessment of programs for outcomes. This paper explores core concepts related to program implementation and delves into factors that influence successful implementation of Extension programs and services. The importance of implementation within the Extension Program Development Model is explored, along with emerging issues and trends.

Keywords: implementation, engagement, evidence-based practices, Extension, Cooperative Extension, program evaluation, scholarship

In 2014, Cooperative Extension (Extension) celebrated its 100th anniversary—a time to reflect on the work of the last century, and to examine how the system has changed and how it needs to evolve in the future. While the core mission and vision for Extension to translate research into practice remains the same, the challenges associated with implementing programs have evolved as communities and organizational environments have changed. By understanding research related to program implementation, Extension professionals at the national, state, and local levels can advance the scholarship of Extension and deliver evidence-based programs that continue to meet and exceed stakeholder needs for the next 100 years.

The social sciences continue to evolve towards evidence-based practice (Mowbray, Holter, Teague, & Bybee, 2003; Stein et al., 2008), and this shift has been noticeable within Extension education. For example, Spoth, Gyll, Lillehoj, Redmond, and Greenberg (2007) developed

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PROSPER (PROmoting School-community-university Partnerships to Enhance Resilience)—a “three-component community-university partnership model that includes community teams, university Extension linking agents, and university researchers” (p. 984). This partnership model allows Extension communities to choose from a menu of evidence-based programs and interventions.

The evidence-based movement focuses on *outcomes assessment*—ensuring that programmatic outcomes are achieved (Aarons, Sommerfeld, Hecht, Silovsky, & Chaffin, 2009). This orientation toward outcomes often sacrifices another important component of programs, their *implementation*—how programs are delivered (Berkel, Mauricio, Schoenfelder, & Sandler, 2011). Considering implementation assessment in the program development process provides a more complete picture of the efficacy of programs and services and a richer understanding of why a program succeeded or failed.

This paper explores the concept of program implementation in the Extension community of practitioners, factors that contribute to high quality program implementation, and strategies and trends for advancing implementation research within Extension settings. This paper is particularly relevant for Extension given the relative paucity of work investigating program implementation and its corresponding assessment within the context of Extension work (Duerden & Witt, 2012).

Importance of Implementation Research in Cooperative Extension

Much of the research related to program implementation has occurred in the prevention and health sciences fields (Duerden & Witt, 2012; Sloboda, Dusenbury, & Petras, 2014). These fields have strong parallels with Extension work in both community-based participatory research (Israel, Eng, Schulz, & Parker, 2013) and transformative learning (Franz, Garst, Baughman, Smith, & Peters, 2009). Implementation research is “the scientific inquiry into questions concerning implementation—the act of carrying an intention into effect” (Peters, Adam, Alonge, Agyepong, & Tran, 2013, p. 1). Put simply, when we investigate implementation, we look at how a program was delivered, rather than what outcomes were achieved. The consideration of program implementation is an essential aspect of the program planning, development, and evaluation process (Berkel et al., 2011; Seever & Graham, 2012). A well-designed program can have differing levels of success depending on the quality and quantity of implementation. If only a portion of a program was delivered as designed, it is reasonable to anticipate that only a portion of the desired outcomes (if any) will be achieved (Duerden & Witt, 2012). Conversely, if a program’s content is present but lacks high quality delivery as intended by program designers, implementation value and corresponding outcomes can, and often do, suffer (Mihalic, Fagan, & Argamaso, 2008). The importance of implementation is clear: programs delivered with high quality implementation tend to produce positive outcomes more consistently than programs

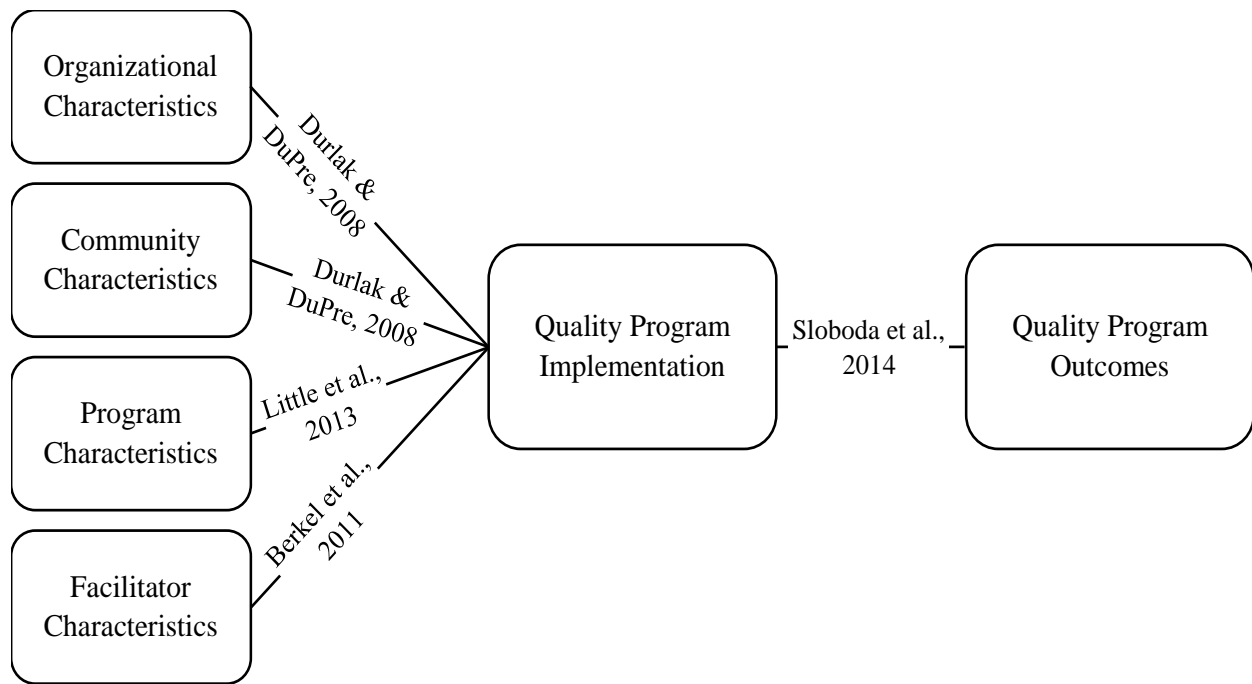
delivered with lower quality implementation (Biglan & Taylor, 2000; Dane & Schneider, 1998; Durlak & DuPre, 2008; Mihalic, 2002). A failure to pay attention to implementation can also impact program outcomes in other ways. As noted by Caldwell et al. (2008), “Small effect sizes or findings inconsistent with well-reasoned hypotheses may not be related to the efficacy of the program as it was designed, but rather be related to failure to implement the program as intended” (p. 148).

Another important reason for monitoring program implementation occurs when a program moves from efficacy trials, where researchers typically have a high level of control, to the *real world*, where the program is delivered to its intended audience with less control by program developers or evaluators (Mihalic et al., 2008). In this situation, implementation assessment helps determine if research-based programs are practical and transferable in real-world settings (Fixsen, Blase, Naoom, & Wallace, 2009; Johnson, Mellard, Fuchs, & McKnight, 2006). Furthermore, as a primary goal of programs is to enhance participant well-being, it is important to understand how factors such as implementation mediate and/or moderate the associations between participation in a program and the program’s desired outcomes (Stein et al., 2008). Additionally, implementation assessment ensures that programs are delivered consistently across sites and highlights potential explanations for omissions or modifications to a program. Finally, the pairing of implementation assessment with a traditional outcome evaluation provides “the identification of effective programs and practices” (Duerden & Witt, 2012, p. 2), and this pairing provides a gold standard for Extension programs.

Factors Contributing to Effective Extension Program Implementation

Several factors contribute to effective program implementation, including the characteristics of the organization providing the programs (e.g., leadership and decision-maker buy-in and funding, organizational staffing structure), community-level characteristics (e.g., funding and political atmosphere), program characteristics (e.g., culture for which it was developed versus culture to which it is being delivered, the context the program is being delivered in, the resources necessary to deliver the program), and the characteristics of the program facilitators (e.g., their level of training, program buy-in, and experience) (Berkel et al., 2011; Dane & Schneider, 1998; Durlak & DuPre, 2008; Little, Sussman, Sun, & Rohrbach, 2013). Figure 1 (next page) illustrates how current literature indicates these factors contribute to program implementation and corresponding program outcomes.

Figure 1. Conceptual Model of the Factors Contributing to Quality Program Implementation and Corresponding Outcomes



Organizational Characteristics

Organizational characteristics and leadership influence the quality of program implementation. For example, Gottfredson and colleagues (2000) found program implementation quality was clearly predicted by the level of administrative and managerial support provided by supervisory and organizational staff. This administrative support can include managing concerns, handling the overall process of program implementation (to include logistical, financial, and personnel issues), providing encouragement to program facilitators, and developing and maintaining engagement at multiple levels within and outside of an organization (Durlak & DuPre, 2008). Durlak and DuPre (2008) analyzed over 500 studies of implementation and noted that effective administrative leadership positively influenced the quality of program implementation. This is further supported by the work of Kam, Greenberg, and Walls (2003) who, in an investigation of program implementation, found that quality organizational support led to the best outcomes for students and to higher quality programs. These researchers also found that the quality of program implementation negatively suffered when administrative support was low.

The capacity of an organization also influences the quality of implementation achieved. *Organizational capacity* includes a group's level of planning, vision development and execution, resources, communication, and fiscal management (Fredericksen & London, 2000).

Organizational capacity factors that influence implementation include the level and consistency of communication within an organization, community engagement (community buy-in) (Riley, Taylor, & Elliott, 2003), and organizational competence (Wandersman et al., 2008). In a study of health promotion programs, Riley et al. (2003) found that higher levels of organizational capacity were positively correlated with higher levels of program implementation.

The availability of technical assistance influences program implementation and is a critical component of successful program implementation (Durlak & DuPre, 2008). *Technical assistance* includes the training of program facilitators and program administrators, program evaluation and feedback, program monitoring, coaching, involvement of facilitators in program design, and the additional resources available to program stakeholders (e.g., brochures, manuals, online communities) (Wandersman et al., 2008). Mihalic et al. (2008) found that quality technical assistance prevented or identified potential programmatic issues that may have compromised implementation. Furthermore, when technical assistance is provided and used effectively, program quality increases (Wandersman et al., 2008).

Community Characteristics

An important consideration regarding program implementation relates to the characteristics of the community in which a program is delivered. If a program is designed for higher-resourced, English-speaking participants, but is delivered to lower-resourced, Spanish-speaking participants, it is no surprise that the quality of implementation may suffer. This *cultural mismatch* occurs frequently within social and prevention programs (Castro, Barrera, & Martinez, 2004). Furthermore, when a community is not consulted or ready for a program, community stakeholders may be disinterested in the program. Needs assessment offers one way to gauge community-level interest in Extension programs (Garst & McCawley, 2015). Another consideration regarding a program's successful implementation within a community relates to the context for which it was designed versus the context in which it is currently being delivered (urban versus rural). Extension program administrators must consider these factors when choosing and delivering programs within the communities they serve (Castro et al., 2004).

Another important community characteristic for successful program implementation relates to the participants in the community being served and their responsiveness to the program. According to James Bell Associates (2009), *participant responsiveness* refers to "the manner in which participants react to or engage in a program. Aspects of participant responsiveness can include participants' level of interest; perceptions about the relevance and usefulness of a program; and their level of engagement" (p. 2). Participant responsiveness may influence outcomes and quality of program implementation. For example, "the less enthusiastic participants are about an intervention, the less likely the intervention is to be implemented properly and fully" (Carroll et al., 2007, p. 3). If participants are not responsive to a program or

the program facilitator or are unable to engage for other reasons with the program, this may influence a facilitator's program delivery and compromise the quality of program implementation (Century, Freeman, & Rudnick, 2008).

Program Characteristics

The characteristics of a program may also influence levels of program implementation. If a program is too complex, too lengthy, or inappropriate for the population being served, the likelihood of a program being delivered as designed may be low (Pereplectchikova, Treat, & Kazdin, 2007). Furthermore, Extension programs are designed inherently for the community they are serving by addressing "the problems, issues, concerns of local communities" (Garst & McCawley, 2015, p. 27). Thus, if a program is not tailored to a local group, the quality to which it is implemented may suffer (Arnold, 2015)

Conversely, if programs are too simple, it may lead those delivering a program to change or modify the program to alleviate boredom or more fully engage participants (Carroll et al., 2007). Program complexity and organization are associated with successful implementation. Programs with clear processes and outcomes are easier to implement and less likely to result in low-quality implementation (Mihalic, Irwin, Elliott, Fagan, & Hansen, 2004).

Facilitator Characteristics

Individuals providing programs exert great influence over how programs are implemented. These program professionals (referred to here as facilitators) and their corresponding characteristics (e.g., program-specific training, program buy-in, level of experience facilitating groups, overall competency) can significantly impact the quality of program delivery (Dusenbury, Brannigan, Falco, & Hansen, 2003; Mihalic et al., 2008; Pereplectchikova et al., 2007; Sloboda et al., 2014) by changing the program design, the intended method of delivery, and the structure of a program, and by adapting program materials (e.g., curriculum, program settings, program components, and so on).

The level and quality of training offered to program facilitators has been shown to be positively associated with both positive programmatic outcomes and quality implementation (Cyr, 2008; Dufrene, Noell, Gilbertson, & Duhon, 2005). When training was active and engaging and involved role playing, peer observation, and timely feedback, facilitator program buy-in, motivation, and self-efficacy were enhanced, and thereby, quality of program delivery (Durlak & DuPre, 2008). In a study of substance abuse prevention programs Little et al. (2013) found that comprehensive training had a significant positive impact on implementation. On the other hand, inconsistent or poor training negatively impacted a facilitator's ability to implement a program as designed (Gottfredson et al., 2000).

Facilitator buy-in can have a profound effect on both program implementation and outcomes. *Facilitator buy-in* is the level of motivation a facilitator has to facilitate, his/her belief in the goals of a program, his/her attitude about a program, and his/her level of agreement that the program will be successful (Dusenbury et al., 2003; Dusenbury, Brannigan, Hansen, Walsh, & Falco, 2005; Johnson et al., 2006). Quality implementation and achievement of positive program outcomes (Durlak & DuPre, 2008; Stein et al., 2008) are correlated with facilitator buy-in.

Experience is another factor that influences how facilitators implement program goals (Nobel et al., 2006) because prior program implementation experience helps facilitators feel more comfortable presenting in front of a group (Allen, Hunter, & Donohue, 1989) and may enhance one's competence and confidence in delivering programs. However, experience may also lead a facilitator to overestimate his/her competence, thereby negatively affecting program delivery (Zollo & Gottschalg, 2004). Finally, there also appears to be a relationship between facilitator competency and quality program implementation. *Competency* can be defined as the level of skill and understanding a facilitator possesses when delivering a program (Milligan, 1998). In an investigation of Extension program facilitators, Cyr (2008) found that quality training enhanced facilitator competency and contributed facilitators feeling more confident about their efficacy as facilitators. However, this study did not link this competency explicitly with improvement to programmatic implementation or outcomes.

Program Adaptation

A defining characteristic of Extension programs and services is that they take place in real-world, applied settings. Therefore, despite evidence of the importance of maintaining high-quality implementation (i.e., delivering a program as designed by the developers) producing better program outcomes (Dane & Schneider, 1998), adaptations to programs are commonplace within Extension program delivery. As noted by Carroll et al. (2007), "An intervention cannot always be implemented fully in the real world. Local conditions may require it to be flexible and adaptable" (p. 5). An adaptation occurs when an Extension professional changes, adapts, adds to, or omits material from the program as developed by program designers. There are two basic forms of program adaptation: changing the program content and changing the program delivery mode (Mowbray et al., 2003). Changing the program content involves adding or deleting material (e.g., adding a section about leadership to a team building program). Changing the program delivery mode involves delivering the same content with changes based on factors such as the audience or environment (e.g., if a program was to occur outside, but due to weather, was located indoors; if a program's language had to be modified for a different audience, such as an English language program being delivered to a Spanish-speaking audience) Castro et al., 2004). According to Elliot and Mihalic (2004), "There is a long history of tension between the need to implement programs as they were designed and delivered in their efficacy and effectiveness trials and the need to make local adaptations to 'fit' the program to local conditions" (p. 50).

Extension professionals and researchers should be pragmatic with their programs as they transfer from an efficacy trial setting to the *real world*, where they have less control, and program staff have implementation preferences that developers may not have considered. For example, Extension professionals often feel uncomfortable teaching sessions on body image even though nutrition and health program developers know this education leads to improved health. Programmatic adaptations are highly likely to occur with programs during transfer from development to implementation (Hill, Maucione, & Hood, 2007). One solution for better transfer is to design programs and corresponding program evaluations with adaptation in mind (Durlak & DuPre, 2008). Greenwood, Tapia, Abbott, and Walton (2003) noted that their program was intentionally designed with adaptability in mind as long as it positively contributed to the desired outcomes. If a particular facilitator was doing something outside of the program implementation plan but was improving literacy scores (the desired program outcome), then that facilitator would share his/her technique and train peers at the next training session, thereby incorporating a new aspect into the program. An adaptation should be considered a compromise to implementation—a compromise that does not always have a negative influence on programs.

Assessing and Measuring Program Implementation

Extension professionals recognize the importance of delivering programs according to how they are designed—a core tenet of measuring implementation quality (Dusenbury et al., 2003; Hansen, 2014). Measuring and monitoring program implementation ensures that a program plan is adhered to as designed by program developers. However, implementation assessment is more difficult than a traditional outcomes assessment. Investigation of a program's implementation level requires more training for program evaluators, more time, and more resources (Hansen, 2014; Mihalic et al., 2008). This measurement typically takes place through process evaluations that examine the elements of a program and how they can be enhanced (U.S. Department of Health and Human Services, 2002). Program implementation assessment tells if the relationship between program delivery and program outcomes is accurate (Moncher & Prinz, 1991). If high-quality program implementation is maintained, but desired outcomes are not achieved, then this may suggest the need for program modification or cancellation. The monitoring of a program for quality implementation also can be used to determine what program components or features were or were not present, or what adaptations and omissions occurred, and to provide confirmation that a program is being provided as designed (Mowbray et al., 2003).

Program implementation quality is typically measured using three methods: indirect, direct, and hybrid assessments (Gresham, MacMillan, Beebe-Frankenberger, & Bocian, 2000). In a *direct assessment*, the components and features of a program are clearly specified in operational terms on a checklist based on the major program components. In many programs, direct observation is preferred for monitoring program implementation (Domitrovich & Greenberg, 2000). In a direct assessment, trained staff observe the program and determine the percentage of the program

implemented as designed. Staff also identify facilitators needing retraining due to low levels of implementation and/or omission or adaptation of program materials (Gresham, 1989).

In an *indirect assessment*, methods for monitoring implementation include self-reports, interviews, and permanent products (Gresham, 1989). For example, a facilitator would rate himself/herself on a seven-point Likert Scale on the degree to which he/she implemented each section of a program with fidelity. By completing a self-report, facilitators may become more aware of areas to maintain and improve fidelity. They may pay more attention to enhancing fidelity in those areas in future program implementation. Another useful option for the assessment of program implementation relates to the use of structured facilitator journals. In a study of camp staff, Mainieri and Hill (2015) used daily camp counselor journaling of program activities, adherence to the suggested program components, and reasons for deviations from the program plan. The information contained in these journals was useful in determining how programs were being modified and the underlying causes of the modifications or omissions. Finally, a *hybrid assessment* involves the blend of indirect and direct strategies (i.e., observation combined with self-report). This strategy is useful in triangulating the strategies to obtain a true score of a facilitator's implementation quality rather than being limited to one method of implementation assessment (Mainieri & Anderson, 2014).

Extension professionals interested in enhancing program implementation can focus on five dimensions of program delivery: fidelity, exposure, quality of program delivery, facilitator competence, and program differentiation (Berkel et al., 2011; Dane & Schneider, 1998; Gagnon, 2014; Hansen, 2014; Mihalic, 2009; Milligan, 1998).

- (a) *Fidelity* refers to whether the Extension program service or intervention is being delivered as it was originally designed or written (i.e., with all core components being delivered to the appropriate population; staff trained appropriately) using the right protocols, techniques, and materials; and in the locations or contexts prescribed.
- (b) *Exposure* (or *dosage*) may include the number of educational sessions implemented, length of each session, or the frequency with which program techniques were implemented.
- (c) *Quality of Program Delivery* is the manner in which an Extension professional, volunteer, or other worker delivers a program (e.g., skill in using the techniques or methods prescribed by the program, enthusiasm, preparedness, and attitude).
- (d) *Competency* is the level of skill and understanding an Extension professional, volunteer, or other worker possesses and demonstrates when delivering a program.
- (e) *Program Differentiation* identifies the unique features and different components of programs that are consistently differentiated from one another.

Implications and Future Directions

This paper's examination of implementation quality has important implications for Extension because effective program implementation has Extension-wide relevance. As stated earlier, Gottfredson and colleagues (2000) found that implementation quality levels were clearly predicted by the level of administrative and managerial support for program implementation. Extension professionals at all levels are in a position to support and advance the scholarship of Extension through implementation research. Considering the emphasis that Extension places on program quality and meeting the needs of Extension stakeholders (Garst & McCawley, 2015), implementation assessment should be a core goal of Extension for the next 100 years.

With clear movement towards evidence-based practices within its communities, not only due to the demands of funders and legislators, there is a need to ensure that Extension professionals are implementing the very best programs and services possible. The strength of implementation assessment is that it highlights not only areas that Extension can improve, but also current areas of strength. Implementation assessment also highlights the move from research to practice and the challenges of working in the *real world* versus the laboratory environment. When the assessment of implementation quality is conducted, practical data are often discovered (e.g., the program is culturally inappropriate, the participants are not engaged, there is not enough time to deliver all components). Thoughtful consideration of how programs are implemented is necessary to achieve the best possible outcomes for Extension program participants.

Many factors may enhance or negate quality program implementation. As mentioned earlier, Extension work is only done well when all levels of delivery from the organization to the participants themselves are engaged and considered in terms of their contribution to quality implementation. When this complexity (Figure 1) is considered, quality program outcomes generally follow (Dane & Schneider, 1998; Durlak & DuPre, 2008). Given the lack of implementation science research (Duerden & Witt, 2012), Extension has an opportunity to contribute to implementation science to further not only its own research base, but also that of the broader social and prevention sciences.

Extension's real-world setting also provides a rich opportunity for research into both cultural and practical adaptations of research-based programs (Castro et al., 2004). When the research and applications *mismatch*, adaptations to programs often occur. Understanding why, and more importantly how, this happens will only help to serve Extension's constituency by allowing Extension professionals to develop and modify programs that better serve the needs of program participants through better outcomes. Program funders will also support more effective and efficient programs.

Implementation work, in spite of its broad support in the social sciences, is still very much in its infancy. Furthermore, by its nature, it requires more resources than a traditional outcomes assessment. However, because a core goal of Extension is the dissemination and replication of evidence-based programs, it is a necessary cost. By measuring programs for their implementation quality, Extension, as a field committed to both service and research, will be better able to make accurate statements about program efficacy and benefits to constituents.

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From Farm Results Demonstrations to Multistate Impact Designs: Cooperative Extension Navigates its Way Through Evaluation Pathways

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This article explores how evaluation has been developed and expanded within the Cooperative Extension system, from the beginning of agricultural education in America in 1800 to the present day. Important periods across the history of Extension evaluation have been identified and categorized according to major themes and significant contributions of Extension individuals and organizations. Challenges for the future of evaluation within Extension are discussed.

Keywords: evaluation, Cooperative Extension, Extension, National Institute of Food and Agriculture, NIFA, Smith-Lever Act, Food and Agriculture Act, Governance and Performance Results Act, Agricultural Research Extension and Education Reform Act

Evaluation is essential at every stage of Extension's educational program efforts (Seevers & Graham, 2012). In a 2008 article in *New Directions for Evaluation*, Michael Quinn Patton, author of many books on evaluation methodology, compares the principles of Extension work with the principles of evaluation. According to Patton (2008), both Extension work and evaluation work contain these mutual elements:

- Determining who the clients are or should be,
- Determining the program (or evaluation) needs of the clients,
- Gathering the needed information,

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- Presenting information (or findings) to the clients, and
- Working with clients (decision makers) to apply the information or findings.

In this article, we first used two methods to develop themes related to evaluation in the Cooperative Extension (Extension) system. One method examined the requirements for data collection and reporting in several pieces of federal legislation, including the Smith-Lever Act in 1914; the Food and Agriculture Act in 1977; the Governance and Performance Results Act in 1993; and the Agricultural Research, Extension and Education Reform Act in 1998. The second method included a content analysis of articles published in the *Journal of Extension* from 1965 to 2014 that used the words *evaluate*, *evaluation*, or *evaluating* in the title. These two methods are combined in this article to create a framework for examining Extension evaluation across time.

A Timeline of Themes Related to Extension's Journey in Evaluation

1800 to 1913 – Experimental Design and Results Demonstration

Early experimental agricultural studies were conducted by agricultural societies interested in adopting new methods to improve American farm conditions (Seevers & Graham, 2012). Agriculture publications began to appear in 1821 and included *The American Agriculturist* and *American Farmer* (Seevers & Graham, 2012). In 1862, the Organic Act created the U.S. Department of Agriculture (USDA), and by 1889, the new organization was publishing research for farmers in *Farmers' Bulletins* (Seevers & Graham, 2012). In 1875, Land-Grant Universities (LGUs) established experimental agricultural stations. The stations provided information to farmers on topics such as which crops were the most profitable, how to control disease, and how to produce superior livestock (Seevers & Graham, 2012). A bill to support these experimental stations, called the Hatch Act, was passed in 1887.

The earliest evaluation efforts have been called *result demonstrations* “conducted under direct supervision of an Extension professional to show the advantages of a recommended practice” (Seevers & Graham, 2012, p. 158). Seaman Knapp found that farmers would not change their methods of farming unless they conducted the demonstration themselves on their own farms under ordinary conditions (Seevers & Graham, 2012). In 1902, under Knapp's direction, Walter C. Porter farmed about 70 acres and kept records of costs and yields. As a result, Mr. Porter reported making \$700 more. The demonstration farms yielded, on average, two times as much as farms in the same localities where the demonstrations were not followed (Seevers & Graham, 2012). Other Extension professionals also used the demonstration method. The first home demonstration agents, who began their work around 1910, established measurable objectives that included improving home sanitation, eliminating contagious diseases, and encouraging thrift (Seevers & Graham, 2012).

1914 to 1976 – Operations, Activity, and Participation

The Smith-Lever Act was passed in 1914 establishing the Extension system (Association of Public and Land-Grant Universities [APLU], 2012). In this legislation, Congress wanted “a full and detailed report of its operations” – not a report of its impact. It would be a long while before Extension created policies to make impact reporting mandatory; however, some people within the system were beginning to advocate for it. In 1971, Boone, Dolan, and Shearon wrote:

A major challenge confronting the educational institution is that of determining the impact of its planned programming efforts in effecting desired behavioral changes in its publics. To achieve this end every subsystem within the organization must perfect and utilize tested and valid methods for pinpointing evidences in relation to their program objectives and for collecting such evidences. (p. 18)

1977 to 1989 – Accountability

In their 2008 article, Rennekamp and Engle offered a quote illustrating the new attitudes that prevailed in the 1980s, which brought about a new era for program evaluation in Extension (Rennekamp & Engle, 2008, p. 22):

No longer can it be taken for granted that programs are good and appropriate. Extension is operating in a new environment—an environment of more open criticism and demands for justification of actions. All publicly funded agencies, not just Extension, are vulnerable in these times. In an era of accountability, Extension must be able to defend who and how people are being served. It also needs to document that programs are achieving positive results (Andrews, 1983, p. 8).

The important legislation in this time period was Section 1459 of the Food and Agriculture Act, passed in 1977. It “ushered in a new era of evaluation activity” (Seevers, Graham, & Conklin, 2007, p. 178). The Secretary of Agriculture was directed to transmit to Congress “an evaluation of the economic and social consequences of...programs” (U.S. Department of Agriculture, 1977, Section 1459). A 1980 report by the Secretary of Agriculture found Extension’s accountability work to be “short on impacts” and long on documenting participation and activity levels of programs (Warner & Christenson, 1984, p. 17). In 1981, an assessment of Extension issued by the U.S. General Accounting Office, cited a need for improved evaluation and accountability. Also, the Extension Committee on Organization and Policy (ECOP) appointed a national task force that called for system-wide accomplishment data and evaluation of high priority programs, as well as a national staff for planning and accountability (National Task Force, 1981; Rennekamp & Engle, 2008).

During this time period, there were efforts to create a national reporting system. Bennett, in a 1996 article, described various attempts to create a national reporting system:

1. The Extension Management Information System (EMIS), launched in 1970 and discontinued in 1981, collected staff time, program activities, and clientele participation. State Extension staff largely did not use it, and the statistics proved useless.
2. From 1982 to 1991, the Narrative Accomplishment Reporting System (NARS) de-emphasized quantitative indicators and encouraged states to report their program plans and outcomes from their own perspectives. These reports provided anecdotal information; however, the data could not be aggregated across institutions or programs.
3. The system used from 1992 to 1997 was called the Program Planning and Reporting System (PPARS) which focused on the information needs of the Cooperative State Research, Education, and Extension Service (CSREES) rather than on the needs of states. The data were only partially complete and were often inconsistent across states.

Evaluation methods in the 1980s were inspired by the social science academic area associated with Extension work, such as community development, rural sociology, and agricultural economics. Influential writers from these academic areas included Benjamin Bloom, Malcolm Knowles, Everett Rogers, Urie Bronfenbrenner, Claude Bennett, and others (Rennekamp & Engle, 2008). The majority (13) of 21 articles with the words *evaluate*, *evaluation*, or *evaluating* in the title, published in the *Journal of Extension* from 1965 to 1990, focused on how or why Extension, as an organization, should evaluate itself. Some article titles from this time period included *Critique of Evaluation* (Alexander, 1965), *A Practical Look at Evaluation* (Logsdon, 1975), *Evaluation: Extension Needs to Get Serious About It* (Pigg, 1980), and *Making Evaluation Manageable* (McKenna, 1981).

1990 to 2005 – Measureable Outcomes

The move from accountability reporting to outcomes measurement began at the state level around 1990. For example, in 1992, Michigan State University produced a report recommending that the university establish a system for measuring, monitoring, and evaluating outreach (Ilvento, 1997; Michigan State University, 1993). At the same time, evaluation also changed on the federal level when a national task force on accountability and evaluation called for system-wide accomplishment data. In response to this call, the Government Performance and Results Act (GPRA; Office of Management and Budget, 1993) required strategic plans and a numerical assessment of outcomes for measurement of performance of governmental organizations (Rennekamp & Engle, 2008). States also implemented performance-based budgeting initiatives similar to GPRA. For example, Florida Extension instituted an annual measurement of customer

satisfaction (Terry & Israel, 2004). In 1998, the Agricultural Research, Extension and Education Reform Act of 1998 (AREERA) was passed (U.S. Department of Agriculture, 1998a). The AREERA required state Extension programs to submit plans of work and reports of results documenting how formula-funded programs (Smith-Lever Act 3(b) & 3(c)) were achieving outcomes towards five national goals.

During this time period, Extension organizations began to hire evaluation specialists. According to Lambur (2008), their responsibilities included:

- Training others to conduct evaluations,
- Giving technical assistance,
- Being a coach or mentor to program teams,
- Coordinating and reporting on the state plan of work,
- Developing program developers, and
- Conducting evaluations.

These responsibilities describe evaluation capacity builders, rather than evaluation specialists who conduct evaluations (Guion, Boyd, & Rennekamp, 2007; Rennekamp & Arnold, 2009). Technical assistance was cited by evaluators as their most important job responsibility (Guion et al., 2007).

Notable Extension evaluators during this time period were Claude Bennett, Richard Krueger, Michael Patton, Nancy Kiernan, Ellen Taylor-Powell, and Kay Rockwell. From 1991 to 2005, 39 articles with *evaluation*, *evaluate*, or *evaluating* in the title were published in the *Journal of Extension*. The majority of articles published during this time period were, as in the past, about evaluation methods (17), followed closely by articles about evaluation in specific program areas (15). Evaluation methods discussed during this time period included sampling, focus groups, and questionnaire development.

2006 to 2015 – Multistate, Regional, and National Evaluation Collaboration

In reviewing evaluation studies published in the *Journal of Extension* from 1998 to 2007, Duttweiler (2008) concluded that there was evidence of increased state, multicounty or instate regions, and multistate evaluation occurring in Extension. The majority were statewide studies:

- Statewide studies = 52%,
- Restricted venues = 32%,
- Multicounty or instate regions = 10%, and
- Multistate = 6% (Duttweiler, 2008).

A number of national program areas in the National Institute of Food and Agriculture (NIFA) have begun efforts to collect multistate and national data. Examples of these efforts will be discussed later in this paper and include the Expanded Food and Nutrition Education Program (EFNEP), 4-H Youth Development, the Integrated Pest Management program, and Community Resource Economic Development (CRED).

Although in the final time period (2006 to 2014), the majority of articles with *evaluation*, *evaluate*, or *evaluating* in the title were still on methods (24) and evaluation in specific program areas (20), a new category had emerged – evaluation capacity (8). These articles examined ways that Extension evaluators could strengthen evaluation skills of other professionals in the system. Articles about national and multistate programs also began to appear in this time period, such as *Identifying 4-H Camping Outcomes Using a Standardized Evaluation Process Across Multiple 4-H Educational Centers* (Garst & Bruce, 2003), *Designing a Regional System of Social Indicators to Evaluate Nonpoint Source Water Projects* (Prokopy et al., 2009), and *Using Common Evaluation Instruments Across Multi-State Community Programs: A Pilot Study* (Payne & McDonald, 2012). Finally, during those last eight years, the number of evaluation articles grew to 55, almost three times the number in the first, but longer, time period of 1965 to 1990.

Location of Evaluation Within the Structure of Extension

The location of the evaluation function within the structure of Extension makes a difference in its focus. According to Lambur (2008), “What evaluators do is driven by the philosophy or approach of evaluation in the organization” (p. 48). Lambur (2008) provides four possible structural choices for the location of evaluation in Extension:

- (1) A separate evaluation unit,
- (2) Within an administrative unit,
- (3) Within a program area, or
- (4) Within an academic department or school.

Extension evaluators interviewed by Lambur (2008) identified advantages and disadvantages to each structure. If evaluation is located in an administrative unit, evaluation is more likely to be focused on the needs of the organization and on accountability rather than program impact. If evaluation is placed within a program area, the evaluator may better understand the information needs of that unit and tailor training to its members; however, these evaluators may interject more bias into evaluations. Extension professionals, placed within academic units may be less focused on accountability and may draw upon the expertise of applied researchers knowledgeable about related assessments. Extension evaluators in this study concluded that the evaluation function should be associated with a high administrative level in the organization, but

not necessarily located in the administrative department. Locating the evaluation function in program areas seemed to be the option preferred by Extension evaluators (Lambur, 2008).

Evaluation Models in Extension

In 1994, the USDA Planning and Accountability Unit conducted a series of workshops across the country on new performance mandates that included a new input/output/outcome model called a logic model based on the Hierarchy of Evidence model developed by Claude Bennett (1976). In 1995, Claude Bennett and Kay Rockwell at the University of Nebraska Extension published the Targeting Outcomes of Programs model (TOP) (Rockwell & Bennett, 2004). In this model, social, economic, and environmental (SEE) conditions, and knowledge, attitude, skill, and aspirations (KASA) outcomes, plus reaction, participation, activities, and resources are compared for program development and performance.

Ellen Taylor-Powell, who was an evaluation specialist with the University of Wisconsin – Extension, “transformed the logic model from an evaluation framework to a comprehensive program development model” (Taylor-Powell & Boyd, 2008, p. 64). In 1997, the logic model became the basis for the new planning and reporting system at the University of Wisconsin – Extension. The logic model framework was also used to develop a national nutrition education reporting system (Medeiros et al., 2005) and later was available as a public-access, online self-instruction module on the University of Wisconsin – Extension website (Taylor-Powell, Jones, & Henert, 2003). In 2007, CSREES, which is now known as NIFA, adopted a program logic model for each state’s annual plan of work and report of accomplishments (Seever et al., 2007).

Evaluation Capacity Building in Extension

As long as 45 years ago, Extension professionals asked for evaluation capacity building in Extension:

Since the major responsibility for program evaluation rests with change agents at the operational level, they must be thoroughly equipped with and skilled in the use of evaluative tools that will facilitate continuous evaluation of program outputs and inputs in relation to teaching learner level objectives and to relate these findings to the macro objectives of their long-term programs (Boone et al., 1971, p. 15).

In an article entitled, *A Critique of Evaluation*, Alexander (1965) advocated for 12 levels of evaluation capacity-building trainings as seen in Table 1.

Table 1. Levels of Evaluation Capacity Training (Alexander, 1965)

Levels	Focus of Evaluation
1, 2	Evaluations used by anyone who teaches
3, 4, 5	Evaluations used by individuals or panels with elementary skills
6, 7, 8, 9	Evaluations jointly planned with Extension specialists or similarly qualified researchers
10, 11, 12	Evaluations that include more complex research exercises and require a high degree of skill

Today, Extension evaluators still use a variety of methods to conduct evaluation, but these methods tend to be less rigorous than those used in applied social science studies. In reviewing 675 evaluation studies published in the *Journal of Extension* from 1998 to 2007, Duttweiler (2008) noted the methods mix used in Extension was not very rich. Almost two-thirds of the evaluation studies were single-point-in-time standard survey methodology; 10% used pre- and post-testing; 9% used focus groups; and 8% used qualitative interviews (Duttweiler, 2008).

The Role of Extension Knowledge Areas and Associations

Each of the four major areas of Extension work – 4-H Youth Development, Family and Consumer Science, Agriculture and Natural Resources, and Community Resource and Economic Development – has contributed in distinct ways to the evaluation efforts of Extension. Historically speaking, the agriculture and natural resources area, through its demonstration farm program and other commodity-based grants, has been collecting evaluation data for the longest period of time. 4-H Youth Development, as well as Family and Consumer Science, have improved their evaluation efforts in response to major grant-funded initiatives designed to reach low-resource populations such as Children, Youth, and Families at Risk (CYFAR) Program and Expanded Food and Nutrition Education Program (EFNEP). Community resource and economic development units have entered the Extension evaluation arena more recently and are now contributing greatly to an understanding of how to develop collaborative indicators. In this section, the contribution of each of the program areas to evaluation is described.

4-H Youth Development (4HYD)

In the late 1990s, NIFA's National Children, Youth, and Families at Risk (CYFAR) Program became a pioneer in multistate evaluation of youth and family programs. Its Internet site (<http://www.cyfernet.org> initially and <https://cyfernetsearch.org> currently) provided technical assistance in evaluation to youth program professionals. The 4-H Youth Development program area has been active in designing and implementing evaluation methodologies and tools for its major initiatives. Within the last few years, the 4-H National Headquarters and National 4-H Council have developed 4-H logic models and common measures for 4-H programming. The 4-H Common Measures will be used by 4-H professionals to document if programs are developing responsible citizens, leading healthy and productive lives, and discovering critical

science-focused innovations (National 4-H Council, n.d.a). The 4-H National Headquarters has also developed online databases for collecting data nationwide. To encourage states to follow scientifically acceptable protocols of evaluation, the National 4-H Council developed Programs of Distinction which are peer-reviewed programs that reflect the high quality of Extension youth development programs from across the U.S. and territories (National 4-H Council, n.d.b). The *Journal of Youth Development* (<http://www.nae4ha.com/journal-of-youth-development>) was created to publish Extension articles and evaluation studies in youth development and 4-H.

The National 4-H Council participated in the 4-H Study of Positive Youth Development conducted by Tufts University (<http://ase.tufts.edu/iaryd/partners.htm>). This is a longitudinal study to assess across adolescence the key characteristics of positive youth development, known as the *Five C's* of positive development – competence, confidence, character, connection, and caring (or compassion) (Lerner, Lerner, & Colleagues, 2013). The study distinguished between youth programs that incorporate *Five C's* or positive youth development (PYD) and those who do not (YD). It also evaluated the impact of key ecological assets – found in families, schools, and community-based programs such as 4-H. The study found that factors representing the *Five C's* of PYD lead to a 6th C – Contribution. It also found that both PYD and participation in YD programs independently relate to contribution; however, over the long term, PYD predicts both community contributions and lessens the likelihood of risk/problem behaviors. Analysis is still ongoing.

Family and Consumer Science (FCS)

According to the mission statement on the website of The National Extension Association of Family and Consumer Sciences (NEAFCS; <http://www.neafcs.org/about-neafcs>), members of the organization educate and improve the quality of life for individuals, families, and communities by providing education in:

- Food preparation, food safety, and nutrition;
- Financial management;
- Healthy lifestyles;
- Home and work environment and safety; and
- Relationship and parenting skills.

In Extension, family and consumer science professionals have developed evaluation studies, particularly with nutrition, wellness, parenting education, and other family relations programs. For example, the multistate team that developed the *Just In Time Parenting* program (http://www.parentinginfo.org/team_leadership.php) also developed an extensive online evaluation system to measure the value of program newsletters to consumers. Specific Extension journals also publish evaluation studies related to family and consumer science topics, including

Journal of the National Extension Association of Family and Consumer Sciences

(<http://www.neafcs.org/journal-of-neafcs>) and the *Forum for Family and Consumer Science Issues* (<http://ncsu.edu/ffci/index.php>). Some evaluation topics in these journals include studies of afterschool programming, child care providers, financial literacy programs, literacy audiences, and networks and collaborations.

One major program within the family and consumer science area in Extension is the Expanded Food and Nutrition Education Program (EFNEP), which began in 1969 (U.S. Department of Agriculture, n.d.b). It has emerged as an early pioneer in Extension evaluation. Initially, sample data were collected from some counties and used to create national reports. In the mid-1980s, data collection expanded to all program participants, and in 1993, the Evaluation/Reporting System (ERS) was released (U.S. Department of Agriculture, 1998b). ERS allowed individual participant data to be entered electronically and aggregated at the state/territory level and at the federal level. The reporting system included a 15-item participant behavior checklist (later trimmed to 10) and a 24-hour diet recall. Youth program impact was measured through four standard indicators. This was significant because EFNEP could then make statements about positive changes as a result of participation in the program which helped EFNEP maintain and increase its funding levels.

To incorporate technological advances, ERS has been updated every 5 to 6 years. In 2012, NIFA collaborated with Clemson University to release the Web-based Nutrition Education Evaluation and Reporting System (WebNEERS; U.S. Department of Agriculture, n.d.f). This system allowed data to be entered securely from any computer and also incorporated new evaluation elements, including standardized youth evaluation tools for school grade-specific groups of participants. It also captured EFNEP-related activities at the community, organizational, policy, and societal levels, which allowed EFNEP to show impact related to Policy Systems and Environmental Change (PSEs).

In 2011, Scholl and Paster at Penn State University created an online searchable database of research studies containing more than 350 citations using EFNEP data. One of the articles in that database is about a longitudinal study by Wardlaw and Baker (2012) that found participants maintained most of their improved behaviors for up to three years. Other studies demonstrated the public value of EFNEP, including Lambur and Cox (1996), who reported that “for every \$1.00 invested in the program, \$10.64 in benefits from reduced health care costs can be expected” (p. 2). A study by Dollahite, Kenkel, and Thompson (2008) concluded “food and nutrition behavior changes resulting from the program are likely to improve future health and reduce health care costs” (p. 1).

Community Resource and Economic Development (CRED)

Prior to 2006, community development professionals in Extension shared programming ideas primarily through the Community Development Society (CDS). With its practitioner focus, the CDS offered opportunities for learning about program innovation, yet relatively little content related to educational evaluation. The first national CRED program conference, held in 2002, led to a consensus that an organization focused on Extension community development education and affiliated with the Joint Council of Extension Professionals (JCEP) was needed to strengthen the quality of CRED programming across the country. The National Association of Community Development Extension Professionals (NACDEP) was created and held its first conference in 2005 (NACDEP, 2014).

Since that time, both NACDEP and CDS have provided opportunities for sharing programming, as well as program evaluation innovation. In 2006, program leaders in the North Central Region created four distinct program logic models for different types of community development programming: community economic development, community leadership development, organizational development, and participatory community planning (North Central Regional Center for Rural Development [NCRCD], 2010). The logic models were instrumental in supporting state efforts to develop strategies for measuring program outcomes and impacts.

With these logic models in hand, and in recognition of the need to share program impacts and sustain programming, state CRED program leaders identified and began collecting, reporting, and aggregating data on a few key community development impact indicators that cut across the four program logic models. As of 2014, CRED indicators were being collected in three of the five Extension regions of the country. Some of the common indicators across regions include the dollar value of grants leveraged or generated by communities, the number of jobs created or retained, and/or the number of program participants who reported new leadership roles. The indicators vary somewhat depending on the nature of Extension community development programming in each region (National CRED Indicators Workgroup, 2014). For example, the North Central states report data on the number of community plans adopted or implemented, while the Southern region reports on the number of collaborative activities initiated by organizations or communities (National CRED Indicators Workgroup, 2014). Challenges remain for creating systematic methods to collect data on these indicators, yet the process has elevated the level of attention given to measurement of community development program outcomes and impacts.

Community leadership development has been a particularly rich arena for multistate research and evaluation activity. For example, research on Missouri's Experience in Community Enterprise and Leadership (EXCEL) program found significant program effects for a range of individual-level factors, such as shared future and purpose, or community commitment (Pigg, 2001). In the

EXCEL program, the connection between these strong individual outcomes and community-level impacts was less clear. The need to better understand community-level impacts led to several research efforts, including a large multistate study funded by the USDA's National Research Initiative (NRI; Apaliyah, Martin, Gasteyer, Keating, & Pigg, 2012; Pigg, Gasteyer, Martin, Apaliyah, & Keating, 2015). The NRI study and others have often employed the Community Capitals Framework as a tool for inquiry (Emery, Fernandez, Gutierrez-Montes, & Flora, 2007; Emery & Flora, 2006; Lachapelle, 2011; Rasmussen, Armstrong, & Chazdon, 2011).

A hallmark of much of the most impactful community development work has been engagement between Extension professionals and their communities. The Horizons program, a deeply engaged community leadership program funded by the Northwest Area Foundation and delivered by Extension in nine states, spawned an innovative and highly engaged approach to impact evaluation known as Ripple Effect Mapping (REM) (Chazdon & Paine, 2014; Kollack, Flage, Chazdon, Paine, & Higgins, 2012). Since the Horizons program, REM has been conducted to evaluate Extension and other community development programs across the country. One notable example is the Turning the Tide on Poverty Program led by the Southern Rural Development Center (SRDC, 2015).

Agriculture and Natural Resources (ANR)

Recent studies focusing on ANR program evaluation suggest that much still needs to be done to improve evaluation. In a study of natural resource Extension professionals, Morford, Kozak, Suvedi, and Innes (2006) found that 79% of the professionals conducted some kind of evaluation. Further examination of results indicated that these evaluations were at the lower levels of Bennett's hierarchy (e.g., inputs, activities, participation, reactions). The majority (51%) used reactions, while the minority (32%) measured KASA during the program. Additionally, only 6% conducted a follow-up, only 8% reported measuring behavior change, and a scant 1% measured long-term outcomes (Morford et al., 2006). Morford et al. (2006) also identified several barriers to carrying out systematic evaluation of natural resource Extension programs: lack of skills, lack of time, lack of funding, methodological difficulties, organizational structure and culture, lack of rewards, and skepticism regarding the value of evaluation. Availability of evaluation specialists also influenced the level of evaluation carried out by natural resource educators – Extension county-level professionals who had evaluation specialists in their states conducted higher levels of evaluation (KASA and beyond) than those who did not (Morford et al., 2006). In a related study, Ghimire and Martin (2013) found that ANR professionals indicated their evaluation knowledge and skills were low compared to FCS, 4-H, and CRED professionals, and they expressed a need for training or professional development in evaluation.

In recent years, a number of changes have occurred relative to the evaluation of ANR programs. Extension professionals are using many innovative ways to evaluate programs, especially using computer technology. Examples include implementing stakeholder analyses, involving stakeholders in planning and designing evaluations (Layman, Doll, & Peters, 2013), linking evaluation questions to program outcomes (Radhakrishna & Relado, 2009), conducting cost-benefit analyses of programs (O'Neill & Richardson, 1999), and assessing implementation fidelity. Articles published in the *Journal of Extension* in the last 10 years point to the strides made in assessing ANR programs. For example, advances in information technology have enabled sharing of evaluation resources with all Extension professionals, reducing duplication of evaluation efforts and increasing validation of others who work in Extension program evaluation. Areas of evaluation requiring particular attention include rigorous assessments documenting long-term impacts of ANR, especially in terms of costs and benefits, revenue generation, job creation, and ultimately, improved quality of life.

The Role of Affiliated Organizations in Extension Evaluation

The Cooperative Extension system is supported by a number of organizations and programs that are formally or informally connected to its work. Some of these organizations, such as the National Institute of Food Agriculture and eXtension, are strongly affiliated and fundamental to the functioning of Extension. Others are separate organizations with less formal ties to Extension, such as the American Evaluation Association and certain journals that publish articles of interest to Extension professionals. In this section, the support given to Extension evaluation efforts by each of these organizations is explained.

National Institute of Food and Agriculture (NIFA)

NIFA administers funds to support Extension through Extension Programs for 1890 Institutions, the Renewable Resources Extension Act, and the Smith-Lever Act. These capacity-building grants are based on statutory formulas (U.S. Department of Agriculture, n.d.a). Capacity funds are highly scrutinized, requiring strong evaluation data. NIFA provides programmatic and fiscal oversight and accountability of capacity-building grants through the collection and review of program plans and evaluation and reporting data. Extension Programs for 1890 Institutions and Smith-Lever 3(b) and 3(c) other Extension activities are reported through the Plan of Work (POW; U.S. Department of Agriculture, n.d.c). Outcomes and impacts are documented in the Annual Report of Accomplishments submitted annually. Renewable Resources Extension Act programs are reported through NIFA's Research, Extension, and Education Online Reporting Tool (REEReport; U.S. Department of Agriculture, n.d.d). Extension programs funded through Smith-Lever 3(d) have their own reporting mechanisms. NIFA National Program Leaders review projects/programs relevant to their area of expertise, make sure they are appropriate, and ensure that they achieve results. The Planning, Accountability, and Reporting Staff use

evaluation results to respond to budget inquiries, congressional questions, and reporting requirements from the Office of Management and Budget. NIFA also uses program evaluation data to justify the need for continued and increased funding. Communication staff design National Impact Reports and highlight Extension work through blogs, news releases, etc.; but NIFA also relies on Land-Grant Universities and other organizations, such as the Association of Public and Land-Grant Universities (<http://www.aplu.org/>), to advocate for programs and demonstrate the value of Extension.

In 2004, the Program Assessment Rating Tool (PART), a reporting requirement of President George W. Bush's ExpectMore.gov (n.d.) initiative, led NIFA to develop an external panel review process. NIFA's research, education, and Extension programs were evaluated as portfolios of work within the framework of their strategic plan (U.S. Department of Agriculture, n.d.e). This highlighted the value of NIFA programs, but also suggested the need for greater rigor in data collection and reporting. In 2010, a panel of experts reviewed the POW process and identified a need for national program outcome and impact indicators (Sellers, 2012). The panel concluded using outcome measures for capacity (formerly formula grants) reporting would "help OMB and Congress see the continued value of that funding" (Sellers, 2012, slide 5). In 2011, NIFA convened teams of experts and National Program Leaders to develop national outcomes and indicators for use in progress reports as early as 2012 (Sellers, 2012). This standardization of outcomes and impacts helped strengthen Extension reporting. These national outcomes and indicators can be found at <http://nifa.usda.gov/resource/pow-national-outcomes-and-indicators>. National 4-H indicators can be found at <http://nifa.usda.gov/resource/national-4-h-youth-development-outcomes-indicators>.

ECOP Excellence in Extension Database

The ECOP Excellence in Extension database was initially established to collect output/accountability data on funding sources, human resources factors, and direct contacts. The data were intended to be used primarily by Extension directors and their staffs to compare their unit with other units in their region or nationally. Currently, the database contributes impact statements for Extension education on the new Land-Grant University Impact Internet site. This site, which is growing rapidly, is open to the public and can be accessed at <http://landgrantimpacts.tamu.edu/>.

eXtension Evaluation Community of Practice

The web-based eXtension community of practice is an interactive learning environment that delivers research knowledge from Extension units of Land-Grant Universities to the public. Initially, evaluators participated as consultants to subject area communities of practice to design ways to measure the impact on learners who visited the site. Some evaluators also studied the

process of forming an online community of practice (Sellers, Crocker, Nichols, Kirby, & Brintnall-Peterson, 2009). Later, eXtension evaluators created an Evaluation Community of Practice to provide evaluation technical assistance to all Extension professionals through an Extension Evaluation Facebook page and a blog where articles are posted and discussed.

Extension Education Evaluation Topical Interest Group (EEE-TIG)

According to its website (www.eval.org), the American Evaluation Association (AEA) “is an international professional association of evaluators devoted to the application and exploration of program evaluation, personnel evaluation, technology, and many other forms of evaluation” (American Evaluation Association, n.d.a, para. 1). Members of AEA align with topical interest groups which are organized around specialty interests of evaluators (American Evaluation Association, n.d.c). The Extension Education Evaluation Topical Interest Group (EEE-TIG) has been the professional home for Extension evaluators for over 25 years (American Evaluation Association, n.d.b). At AEA’s annual conference, Extension evaluators organize paper sessions, demonstrations, round tables, and panels that feature Extension’s evaluation work. These workshops are attended by evaluators outside of Extension, too. EEE-TIG also serves as a network for evaluators to share information with each other throughout the year.

Journals

Journals that regularly publish Extension evaluations include *Journal of Extension*, *Journal of Human Sciences and Extension*, *Journal of Agricultural Extension*, *Journal of Youth Development*, *The Forum for Family and Consumer Science Issues*, as well as other journals associated with all of the Extension professional associations. Currently, *Journal of Extension* best reflects Extension’s historic and current efforts in evaluation. Duttweiler (2008) categorized studies published in the *Journal of Extension* according to the following criteria: (1) needs assessment, (2) program documentation, (3) program fidelity, (4) program improvement, and (5) evidence of effectiveness. Forty-eight states were represented in the study; however, two institutions accounted for 29% of all articles selected (Duttweiler, 2008). Ten institutions accounted for nearly 50% of all articles selected. The typical evaluation study was situated in either youth development or agriculture and food systems program areas, had the dual purpose of outcome documentation and educational process improvement, was statewide in scope, and employed simple survey methodology.

Implications and Recommendations

After reviewing Extension’s program evaluation journey, it becomes clear that we could repeat our mistakes unless we learn from the lessons of the past. We have known for a long time that it is not sufficient to report only statistics on activities conducted and the number of people reached. Even the results demonstrations conducted since the early days of agriculture education

are not enough evidence of program impact because they fail to illustrate an effect on people and communities. An emerging focus within Extension is the impact of our work in creating public value – the value to those who do not participate in our programs (Kalambokidis, 2004). Before we can document Extension's public value, we must continue to produce strong research on Extension's private value.

Based on our study of Extension evaluation history, we offer suggestions for making Extension's future evaluation even more successful.

Incorporate Systems-Based Theories into Extension Work

Rennekamp and Arnold (2009), in their 20-year review of Extension evaluation, called for new action. They said Extension professionals should think about program theory more and about filling out forms less (Rennekamp & Arnold, 2009). They asked Extension professionals to put logic into logic models. Patton (2008) proposed that the logic model may not work in the simple, linear, direct cause-and-effect chain that we envision and that systems-based theories of change may be needed. Moving from logic to systems-based approaches requires collaboration with academic faculty who can share theories of change from specific fields of study that impact Extension work. It means finding validated assessments to measure change, rather than using our tried and true tools. *Umbrella models* as proposed by Arnold (2015) have the potential to connect research to Extension practice if they are included as a part of program planning and capacity building. They could also be the basis for multi-state evaluation studies that support the impact of Extension regionally and nationally. According to contemporary Extension evaluation scholars, if we fail to incorporate system-based theories of change into Extension work, we will fail to prove to our supporters and critics that Extension is making a difference.

Often our goal in evaluation is to give funders the information they want to maintain the programs and staff that we have, even if evidence suggests that our programs are ineffective. This was true 50 years ago when Alexander (1965) wrote, "Many, perhaps most Extension people, who want their program evaluated, make an unconscious assumption that evaluation findings will be favorable" (p. 206). Over the years, organizational learning has taken a back seat because evaluation was used to counter the criticism levied against Extension that it was not articulating impacts. The evaluation of organizational learning supports Extension work in the following ways: (1) it helps to establish program direction, (2) it improves existing educational practice, (3) it informs public policy, (4) it establishes or sustains program support, (5) it offers a basis for resource allocation decisions, (6) it influences relationships with stakeholders, and (7) it strengthens evaluation practice itself (Rennekamp & Arnold, 2009).

Provide Appropriate Resources for Conducting Multistate and National Evaluations Using Appropriate and Rigorous Methodologies

The call to evaluate Extension programs on a multistate, regional, and/or national level, to create a fuller picture of the impacts of Extension work, has been heard for many years. There are, however, many competing realities and needs that keep Extension professionals focused on their states. In instances where multistate evaluation is conducted, it usually reflects the directives of the funding agent or occurs because program organizers or evaluators agree to work together. Franz and Townson (2008) listed organizational factors in Extension that may make multistate and national evaluations become a reality. These factors include (1) directing resources to hire external evaluators when the occasion demands; (2) enhancing understanding of and ability to work within complicated organizational functions at each level – community, county, regional, state, multistate, and national; and (3) convincing Extension professionals who have a high degree of autonomy to collaborate in planning, implementing, and evaluating their educational programming.

Stop Apologizing

Throughout the history of Extension, evaluators and other professionals have written about evaluation methods and tools used in Extension programs; however, these methods were not always highly sophisticated or rigorous (Braverman & Arnold, 2008; Duttweiler, 2008). In 2002, the White House encouraged all federal agencies to support evidence-based programs and to discontinue programs without evidence of effectiveness (Office of Management and Budget, 2002). Today, there are registries available that list so-called evidence-based programs – randomized controlled trials (RCTs) and/or evidence of sustained impact and replication (Coalition for Evidence-Based Policy, 2014; Elliot, 2013; Milhalic & Elliot, 2015). One such registry is *Blueprints for Healthy Youth Development* hosted at the University of Colorado – Boulder (<http://www.blueprintsprograms.com>). Extension has begun to adopt non-Extension evidence-based programs. The *PROSPER* Project (<http://www.prosper.ppsi.iastate.edu>), directed by Iowa State University Extension, is one example. This Extension and research program allows communities to choose from a menu of evidence-based substance abuse prevention programs.

Patton (2008) encouraged Extension evaluators to stop apologizing for not using the so-called *gold standard of evaluation*, and instead adopt the standard of appropriateness. Patton (2008) argues that instead of apologizing, Extension evaluators should explain how and why the methods used are appropriate for their purpose, resources, timeline, and intended use. That does not mean, however, that Extension evaluators should make excuses or avoid rigor. Nor should they apologize for using evidence-based programs that others have developed.

Measure Social Capital Creation

Across all the areas of programming, there is a consistent theme that Extension builds relationships in organizations and communities, and that these relationships lead to important accomplishments. Social capital is defined as the “features of social organization, such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit” (Putnam, 1993, p. 35). Extension has a long history of building social capital through the role of the county Extension professional. Yet, Extension also has a long history of not documenting to what this relationship building activity has led. The Ripple Effect Mapping approach described earlier is one tool that can be employed to document the chain of effects resulting from relationships built or strengthened by Extension professionals or programs. In addition, Social Network Analysis (Bartholomay, Chazdon, Marczak, & Walker, 2011; Fredericks & Durland, 2005) can be employed as a pre-post tool to document changes in personal or organizational networks over time.

Conclusion

The history of evaluation in Extension reflects the significant progress made over time in pursuit of good, purposeful, and useful program evaluations. Extension cannot abandon any of the ways we have conducted evaluation in the past. We must continue to collect statistics that show we use public and private funds appropriately; we must continue to use change theory and logic models to connect what we do with the outcomes of our work; and we must work together on multistate and national evaluation initiatives. Today, Extension faces the challenge of learning state-of-the-art digital tools, as well as using new and yet-to-be-developed methodologies. Extension evaluators must continue to innovate, collaborate, and incorporate the most appropriate methods for showing evidence of Extension’s good work and improving programs for the benefit of Extension’s clients.

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Extension Stakeholder Engagement: An Exploration of Two Cases Exemplifying 21st Century Adaptions

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Over the past 100 years, a number of societal trends have influenced how Cooperative Extension engages public audiences in its outreach and education efforts. These trends include rapid evolution in communication technology, greater specialization of Land-Grant University faculty, and diversification of funding sources. In response, Extension organizations have adapted their engagement approach, incorporated new technologies, modified their organizational structures, and even expanded the notion of public stakeholders to include funders, program nonparticipants, and others. This article explores the implications for future Extension efforts using two case studies—one which explores how a community visioning program incorporated new ways of engaging local audiences, and another which explores how an Extension business retention program used participatory action research and educational organizing approaches to strengthen participation in a research-based program.

Keywords: Cooperative Extension, Extension, community development, stakeholder engagement, Millennials, stakeholder, participatory action research, educational organizing

Cooperative Extension (Extension) has evolved its approach to engaging the public in program development and implementation for over a century in response to an ever-changing societal context and client needs. Extension's adaptive approach has helped it garner grassroots support and demonstrate public value during much of its time (Rasmussen, 1989; Rogers, 1995). Yet, the world is in the midst of multiple transitions that impact the way stakeholders—individuals or groups affected by a particular issue, effort, or topic of focus by Extension—seek out and access education and resources.

Extension leaders broadly recognize that public engagement in program development and implementation necessitates real-time communication and information-sharing with technology-savvy audiences; collaboration across multiple sectors at the regional and multi-state level; and a deeper understanding of the needs of nontraditional audiences, such as Hispanics, Millennials,

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and urban residents (Morse, 2009). Yet, these changes are cultural shifts that have been advocated for years and are difficult to implement (McDowell, 2001; Seevers & Graham, 2012; Seevers, Graham, Gamon, & Conklin, 1997). The challenge for Extension organizations is that they will have to continuously adapt to change to be effective at engaging diverse stakeholders.

This paper explores trends impacting the way Extension education participants seek education and information and the implications for how Extension engages its audiences. These trends are exemplified through two case studies. The first case study illustrates how Extension modified its program delivery model to adapt to changing societal trends and client needs. The second case study examines how an Extension program uses participatory action research and educational organizing to secure local engagement in a community economic development project.

The Evolution of Extension's Public Engagement

When Cooperative Extension was established by the Smith Lever Act of 1914, a Progressive Era philosophy had taken root: a philosophy that social conditions, not individualistic behaviors, lead to poverty (Green & Haines, 2012). This philosophy was based in the idea that raising peoples' standard of living required large-scale, place-based programs to lay the foundation for advancing rural America through promotion of new technologies and workforce skills. By integrating education and technical expertise, Extension provided training and technical expertise to rural Americans in agriculture and the mechanic arts (Rasmussen, 1989).

In early Extension programs, the solutions and their implementation were largely expert-driven. This raised concerns about the possibility of public stakeholders becoming dependent upon technical expertise provided by Land-Grant institutions (LGUs) (Green & Haines, 2012). By the mid-1920s, Extension began to shape a new form of audience engagement that leveraged the ideas and skills of participants by the recruiting and training of volunteers to deliver programs (Seevers & Graham, 2012). Volunteers relied on technical expertise from academic institutions, but they were part of the communities that Extension served. In this regard, Extension's train-the-trainer emphasis on engaging volunteers and developing their capacity helped alleviate concerns about creating a dependency relationship between university scientists and community members. This volunteer emphasis included the incorporation of Extension Advisory Councils, which were set up to advise county-level programming, as well as garner support for Extension (Seevers & Graham, 2012).

The New Deal programs in the 1930s posed a new wrinkle in interfacing with stakeholders. With the rollout of large-scale government programs like price supports and rural electrification, Extension was asked by the Department of Agriculture to play a role as promoter of programs, signifying a shift from its former role as an educator and capacity builder (Rasmussen, 1989). Extension no doubt helped make the New Deal programs successful, but it lost some of its ability

to respond to client-identified needs in the process. According to National Institute of Food and Agriculture (NIFA) archives, food shortages during World War II further extended Extension's role as a promoter of programs, such as the Victory Garden movement, placing emphasis on boosting agricultural production, reducing erosion, and training farm labor (National Institute of Food and Agriculture, n.d.).

President Johnson's Great Society in the 1960s brought new winds of change, pushing Extension to engage nontraditional audiences, such as low-income households, minorities, and nonfarm-related industry sectors like commercial fishing (Seevers & Graham, 2012). Extension expanded its focus to topics such as rural development and urban blight. The latter topic followed the implementation of urban renewal programs in America's inner cities, where Extension helped many neighborhoods address unintended consequences of urban renewal (Cunningham, 1972).

Throughout the 1970s and 1980s, Extension expanded its reach to nontraditional audiences and addressed topics such as renewable energy, workforce development, housing, and environmental change. Many of the programs established during this period sought to engage communities and groups, as opposed to individuals. For example, Extension provided training and organizational support to migrant workers who labored at farms and orchards (Seevers & Graham, 2012).

By the early 1990s, Extension had established a national reputation as a convener of dialogue and facilitator of community change, as exemplified by the emergence of community visioning programs across the country (Walzer, 1996). However, cuts to Extension budgets in the 1990s and 2000s forced Extension to focus its limited resources, and in some cases, discontinue certain programs. Resource constraints forced Extension to become more efficient at program delivery, which necessitated increased use of electronic communications and delivery of information via the World Wide Web starting in the late 1990s (Gregg, 2002).

Extension's Public Engagement Today

Though Extension evolved its engagement strategies to address ever-changing audiences and societal needs, some scholars purport that Extension lost its engagement roots starting in the late 1990s. Peters (2002) notes that Extension's role shifted from that of community convener and capacity builder to research agenda promoter. This shift harkens back to Extension's early 20th Century roots when it was principally a purveyor of technical expertise (Seevers & Graham, 2012). This may explain growing public sentiment throughout the 1990s that Extension was not meeting its public engagement mission (Franklin, 2009; Kelsey, 2002; Peters, 2002).

The Kellogg Commission on the Future of State and Land-Grant Universities published a 1999 report stating that Land-Grant Universities (LGUs) needed to go beyond public service and traditional outreach—including Extension—and transition to true engagement. The term

engagement connotes a two-way relationship between institutions of higher education and community partners in a manner that builds reciprocity, fosters trust, and focuses on shared goals (Franz, 2009; French et al., 2013). A 2005 survey of LGUs found these institutions and Extension organizations have modified their missions to encompass key engagement principles put forth in the Kellogg report (Byrne, 2006). Faculty members have also incorporated broader impact goals into their research and increased partnerships with Extension on projects and proposals (Byrne, 2006).

Peters (2002) identified one form of engagement as *educational organizing* and described it as the work of developing leadership; building civic capacity; and facilitating learning through bringing people and resources together to identify, deliberate about, and act on important public issues and problems. In a second form of engaged outreach and scholarship, Greenwood, Whyte, and Harkavy (1993) described *participatory action research* as one in which “authority over and execution of research is a highly collaborative process between expert researchers and members of the organization under study” (pp. 174). Both are relevant for Extension, going back to the days of corn demonstration farm plots (Rasmussen, 1989).

The following sections identify key stakeholders of Extension programs and current trends changing the game for how Extension engages with public stakeholders.

The Role of Stakeholders in Extension Program Development and Delivery

The term *stakeholders* is often used to refer only to participants who are in the target of the educational activities. Mayeske (1994), as cited in Seevers and Graham (2012), defined stakeholders more broadly as:

people who have a vested interest in the program. They can include many individuals: people who participate in the program, Extension personnel, Extension organizational leaders, community leaders, individuals and/or organizations providing funding or other resources to the program, other community professionals who co-sponsor a program, potential participants in a program, legislators and others. (p. 105)

While this definition is broader than merely program participants, it understates the complexity of the term. For example, it omits the following groups: national Extension colleagues, nonprofit interest groups that provide a range of services, government and private funders that support the development and implementation of Extension programs, related industries or groups that interact with the target audience, academic researchers on the issues being considered, and evaluation specialists and researchers who may or may not have Extension appointments. Each of the groups identified above is key to the successful development and/or delivery of Extension programs. The following section outlines key roles that each plays in Extension.

Extension professional associations and networks are critical Extension stakeholders (Jackson et al., 2004; Singletary et al., 2007). They enable the sharing of program materials to address local needs without each institution having to *reinvent the wheel*. Examples of these benefits are the Master Gardener program initiated by Washington State University, now implemented in all 50 states (Langellotto, Moen, Straub, & Dorn, 2015), and the Business Retention and Expansion (BR&E) program started at The Ohio State University, now spread throughout the U.S. and the world (Boyles, 2014).

Nonprofit interest groups offer education and political lobbying. In fact, countless international and national groups, as well as state organizations, offer educational programs similar to Extension. Hence, they can either be seen as collaborators or competitors. Developing working relationships with these groups, while maintaining an educational perspective, takes a lot of relationship building and mutual learning. Yet, once partnerships are forged, nonprofit groups can help promote, fund, and even deliver Extension programs (Tuck, Darger, & Ahmed, 2012a).

Stakeholders-as-funders are a key source of Extension funding as public resources for Extension decline. In fact, the federal funding for Extension fell from 40% in 1972 to 17% in 2006 (Joint Task Force, 2006). Meanwhile, Extension income from grants and fees grew from 2% in 1972 to 21% in 2003 (Morse, 2009). With declining budgets, states have explored a variety of funding options, such as shifting to a cost recovery model. This requires Extension staff to become familiar with stakeholders-as-funders, including state and federal agencies, small and large foundations, or corporations, such as seed companies, that provide research dollars and resources for agricultural trials (Umali-Deininger, 1997). This necessitates Extension engaging with new potential funding partners, such as private businesses, as well as direct support from program participants (Pike, 2012; Tuck et al., 2012a).

Academic department researchers are essential in solid outreach programs. Research and scholarship is essential in order to provide useful and effective information in a technical transfer approach, as well as to discover and use effective educational organizing and participatory action research (Gagnon, Franz, Garst, & Bumpus, 2015). When it is working at its best, Extension also influences research agendas by providing feedback on how well the work of researchers addresses real-world needs (McDowell, 2001). This will require Extension program teams to engage researchers as key program stakeholders.

Evaluation specialists and researchers are key to improving the quality of formative evaluations, summative evaluations, and impact reporting by Extension programs. Extension evaluation specialists also enhance the public value of programs by helping Extension professionals identify and measure the impacts of programs on nonparticipants (Franz, 2011; Kalambokidis, 2004). While many states have a paucity of evaluation specialists, this may

change as pressure mounts for evidence-based programming (Thomas & Pring, 2004; Workman & Scheer, 2012).

Political constituents are also key stakeholders, since taxpayers provide most of Extension's base funding, although they may not participate directly in Extension programs. While Extension personnel have learned how to sell their programs to participants, it is not as easy to garner support from nonparticipants. Thus, a great deal of attention is being placed on helping Extension professionals communicate the public value of Extension projects and programs to nonparticipants (Franz, 2011; Franz, Arnold & Baughman, 2014; Haskell & Morse, 2015a, 2015b; Kalambokidis, 2004, 2011).

Trends Impacting Audience Engagement and Implications

The above section focuses mainly on stakeholders that support Extension program development and implementation but are not direct educational program participants. This section explores the trends that impact stakeholders who are clients, or the target audience, of Extension programs. The list of Extension program participants is vast, as Extension is geographically diverse and addresses many different issues. These trends include rapidly changing demographics, emergence of new communications technologies, regionalized and specialized Extension organizational structures, and economic globalization. The following are key trends and how they are impacting Extension audience engagement.

Evolution of Communication Technology

People, particularly young people, access and share information much differently today than in 1914, let alone 1970. The use of social media, the emergence of real-time information gathering via the web, and the concept of digital classrooms have altered the way many stakeholders engage with people in the workplace, in their communities, and among social circles (Gilbert, 2011). In fact, research suggests that Millennials—individuals born between 1980 and 2000—respond to engagement approaches that utilize technology to enable multitasking, instant feedback, and collaboration with people in other locations (Shaw & Fairhurst, 2008). For instance, Extension professionals have adapted to new communication modes, as exemplified by a 4-H program that uses a digital classroom to connect 4-H clubs (West, Fuhrman, Morgan, & Duncan, 2012). But, not all Extension professionals have embraced technology to engage with tech-savvy individuals and need training to do so (Porr et al., 2014). This implies the need to invest in additional professional development in new communication technologies and distance education methods.

Rising Audience Educational Levels

Extension audiences are more educated than they were fifty years ago. For example, only 4% of farmers had college degrees in 1964, compared to 25% in 2006 (Ahearn & Parker, 2009). In 2010, 45% of farm managers had some college, marking an increase from decades ago (Hertz, 2011). Extension participants also have a greater range of educational achievements, including PhDs. Engaging these educationally diverse audiences requires additional professional development in an Extension professional's area of expertise so they can stay current with stakeholders' informational needs (Morse, 2009). As suggested by Gagnon et al. (2015), earning credibility with this diverse set of audiences increases the need for Extension professionals to have evidence-based programs that can deliver high quality results with strong implementation research on how best to do this.

Globally Integrated Rural Economies

Economic well-being for many farm families depends on what happens in the global economy and how those changes ripple out to the nonfarm sectors in their communities, not to mention the impacts of global trends on farm income. Off-farm income exceeds income from farming in rural America (Peel, Doye, & Ahearn, 2013). In fact, more farm operators and their spouses are reporting off-farm jobs as their major source of income. These nonfarm jobs are increasingly integrated into and dependent upon the global economy (Fernandez-Cornejo, 2007). Globalization is influencing the types of programs needed to continue serving participants and to secure support of other stakeholders. As Garst and McCawley (2015) note, this requires strong needs assessment efforts. This implies the need for better in-service training, as more Extension professionals are hired for their expertise in a specific area and lack adult education training.

Ethnic and Racial Diversity

The United States is rapidly becoming a *majority-minority* nation, whereby racial and/or ethnic minorities have become the relative majority of the population (Jacobsen, Kent, Lee, & Mather, 2011). This might be one of the nation's greatest strengths for competing in the global economy (Kotkin, 2010). Yet, this implies that Extension faculty will need to learn how to more effectively engage audiences from diverse backgrounds.

Urbanization of Extension's Audience

Since World War II, rural areas nationally have lost around two-thirds of their population, while metropolitan areas have seen a net gain (Walzer, 2003). This demographic shift has significantly altered audience needs. As one example, Extension focused primarily on serving the agricultural community when it was formed in 1914. However, the number of rural farms has dropped

roughly parallel to that of the rural population. In response, resources that were once allocated to rural farmers have been reallocated to address issues facing urban areas, such as urban blight, youth risk factors, and resource protection (Seevers & Graham, 2012). Yet, expanding programs to reach new audiences while facing financial cuts implies Extension needs to deliver programs regionally (Morse, 2011).

Changes in Volunteerism and the Role of Parents

Putnam (1995) chronicled significant changes to the way that people engage with communities. He postulated that not only are people contributing less volunteer time to community organizations, such as Parent Teachers Organizations (PTOs), but they are also less civically engaged in community life. Others, such as Ladd (1998), contested this notion, pointing out that declining volunteerism in groups like PTOs is merely a result of the fact that institutional structures have not adapted to current times. He noted that volunteers contribute in different ways than they did two or three decades ago, requiring organizations like 4-H to be more creative in how they recruit volunteers, as well as parents (Ladd, 1998). In fact, today's 4-H parents can contribute volunteer time in new and creative ways, such as virtually through the Internet, or to specific activities that involve Science, Technology, Engineering, and Math. Since volunteerism is the lifeblood of many Extension programs, Extension staff need to learn new methods of engaging all types of volunteers (West et al., 2012).

Changes in Extension Campus Faculty Expectations and Implications for Stakeholder Engagement

Extension is influenced by both the demand side (what participants and funders want) and the supply side (what Extension professionals are willing and able to provide). The trends outlined above change the demand side. Extension's supply side has changed over the past 100 years due to three major factors: (1) changes in the role of state specialists in academic departments, (2) changes in scholarship expectations at all levels, and (3) regionalization and specialization of field educators (Morse, 2009).

Change in the Role of State Specialists in Academic Departments

During the 1950s through the 1970s, many states added state specialists who were tenured faculty in academic departments, had joint teaching/research/Extension appointments, and worked as experts throughout the state. Often, their role was the development and testing of a program and then training of field educators to deliver the program throughout the state. Rogers (1995) describes the specialists' role as spanning the differences in the "levels of professionalism, formal education, technical expertise, and specialization" (p. 362) between the campus, field educators, and local audiences. He argued that specialists were the critical link in

helping the university be engaged and successful in outreach and described their spanner role as “... link[ing] the sources of research-based knowledge to the county Extension agents. He or she is the county agent’s extension agent” (Rogers, 1995, p. 360).

Rogers (1995) claimed that specialist spanners had typically served as county Extension agents prior to their state specialist role. That was true in the 1950s-60s and is still largely true for youth programming (Culp, McKee & Nestor, 2005), but it is no longer the case for other Extension program areas. For example, the majority of community economics state specialists in academic departments have PhDs and little to no experience as county Extension professionals. In fact, since the mid-1970s, most Extension specialists hired into academic departments have faced the same promotion and tenure expectations as other academic faculty. This requires that they specialize. The result is that the state specialist *spanner* role of connecting county and campus cultures has been greatly diminished in most states (Morse, 2009). However, several states are trying to replace the lost state specialist *spanners* with field specialists, as has happened in community development in Minnesota, Iowa, South Dakota, New Hampshire, Pennsylvania, and Ohio (Morse, 2009).

Does this shift to field specialists increase the opportunities for engagement with stakeholders? While research on this question is in its initial stages, there is some indication that it does. Ahmed and Morse (2010) found that the Minnesota educators who moved from a county delivery model to a regional one reported they had more opportunities to learn about their target audiences (62% more), adjust to their target audience needs (56% more), integrate audience feedback (47% more), focus on their program’s target audience (69% more), and earn respect from audiences (54% more). All of these signal stronger engagement. Yet, only 39% felt they had closer relationships with their audiences than in the counties, possibly reflecting the change from close neighbors to a more professional relationship (Ahmed & Morse, 2010).

These initial results imply that regionalization and specialization encourage, not discourage, stronger relationships with participants, but much more research is needed on this question.

Scholarship Expectations for Extension Educators

Extension educators are also increasingly expected to be active participants in both the scholarship of teaching and the scholarship of discovery (Boyer, 1990; McGrath, 2006; Morse, 2009; Olson, Skuza, & Blinn, 2007; Vlosky, & Dunn, 2009). While this is partly driven by promotion and tenure expectations, the primary reason is to improve the quality of programs and document their private and public value (Franz, 2009, 2011; Franz et al., 2014; Kalambokidis, 2004).

Clearly, one of the key reasons for low levels of scholarship by Extension staff is that those with the most successful programs often have little time for scholarship. Yet, if good scholarship

leads to stronger programming, this benefits both program participants and all other stakeholders, resulting in stronger attendance and stronger financial support. This implies that strong stakeholder involvement depends on strong evaluation and scholarship.

Regionalization and Specialization of Field Staff

To sustain strong participation in programs and the support of other stakeholders, it will be necessary to develop and deliver strong programs and to articulate both their private and public value. This requires understanding and using the needs assessment, program development, and evaluation methods reviewed in the early chapters in this issue (Franz, Garst, & Gagnon, 2015; Gagnon et al., 2015; Garst & McCawley, 2015).

Yet, Seevers and Graham (2012) point out that “Traditionally, the county has been the center for educational programming efforts...” (p. 47). Is it possible for county-based programming to make these investments? A number of states have decided it is necessary to have greater specialization and regional delivery to make these program investments. States that have adopted both a regional system and field specialists on a broad scale are Minnesota (Morse, 2009), Iowa (Clause, Koundinya, Glenn, & Payne, 2012), South Dakota (SDSU Extension, 2011), New Hampshire (Pike, 2012), and Pennsylvania (Penn State Extension, 2011). Ohio has also adopted this approach for its community development work (Bowen-Ellzey, Romich, Civittolo, & Davis, 2013; Kremer, 2012).

Many of the new field specialists are being hired with M.S. degrees in their field of specialization and have little or no training in adult education, participatory action research, engaged scholarship, needs assessment, program development, and evaluation methods (Morse, 2009). Most state specialists in academic departments also have no formal training in these topics. This implies the need for more intensive in-service training for both groups because stakeholder involvement depends on quality programming.

Considering the changing needs of Extension stakeholders, as well the changing expectations for Extension professionals, the following case studies illustrate how Extension has effectively engaged with diverse stakeholders. The first case illustrates how Extension modified its program delivery model to meet the changing needs of diverse community stakeholders undergoing an Extension-led community visioning process. The second case illustrates how Minnesota Extension’s regional delivery system enabled field staff to engage different stakeholders involved in a business retention and expansion program.

New Hampshire's Community Profiles Visioning Program

The following case study uses a qualitative approach to examine how the University of New Hampshire Cooperative Extension (UNHCE) adapted its approach to engaging stakeholders in a community visioning program established over twenty-five years ago that continues today.

Description of Community Profiles Visioning

Through the Community Profiles program, UNHCE has helped 71 New Hampshire cities and towns—about one-third of the state's municipalities—to develop a vision for their future and has mobilized local residents to act upon that vision. The Community Profiles process allows community residents to take stock of current conditions, articulate goals for the future, and develop an action plan for achieving that vision (French & Lord-Fonseca, 2008).

The Community Profiles program was conceived by a consortium of organizations in the Northeast in the late 1980s to help communities engage the public in crafting a community vision and succeed in moving them from vision to action. Mobilizing action around a common vision has been a challenge for communities that rely mainly on volunteers.

The program included an intensive, six-month planning process led by a local steering committee to organize the Community Profile, something with which local boards and committees were familiar. The visioning forum itself typically began with a Friday evening potluck dinner and continued through Saturday. It was not unusual to attract 10% of a town's population to the forum, and in some cases, over a quarter of the population. Residents of New Hampshire towns were accustomed to coming together to talk about important issues. The Town Meeting had long been the primary mode of governance in New Hampshire towns where important issues were discussed, town warrant articles were voted upon, and local residents weighed in on matters of local import. This culture helped the Community Profile process take root in nearly one-third of New Hampshire towns, as it aligned with the way New Hampshire communities did business.

However, in 1995, the state Senate passed a bill—dubbed as SB2 for Senate Bill 2—that enabled towns to adopt a process whereby warrant articles are given their final vote by official ballot or referendum. In the subsequent decade, dozens of towns in New Hampshire converted to SB2. Today, close to 70 towns have adopted the ballot process over the Town Meeting. While some lamented the loss of the Town Meeting—the one annual opportunity for people come together with fellow residents to talk about important issues—a wave of towns converted to the ballot.

Not unrelated to the loss of Town Meetings was waning interest in the Community Profiles process post-2000. Communities simply lost the habit of coming together to discuss issues, and it became harder to recruit people to serve on local Community Profile steering committees.

Rather than discontinue the program, UNHCE evaluated what was working and not working for community program participants. The goal of the process is to get people of all ages, abilities, and interests involved and sharing a voice so they can have a say in community matters. However, one issue uncovered through the evaluation was that the older generation in communities was no longer serving on local boards and committees. Yet, the younger generation of adults was not stepping in to take their place. For many young adults, the Community Profile process felt antiquated (French & Lord-Fonseca, 2008). Youth were also not feeling engaged in the program. The process was intimidating and the timing of the program activities conflicted with sports and homework. In fact, parents were limiting their involvement for many of the same reasons.

Thus, Extension was challenged to reimagine the process, with the desired end goal of mobilizing community members to take part in positive, grassroots action. With help from former Community Profile participants and Extension professionals, the process was updated. The following key changes were made to the program to adapt to the times, noting the specific societal trends that drove the changes.

Rapidly Evolving Communication Technology

Given that the way in which people in communities communicate with each other was rapidly changing—particularly for millennial audiences—Extension recognized that Extension professionals, as well as members of the Community Profile steering committee, required training. As a result, Extension professionals committed to learning how to effectively use social media to engage audiences. They, in turn, taught steering committee members how to more effectively use social media to market the Community Profile visioning forum event to new audiences, such as tech-savvy Millennials.

New participant engagement techniques were also incorporated into the process to solicit input, such as gathering feedback from participants who did not attend the forum. Examples include *sticky note flash mobs*, which collect input on how people feel about a particular space using sticky notes posted on a façade, and the *We Table*, which allows people to identify special places on a digital map projected for everyone in the community to see.

Changing Demographics

A major problem facing rural New Hampshire is the out-migration of young people after high school. To address this issue, Extension facilitated steering committee members through a process to identify ways to address the outmigration trend. This led to a separate youth visioning process conducted in cooperation with local schools to occur prior to the Community Profile visioning forum. This separate process, which now utilizes new technologies such as real-time

mapping to enable youth to identify community assets that they care about, garnered youth participation and gave them a chance to present their hopes and dreams to the community to set the stage for the Community Profile public forum. Though no empirical data supports that this process has helped to reverse the outmigration trend, anecdotal evidence from youth participants suggests it would influence their decision to stay in the community (French & Lord-Fonseca, 2008).

Increasing Diversity

Diversity in the context of public engagement means more than just racial and ethnic diversity. It also connotes diversity in socioeconomic class, occupation, age, gender, level of participation in community affairs, and interests. Two decades of experience conducting Community Profiles in over 70 communities led Extension to realize that steering committees were *not* as diverse as they should be. This resulted in a diminished ability to engage diverse segments of the community to help plan and/or participate in the visioning process. To address this concern, Extension implemented a new training segment for steering committee members aimed at helping them identify potential new members not typically engaged in community affairs. They also learned how to reach out to under-represented segments of the community to participate in the process, such as minorities, low-income residents, senior citizens, single mothers, youth, etc.

Urbanization

Although New Hampshire's largest city has fewer than 100,000 residents, the state saw double-digit growth rates per decade from 1950 to 2000. As suburban towns grew in population and development, they faced many of the same challenges as urban communities: overcrowded schools, increased crime, and loss of sense of neighborhood unity. Given Extension's limited success conducting the Community Profiles process in several of the state's larger communities, the program organizers piloted a new, neighborhood-centric approach in the state's largest city, Manchester. Four separate neighborhood forums were held, based on how local residents collectively defined their neighborhood boundaries. This garnered greater local buy-in and provided a sense of local control by decision makers in neighborhood wards. The framing of the process, which had previously focused on the elements of a vibrant community, was adapted to be more reflective of an urban setting. These changes resulted in a greater relative participation by residents in the process than in other urbanized communities.

In summary, the Community Profiles visioning process was modified to adapt to changing trends and community needs. Extension embraced the use of communications technologies to better reach community stakeholders, and it focused more energy on engaging young people, as well as other typically underrepresented audiences. While resources have not allowed the type of evaluations to tell if these strategies have rippled out to have longer-term impacts on the way that

communities engage with local residents, the modifications that were made in the last five years certainly have impacted the diversity of Community Profile steering committee members, as well as participants.

Minnesota's Community-Driven Business Retention and Expansion Program

The previous case study explored how Extension specialists adapted a program to address changing audience needs, considering current trends impacting engagement. The following case study focuses on how the diversity of stakeholders, both those in the community and those who provide additional financial and technical support, are engaged.

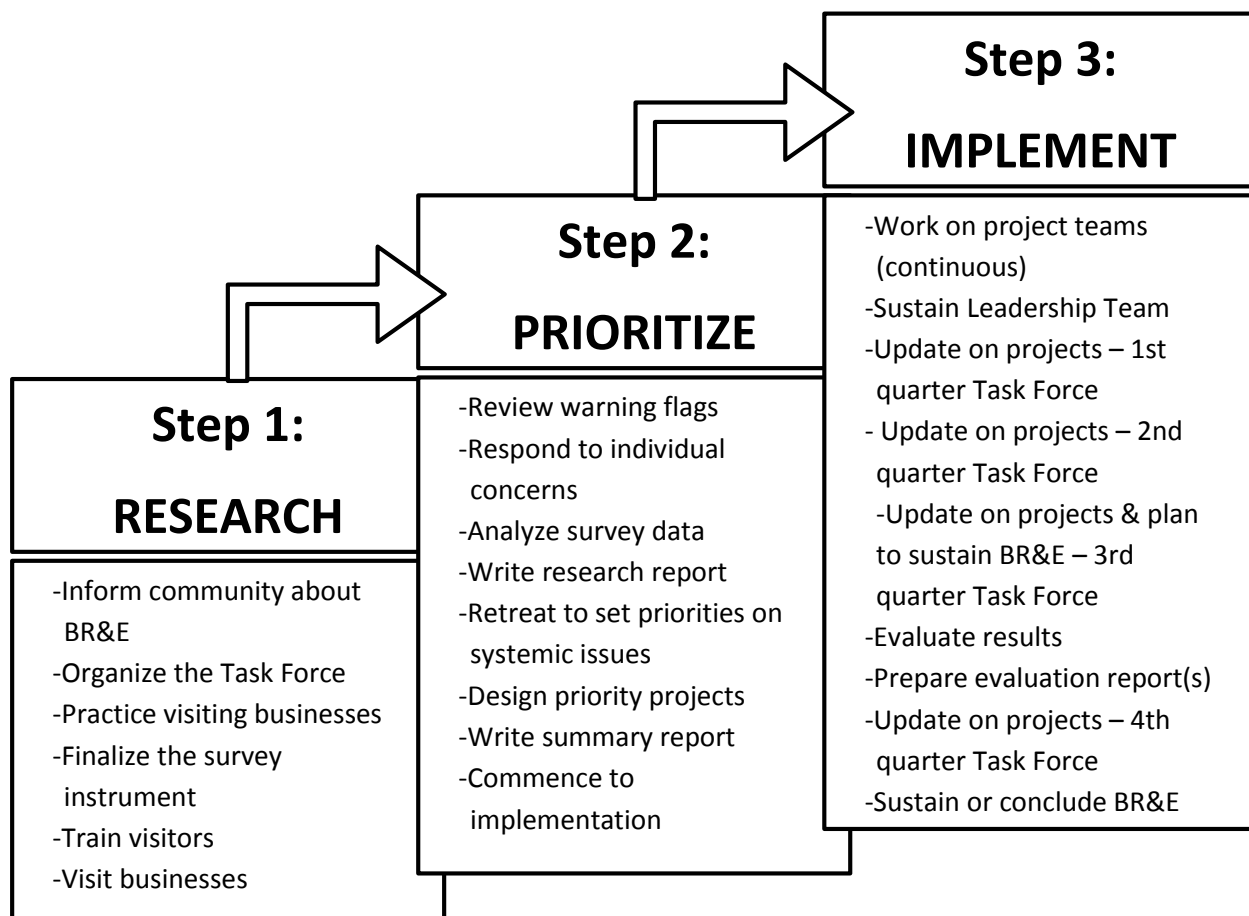
The Minnesota Community-Driven Business Retention and Expansion Program (or simply BR&E) helps existing community businesses survive and thrive. The program's short-term goals are to demonstrate to local businesses that the community cares about their success and is willing to help solve local problems, such as navigating local and state regulations and improving local services. The long-term goals of the program are to build leaders' capacity to respond quickly to major economic development opportunities or challenges, help firms become more competitive in a global economy, and help communities to develop and implement strategic plans (Loveridge & Morse, 1997; Morse, 1990; University of Minnesota Extension, 2015).

Implementing BR&E is a three-step process: (1) application of research with local firms by local leaders, (2) prioritization of immediate and long-term reactions to the results after review of the data collected of local businesses, and (3) implementation of the plans by local leaders with assistance from state agencies as summarized in Figure 1 (Darger, 2014).

Stakeholder Involvement

Stakeholder involvement in the BR&E program is based on the practices of educational organizing (Peters, 2002) and participatory action research (Greenwood et al., 1993). To explore the stakeholder involvement in the BR&E program, we will describe the experiences from the Menahga, Minnesota, program, which started in 2011 and continues today. Menahga is a city of 1,306 people in predominantly rural, north-central Minnesota.

Before the program starts, it is the community's responsibility to secure funds to implement the program. In Menahga, the Initiatives Foundation provided a grant to help the city cover the university fee for the BR&E program. If Michael Darger, the state specialist, and Adeel Ahmed, the regional educator, specializing in community economics, had not developed connections with the Initiative Fund earlier, this might not have happened.

Figure 1. Minnesota's Three-Step BR&E Approach (Darger, 2014)

Step 1 – Research to Better Understand Business Needs, Opportunities, and Challenges

The key participants in the program include local leaders. Having leaders from the business community, local government, public schools, community colleges, and nonprofits is important to the program's success. Minnesota Extension asks communities to demonstrate that they have a team of these leaders recruited prior to agreeing to work with them. To ensure that the local team understands the program and how it fits their needs, Extension provides a half-day overview for interested communities.

In step one, the Leadership Team in Menahga formed with six local leaders: the Mayor, City Administrator, two City Councilors, and two members of the Civic and Commerce Association. This group recruited 11 other local citizens to participate on a Task Force, including representatives from the city, public schools, and local nonprofit economic development groups. While Ahmed advised the Task Force on types of businesses to visit as part of the program, it was a group decision.

A key practice in the BR&E is for community leaders to participate in surveys of local businesses. The Task Force also recruited 17 *visitors* to help with business visits and surveys. Eight of these 17 people were local business owners. This volunteer-driven effort not only reduces program costs, but also demonstrates to businesses that community leaders care about local businesses. The discussion between business and public sector leaders helps build trust and sets the stage for them to work together on future economic development issues.

Thirty-seven community leaders visited fifty-three firms. A key visitor role was to flag urgent concerns that a particular business had. While this step involved both educational organizing and participatory action research, most local participants simply saw it as an action program.

Step 2 – Prioritize the Projects and Actions on Which to Focus

This step engages program participants in different ways. Ahmed facilitated two meetings of the Task Force to review concerns identified by firms, called *warning flags*. These flags are issues unique to a firm and often require individual attention rather than a community-wide response. In Menahga, no warning flags needing follow-up were found (Ahmed, personal communication, March 2015). A 14-person State Research Review Panel (Menahga Task Force members, Extension specialists, and state agency partners) was convened at the University of Minnesota campus. The panel reviewed the tabulated data, conducted a SWOT (strengths, weaknesses, opportunities, threats) analysis, and suggested action steps for Menahga leaders to consider.

Using the results from the above meeting, Tuck, Darger, and Dorr (2012b) developed the 127-page Research Report for the Menahga Task Force. The Research Report included three broad strategies, outlined the economic concepts behind the strategy, reported survey data, and identified 25 specific actions for implementing the strategies. The Menahga Task Force could choose to adopt all of the strategies and related projects, modify any of the strategies, do nothing, or design entirely new strategies or projects to address issues. Using this report, Ahmed facilitated a Menahga Task Force retreat to review the research report results and select priority projects based on a set of criteria. Five of the 25 action projects were selected by the Task Force and are reported in the 18-page Summary Report (Tuck et al., 2012a).

Step 3 – Implement the Plan by Garnering Participation of Local Stakeholders

Project implementation was often weak in the early programs (Morse & Ha, 1997; Morse & Lazarus, 2000). As a result, Ryan Pesch, regional Extension educator, encouraged the Menahga group to hold four quarterly implementation meetings scheduled and facilitated by Extension. In Menahga, 15 local leaders joined the implementation team and reported on their progress at these quarterly meetings. Not every team reported actions at the first meeting, but the enthusiasm generated by those who took action inspired others to do so.

A number of projects were successfully implemented by the Menahga group. One project, options for new retail and lodging development, resulted in sixteen new senior housing units that opened in 2013 (Pesch, personal communication, April 2015). A second project, community music nights, started in 2013 and has been held for two years during summer months. A third project, business networking through the Civic and Commerce Club, resulted in monthly breakfasts for the past two years. A fourth project, local career fair, was held for high school youth to showcase local employment and training options. The Menahga School Superintendent reported, "During the first year of the fair, 35 businesses participated and 100 students and 50 community members and parents attended. During the second year, 40 businesses and 130 students participated" (Longworth, 2014, para. 12). Only the fifth project dealing with business transitions stalled, as a result of changes in the committee.

The above BR&E processes are consistent with tenants of educational organizing (Peters, 2002) and participatory action research (Greenwood et al., 1993) as outlined in Loveridge and Morse (1997). While both Ahmed and Pesch were Extension educators specializing in community economics and covering large geographic areas (University of Minnesota, 2015), they were able to actively engage the local leaders in this participatory action research using educational organization principles specific to this program. Ahmed and Pesch's campus- and state-level networks allowed them to pull in applied research assistance in an effective and timely fashion. As a result of this two-way engagement, the group is now self-sustaining and still moving ahead.

Conclusion

The context of Extension education is very different today than in 1914 or even in the 1980s. The number and types of stakeholders that Extension organizations work with is ever-expanding and include far more than those directly participating in programs. The external trends influencing who Extension's stakeholders are, as well as how they would like to be engaged around specific topics, include changes in communication technology, rising educational levels, increasing impacts of an integrated global economy on rural economies, growth in ethnic and racial diversity, increased urbanization, and shifts in the ways that people volunteer. Changes at LGUs are also influencing the way that Extension programs are implemented, such as the change in the role of state specialists who are in academic departments, higher scholarship expectations of Extension educators, and regionalization and specialization of Extension field educators.

Each of the above trends impacts Extension's ability to deliver high quality programs, which are essential to strong participation in educational activities and strong public financial support from other stakeholders. To learn about and effectively use the new tools in needs assessment, program development, and program implementation research and evaluation requires considerable investments by Extension. It might also require some fundamental shifts in its

delivery system towards more regionalization and specialization in order to make it feasible for staff and to capture economies of scale.

The two case studies highlighted in this article illustrate how Extension has adapted to the changing context of stakeholder involvement. The New Hampshire Community Profiles Visioning case demonstrates that the way stakeholders want to engage in community development programs has changed over time and that Extension had to be attuned to these changes to sustain participation in the program. The Minnesota Business Retention and Expansion Program case demonstrates how diverse stakeholders, including program nonparticipants, can influence efforts to engage a broader audience. This case also examines how changes on campus impact the role of field staff in a program that requires high levels of community engagement to be successful.

As demonstrated by the case studies, projects were successful when adaptations were made to engage more and diverse stakeholders in the wake of changing societal trends and institutional-organizational structures. Both programs incorporated what is often referred to as *educational organizing*, whereby decisions were made by local leaders rather than by the Extension professionals. This marks a significant transformation from Extension's original role as primarily a disseminator of research-based information. However, both of these programs add research-based concepts and data at appropriate stages for local use, making them a form of participatory action research.

Also key to the success of both programs was the fact that the Extension professionals had a strong reputation and credibility with state and regional leaders in both the private and public sectors. This allowed the Extension professionals to leverage this network to help fund the programs and to serve as resource people. The programs were also led by highly specialized Extension professionals—both state specialists and field/regional specialists—who had particular expertise in community economics. This specialization has been key to ensuring that the programs are research-based, incorporate cutting-edge best practices regarding engagement, and are implemented in a consistent manner from one region to another.

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Developing Extension Professionals to Develop Extension Programs: A Case Study for the Changing Face of Extension

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Development of Cooperative Extension programs depends upon the skills and abilities of competent Extension professionals. The most effective manner of building program development competencies in these Extension professionals is through professional development. A wide variety of competencies are necessary for Extension professionals to develop programs, including strong interpersonal skills. Differences exist between the professional development efforts of Extension institutions and are highlighted herein. Major challenges to delivery of professional development include time and budget, but these can be overcome through planning and innovation and use of online or hybrid methods. Professional development for program development is essential to furthering Extension's mission, especially during times of rapid change.

Keywords: Cooperative Extension, Extension, learning, onboarding, professional development, program development, training

The Importance of Professional Development for Program Development

Delivering high quality, locally relevant, and research-based educational programs is the central mission of Cooperative Extension (Extension). The basis of this mission is the ability of both agents and specialists to plan, implement, and evaluate a local program (Cooper & Graham, 2001; Radhakrishna, 2001). The Program Development Model is the centerpiece for the development and delivery of educational programs within Extension (Seevers & Graham, 2012).

Competent Extension professionals are critical for the future of the organization and its Program Development Model. Organizations are only as strong as their human capital. Extension can be transformed into a more successful 21st Century organization by improving the quality and skills of the professionals who develop educational programs (Extension Committee on Organization and Policy, 2007; Garst, Hunnings, Jamison, Hairston, & Meadows, 2007; Seevers & Graham, 2012). The preparation of Extension professionals to accomplish their roles through professional development is essential to the development of quality Extension programs (Garst, Baughman, &

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Franz, 2014). However, the design of professional development for educators is rarely straightforward, rarely measured for effectiveness, and the impact is rarely demonstrated (Rienties, Brouwer, & Lygo-Baker, 2013).

Professional development, the advancement of skills or expertise to succeed in a particular profession through continued education, provides the opportunity for employees to strengthen their practice throughout their careers (Mizell, 2010). Professional development improves staff retention, reduces stress, assists in leadership succession, allows for better use of resources, improves program quality, increases job satisfaction, reduces hiring and orientation costs, and allows for more successful organizational change (Garst et al., 2014). As a knowledge organization, Extension must continually develop the intellectual capital of its workforce to remain relevant in an ever-changing context (Conklin, Hook, Kelbaugh, & Nieto, 2002; Van Buren, 2001).

Extension professionals must be able to successfully execute the Program Development Model in their work, which requires an increasing number of competencies (Brodeur, Higgins, Galindo-Gonzalez, Craig, & Haile, 2011; Conklin et al., 2002). Professional development may be the most accessible way for Extension professionals to develop competencies for the execution of the Program Development Model (Garst et al., 2014).

Professional Development in the Extension Context

Most Extension institutions provide professional development opportunities for new employees, as well as continued education for experienced employees. These opportunities focus on subject-matter expertise (e.g., livestock, crops, health, families, youth development) or core skills (e.g., time management, conflict resolution, use of technology). An important component of professional development for all Extension professionals is the strengthening of competencies in areas related to program development.

Several terms are used interchangeably with professional development, including training, workplace learning, and employee development (Garst et al., 2014). Stone and Bieber (1997) define *competencies* as “the application of knowledge, technical skills, and personal characteristics leading to outstanding performance” (para. 2). Competencies are the building blocks for performing advanced and complex functions, such as program development.

Career Continuum of Professional Development

Although professional development is important throughout one’s career, professional development related to the Program Development Model is especially critical during the first 6 to 36 months on the job (Baker & Hadley, 2014; Brodeur et al., 2011; Kutilek, Gunderson, &

Conklin, 2002). Extension professionals arrive on the job with a set of experiences, skills, and knowledge, and competencies are developed throughout the career stages (Benge, Harder, & Carter, 2011). Competency levels of Extension professionals are correlated with years of experience, suggesting that professional development occurs continually, although perhaps not consistently, throughout the career (Lakai, Jayaratne, Moore, & Kistler, 2012).

Table 1. Benge, Harder, & Carter's (2011) Professional Development Model

Career Stage	Motivators	Organizational Strategies
<i>Pre-Entry</i>	Pre-Entry competencies needed: Self-management, program development process, communication skills, interpersonal skills, technical/subject matter expertise, and teaching skills.	Pre-service examination of competencies before entering the Extension organization; and Pre-service training before starting the job.
<i>Entry</i>	Understanding the organization, structure, and culture; Obtaining essential skills to perform job; Establishing linkages with internal partners; Exercising creativity and initiative; and Moving from dependence to independence.	Peer mentoring program; Professional support teams; Leadership coaching; and Orientation/job training.
<i>Colleague</i>	Developing area of expertise; Funding for professional development; Becoming an independent contributor in problem resolution; Gaining membership and identity in professional community; Expanding creativity and innovation; and Moving from independence to interdependence.	In-service education; Specialization funds; Professional association involvement; Formal educational training; and Service on committees or special assignments.
<i>Counselor and Advisor</i>	Acquiring a broad-based expertise; Attaining leadership positions; Engaging in organizational problem solving; Counseling/coaching other professionals; Facilitating self-renewal; and Achieving a position of influence and stimulating thought in others.	Life and career renewal retreats; Mentoring and trainer agent roles; Assessment center for leadership; and Organizational sounding boards.

Pre-entry and entry. Benge et al. (2011) listed program development as one of the most important pre-entry skills identified by Florida Extension agents (Table 1). Many new employees in Extension lack sufficient background in program development. Therefore, competencies in this area must be developed during the first few years post-hire through professional development (Brodeur et al., 2011; Gibson & Brown, 2002). Kutilek et al. (2002) stated, "Extension wants new employees to develop skills quickly to a level at which they can perform their work efficiently and effectively" (para. 6).

Onboarding of new employees generally spans two to three years during the entry stage, and may last up to five years if the process extends into the early career of an employee. Early stage professionals need to develop competencies in professional development in order to increase the likelihood of delivering successful educational programs.

The early stage is a formative time to learn or establish best practices in program development and in competencies such as interpersonal skills, collaboration, and communication (Kutilek et al., 2002). Without a solid foundation in the beginning of their career, Extension professionals may develop less-than-effective habits or may not be able to move on to more advanced stages.

Colleague stage and beyond. In the colleague stage, professional development provides the opportunity to increase efficiency and effectiveness in program development, as well as expand creativity and innovation (Rennekamp & Nall, 1994). Keeping current on technology, demographic shifts, the needs of stakeholders, and global issues for all employees can increase the effectiveness of educational efforts, thus helping the communities they serve. Those in the counselor and advisor stages are in coaching, mentoring, and sponsoring roles (Rennekamp & Nall, 1994), and therefore must keep current in program development to be effective in developing entry stage professionals.

Major Challenges and Barriers

External and internal factors influence Extension's ability to carry out program development. Ladewig and Rohs (2000) found that the changes in society's social, economic, and environmental conditions, including globalization and technology, have created numerous challenges for Extension:

- Accelerated rate of technical change;
- Accessibility of knowledge to whomever has the technology to access it;
- Becoming fast and flexible to meet changing customer needs;
- Becoming more customer driven;
- Changing demographics of the people to be served;
- Continuing to improve to satisfy customer expectations;
- Ensuring cost-effective approaches to make the most of limited budgets;
- Increased competition for public funding; and
- Shifting sources of support for teaching, research, and Extension.

As society experiences major shifts in funding, expectations of stakeholders, technology, and the rate of change, barriers and challenges occur for the Extension professional.

Time. One of the greatest limitations to acquiring or strengthening core competencies is time, especially time out of the office (Baker & Hadley, 2014; Lakai et al., 2012). Mincemoyer and Kelsey (1999) found that many of the major factors preventing educators from attending professional development revolved around time: difficulty taking time away from the office or conflict with previously scheduled events. Conklin et al. (2002) confirmed these findings and listed four barriers to professional development:

- Difficulty taking time away from the job;
- Distance to training sites too far, requiring too much travel time;
- In-services viewed as irrelevant to the job; and
- Scheduling conflicts.

Budget. Budget constraints can also limit professional development opportunities. During periods of reduced resources, professional development is often discontinued. Budget reductions can negatively impact how Extension professionals perform their jobs (Baker & Villalobos, 1997). Budget crises may be the best time to increase – or at least hold steady – professional development opportunities to retain quality educators and increase effectiveness and efficiency in delivering programs (Safrit & Owen, 2010). Funding limitations, however, may mandate the use of new delivery methods for professional development (Conklin et al., 2002).

Professional Development Delivery: Methods and Strategies

An Extension professional's needs for development can differ according to his or her career stage, and these needs can be mapped according to strategies and motivations that are important at each of the career stages (Table 2). Extension institutions provide several methods of professional development. A multimodule approach, utilizing different methods, has been proven successful by several institutions (Baker & Hadley, 2014; Garst et al., 2007). These methods take many forms, including formal and informal, as well as face-to-face and online approaches (Bowie & Bronte-Tinkew, 2006).

Formal. Formal professional development opportunities include but are not limited to certification programs or coursework for credit, guided individual skill development opportunities, mentor programs, one-on-one coaching, shadowing experiences, and training approaches such as workshops or simulations.

Informal. Informal professional development opportunities include a multitude of unstructured leaning opportunities, such as casual conversations within or outside the workplace, informal mentoring or coaching, observation of coworkers, self-directed learning opportunities, and support teams.

Table 2. Professional Development Description, Strategies, and Motivators by Career Stage

Description (Benge et al., 2011; Rennekamp & Nall, 1994)				
Pre-Entry	Entry	Colleague	Counselor	Advisor
Individuals actively seeking employment in Extension, such as students or individuals changing careers.	Individuals first entering the profession or a new job within the profession.	Individuals accepted as members of the professional community and independently contribute their expertise to solving problems and carrying out programs.	Individuals ready to take on responsibility, either formal or informal, for developing others in the organization.	Individuals playing a key role in shaping the future of the organization by sponsoring promising people, programs, and ideas.
Strategies (Benge et al., 2011; Kutilek et al., 2002)				
Pre-Entry	Entry	Colleague	Counselor	Advisor
Examination of competencies, and pre-service training before starting the job.	Peer mentoring, professional support teams, leadership coaching, and orientation/job training.	In-service education, professional association involvement, formal educational training, and service on committees or special assignments.	Life and career renewal retreats, mentoring and trainer agent roles, assessment center for leadership, and organizational sounding boards.	
Motivators (Benge et al., 2011; Rennekamp & Nall, 1994)				
Pre-Entry	Entry	Colleague	Counselor	Advisor
Self-management, program development process, communication skills, interpersonal skills, technical/subject matter expertise, and teaching skills.	Understanding the organization, structure, and culture; obtaining essential skills to perform job; establishing linkages with internal partners; creativity and initiative; and moving from dependence to independence.	Developing area of expertise, professional development funding, independent contributor in problem resolution, membership and identity in professional community, creativity and innovation, and moving from independence to interdependence.	Acquiring a broad-based expertise, attaining leadership positions, engaging in organizational problem solving, counseling/coaching other professionals, facilitating self-renewal, and, achieving a position of influence and stimulating thought in others.	

New Directions: Online and Hybrid Methods

Online professional development can replicate many activities traditionally performed face-to-face and has proven to be an exceptional tool for reaching a geographically dispersed audience (Coppernoll, Jahedkar, & Murphrey, 2006). Employee perspectives and professional connections are enhanced by bringing together people and experiences outside the normal reach of face-to-face professional development (Russell, Carey, Kleiman, & Venable, 2009). Online and hybrid methods also address the major challenges of time and budget through negating the need for travel (Franz, Brekke, Coates, Kress, & Hlas, 2014; Harwell, 2003).

A study by McCann (2007) on professional development in Extension determined that the success rate of professional development between online and face-to-face methods were almost equal. Even though online professional development has been successful, many Extension professionals still prefer face-to-face instruction (McCann, 2007). This preference may change as new generations native to online communication more fully enter the workforce. Slow Internet connections, especially in rural areas, may affect the effectiveness, adoption, and/or enjoyment of online methods (Thomas, 2009). Hybrid methods, which combine online modules with face-to-face educational sessions, may become more established for Extension professional development to enhance program development.

Competencies Required for Extension Program Development

Competency development is a participatory process linked to strategic decision making in training and development (Stone & Bieber, 1997). Thus, the development of competencies is also a strategic issue that has implications for the future success of Extension.

Literature on the core competencies and essential skills required for Extension professionals consistently lists program planning and development (Baker & Hadley, 2014; Cooper & Graham, 2001; Radhakrishna, 2001; Scheer, Ferrari, Earnest, & Connors, 2006; Stone & Coppernoll, 2004). The list of required core competencies expands greatly when viewing program development through (1) the lens of Boyle's (1981) comprehensive definition of a program; (2) the Seevers, Graham, and Conklin (2007) concept that stakeholders play a critical role in program development; and (3) the idea presented by Ripley et al. (2010) that volunteers must play a role in all parts of a program.

Not only must Extension professionals have mastery over the Program Development Model, they must possess a variety of program development skills, including evaluation, promotion, instruction, use of technology and media, interpersonal skills, volunteer management, and more (Gamon, Mohamed, & Trede, 1992; Hibberd, Blomeke, & Lillard, 2013). Extension professionals have placed equal importance on program planning, implementation, and

evaluation; public relations; personal and professional development; and faculty/staff relations (Cooper & Graham, 2001). Core interpersonal skills and an understanding of the program development process may go hand-in-hand (Scheer, Cochran, Harder, & Place, 2011). Therefore, training on the Program Development Model alone is not sufficient to prepare an Extension professional to successfully develop effective programs.

The case could be made that almost any Extension core competency could be directly related to program development, given the range of skills necessary to develop a comprehensive program in collaboration with stakeholders. Extension professionals have identified leadership skills, human (interpersonal) skills, and emotional intelligence skills as being the most important factors in implementing successful educational programs in their communities (Bruce & Anderson, 2012). Scheer et al. (2006) listed ten core competencies for Extension professionals, almost all of which play an important role in program development:

- Applied research;
- Communications;
- Community development process and diffusion;
- Diversity and pluralism;
- Extension knowledge, leadership, and management;
- Marketing and public relations;
- Program planning, implementation, and evaluation;
- Risk management;
- Technology; and
- Theories of human development and learning.

As the world becomes more interconnected and Extension audiences become more diverse, Deen, Parker, Hill, Huskey, and Whitehall (2014) suggest the need for cultural competency training to deliver relevant programs for a variety of audiences. Extension professionals have an increasing need to understand how global issues affect local communities, as well as how to operate in a world with global technology connections (Ludwig, 1999). Furthermore, successful Extension professionals must be able to work in teams, communicate effectively, oversee performance, manage tasks, and lead people to further the mission of delivering educational programs (Ladewig & Rohs, 2000).

Case Study: Texas A&M AgriLife Extension Service

Setting the Stage

Employee development has long been a focus of AgriLife Extension, including new hires and experienced employees. In the late 1990s, AgriLife Extension embarked on a significant effort

to identify competencies needed by employees for successful program development (or performance) (Stone & Coppernoll, 2004). This effort led to the creation of a comprehensive strategy to ensure all employees received strategic professional development. Since this time, numerous adaptations and modifications have been made to the strategy. Environmental changes such as budget reductions and organizational changes were the primary factors guiding this change.

Prior to 2011, AgriLife Extension employed one faculty and one staff position specifically focused on employee professional development. These individuals developed and implemented strategies for employee professional development, including programs for new employees such as orientations, trainings, mentoring, and instructing existing employees on new ideas or refresher trainings. In 2011, as a result of budget cuts, these positions were eliminated and the responsibilities assigned to other employees within the organization. Professional development efforts have continued at levels equal to or greater than those prior to these changes.

Internal analytics have shown the demographics of AgriLife Extension employees have changed. The workforce has continued to get younger, and the needs, work styles, and learning styles of these employees has altered the approach to the professional development strategy. In addition, rapid changes in technology have led to the use of online courses for basic level content of program development and content related to teaching, the use of video conferencing for some training, and the development of short videos for the diffusion of less detailed information.

The activities described below focus on the professional development efforts within AgriLife Extension. This work includes topics such as program development (planning, implementation, and evaluation), teaching effectiveness, facilitation skills, and specific subject matter skills, such as animal science, crop science, nutrition, community development. Professional development opportunities for other skills, such as time management, conflict resolution, and personnel management, fall under the responsibility of the human resources unit.

Onboarding New Employees

New employees for AgriLife Extension are defined as those within the first three years of employment. AgriLife Extension data indicate that new employees retained for three years generally stay with the organization. The goal of the onboarding process is to get 'early wins' for a new employee, thus increasing the chance they stay with the organization.

District Extension Administrator/Regional Program Leader agendas. Specific orientation and training agendas have been developed for use by regional leadership teams consisting of District Extension Administrators (DEA) and Regional Program Leaders (RPL). The specific roles of the DEAs are hiring and supervising county agents. The RPLs provide professional

development and support for program development. The professional development agendas cover a wide range of topics. These agendas are implemented the first day of employment and continue through the second year of employment. Agendas are used by both DEAs and RPLs for specific employee competency development. For example, a DEA will cover information on working with a county Leadership Advisory Board and other committees. An RPL will cover how an agent works with specialists in program development and delivery. This strategy is specifically designed for new county agent hires.

FirstStep program. All county agent hires, except those in an urban county, go through a process called FirstStep in their first month of employment. The FirstStep program places a new agent in a county similar to their own for their first 30 days of employment. This allows a new agent to shadow and learn from successful experienced agents. During this time, new agents are exposed to programming efforts, committee meetings, visits with producers and other clientele, and the general county office environment.

Program Excellence Academy. The Program Excellence Academy is comprehensive and intensive face-to face professional development for all new agents in their first 12 to 15 months of employment. The academy consists of two weeklong sessions aimed at providing in-depth knowledge and skills on the program development process. The first session focuses on an organizational overview, issue identification, program planning, and program design. The second session focuses on program implementation, teaching effectiveness, evaluation, and program reporting. These sessions contain both classroom and hands-on educational experiences. Educators participating in these sessions include organizational development faculty, Extension administration, DEAs, RPLs, specialists, and agents. Agents can earn up to six graduate credit hours towards a graduate degree with approval from an institution of their choice.

101 trainings. At the end of the first academy session, new agents attend one of two 101 trainings. One session focuses on 4-H livestock education and the other focuses on 4-H family and consumer science education. These sessions provide in-depth understanding and skill development for various aspects of the 4-H program. These offerings contain both classroom and hands-on educational experiences.

Online training. New agents are required to take several online courses to assist them in obtaining a basic framework for the more in-depth training at the academy sessions. Topics for online courses include the history of Extension, basic program development concepts, professionalism, and use of the Extension planning and reporting system.

Mentoring. All new agents are involved in a formal mentoring program. Mentors and mentees are assigned to each other based on geographical proximity, knowledge and skill sets, and

subject-matter expertise. The mentor program lasts for 24 to 36 months, based on the needs of the mentee. All mentors undergo initial and other periodic trainings to ensure they understand the mentoring strategy and concepts and to ensure their skills are kept up-to-date.

Specialists' Foundations. A specific training for new specialists is conducted. These trainings are held as needed based on the number of new specialists hired. The focus of this professional development includes topics such as program development, working with agents and county programs, grants and contracts, and the promotion and tenure process. Specialists' Foundations is usually a two-to-three day program held on-campus at Texas A&M University.

Professional Development for Experienced Employees

Experienced employees for AgriLife Extension are those who have completed the onboarding process. Several development opportunities described below are made available for these employees.

ExtensionU. ExtensionU (or Extension University) provides continued training for experienced agents. This opportunity is voluntary, and both agents and specialists can register for courses that they and their immediate supervisor believe will enhance their growth. Intermediate and advanced courses focus on program development related skills. ExtensionU topics include program development, teaching effectiveness, evaluation, online learning development, grant writing, volunteer management, and use of social media.

Regional/District offerings. Regional and district trainings are planned throughout the year based on the needs of the agents in each district. These trainings are identified, developed, and implemented by regional and/or district teams. These offerings can be organizational or subject matter-related. They may include all agents in a geographic area or target a specific group such as new agents.

New Ideas and Concepts

Peer mentoring. This effort provides a team of mentors instead of focusing mentoring efforts on a one-to-one relationship. In this strategy, mentors can be co-workers, agents with similar job responsibilities, agents with similar interests, or any other relationship to enhance the mentee's success. Mentor teams are generally small with up to five employees working with a new employee.

Modifications to FirstStep program. Modifications to the FirstStep program (described previously) are currently being tested within the state. The primary modification utilizes multiple counties in the process. By observing Extension in two or more counties during the first month

of employment, it is believed that the new agent will get more exposure to programs and activities, as well as insights into working with a wide variety of clients.

Regional onboarding. A regional onboarding effort is being developed to supplement the skills and practices learned in the Program Excellence Academy. These sessions, three in total per region, will focus on skill sets not fully developed during the Academy, such as a deeper focus on developing relationships.

Agent certification. An agent certification program is currently in the planning phase. This effort will help agents gain advanced knowledge, skills, and practices in key areas of their current position or a desired future position. Each certification effort would have a similar format to ensure consistency. The certification process would incorporate a ‘degree plan’ approach to an overall employee development effort including an employee development plan and an associated academic transcript. The proposed plan would include core strategies and personal competencies to reach each agent’s needs. Beyond the core requirements, agents will select elective training opportunities focused on their goals. A modified version of this certification process will also be designed for specialists.

Major Challenges

Several challenges face AgriLife Extension’s professional development efforts including the financial and personnel resources needed to train employees across a large, diverse state. Also, as technology and the workforce continue to change at a rapid pace, challenges to how professional development opportunities are delivered will continue to be an issue. These challenges will impact how we identify, design, deliver, and evaluate programs in a timely and relevant way.

Extension Professional Development Across the Country

University of Arkansas Cooperative Extension Service

The University of Arkansas Cooperative Extension Service (UA CES) uses a blended learning approach to professional development delivered through various platforms, methods, and products (R. Poling, personal communication, March 27, 2015). This strategy includes periodic comprehensive assessments of employee needs across program areas, organizational roles, and years of service. A full range of training efforts includes online courses, fact and tip sheets, videos, webinars, distance coaching, classroom instruction, and field training. These resources are made available to both new and experienced employees. Onboarding webpages and semi-annual *Check-In and Tune-Up* workshops are also available to all new employees at UA CES. Structured onboarding and mentoring efforts are also part of the support for new employees. Both district directors and program and staff development personnel provide these efforts.

Onboarding new employees. UA CES has specific professional development targeted at county agents. This includes a formal onboarding and mentoring program, with the responsibility of this effort shared among the new agent, the new agent's direct supervisor, mentor, district director, and program and staff development personnel. Training resources include an onboarding notebook that identifies key information and activities each new employee should experience within the first year of employment, as well as a self-guided competency assessment tool. A companion notebook is provided to each supervisor and mentor. In addition, online courses are available for the new employee, supervisor, and mentor that outline the onboarding process. Monthly videoconferences are conducted with new agents on topics relevant to the new agents' roles and responsibilities. A formal evaluation process is also used to assess the onboarding and mentoring program. To assess the mentor/mentee relationship, 30-day follow-up telephone interviews are conducted with both the new agent and the assigned mentor. Evaluation data for the overall onboarding and mentoring process is collected from the new agents, the direct supervisors, and the mentors using online surveys at 3-, 6-, and 12-month intervals during the new agent's first year. The new agent onboarding process is currently being modified for other UA CES job categories.

Several efforts described above (e.g., online and face-to-face courses) have a strong focus on the program development process, including program implementation and evaluation. Informal feedback provided by new employees, mentors, and supervisors suggests these efforts have led to a greater understanding of the program development process and better designed programs.

Professional development for experienced employees. Professional development opportunities for experienced UA CES employees include traditional face-to-face in-service training classes and workshops, online courses, webinars, and blended classes with online materials integrated with face-to-face classes. These opportunities are also available to new employees.

In-service training offerings are categorized based on a set of core competency areas identified as important knowledge and skills needed by Extension employees. These competencies include subject matter expertise, organizational knowledge, program development, technology, communication, and professionalism. Ideas for in-service training topics are identified through periodic needs assessment surveys and consultation with district directors and department specialists. Prior to the beginning of each training year, the in-service face-to-face classes, online courses, and webinars are identified, approved, and scheduled for the coming year.

Another professional development opportunity available to experienced employees, as well as new employees, is an annual three-day professional development conference sponsored and conducted by four Arkansas Extension professional associations. This *Galaxy Conference* offers educational sessions, guest keynote speakers, and a poster session for sharing ideas.

New ideas and concepts. UA CES is focusing new efforts on the translation of the face-to-face orientation to online modules. In addition, UA CES is working to expand the use of self-paced, readily available tutorials for training in organizational operations, as well as expanding the use of webinars as a delivery method for employee professional development activities.

Major challenges. UA CES has identified several professional development challenges, including employee turnover. This situation increases the need for timely training delivered on-demand, acquiring skill sets to develop quality online courses, and funding to create the courses. Providing training opportunities in program areas where few employees need specific training sometimes causes offerings to be postponed until a critical mass of participants is available.

Colorado State University Extension

Colorado State University Extension uses a variety of methods for the professional development of new and experienced employees (J. Barth, personal communication, March 31, 2015). These include a combination of face-to-face and electronic methods to reach both new and experienced employees.

Onboarding new employees. Currently, online presentations, an online workbook, and printed materials are being used. In addition, a three- to four-day face-to-face new employee training is conducted on-campus twice a year. A formal mentoring program is also part of the onboarding process. Mentors are assigned to new employees based on their area of responsibility, geography, and program size. Regional program directors select the mentors, and funds are provided for the mentor and mentee to have face-to-face meetings. All of these efforts have a focus on the program development process. Anecdotal evidence suggests these efforts are having an impact on new employees when compared with earlier efforts that did not utilize face-to-face trainings or a mentoring program.

Professional development for experienced employees. Experienced employees create a professional development plan and update it every four years. These plans are discussed annually during the employee's performance appraisal to determine how they stay up-to-date and grow in their respective fields. In addition, subject-matter units provide content updates, and an annual conference provides professional development opportunities for employees. Yearly regional meetings and monthly county director webinars also provide professional development opportunities for employees.

New ideas and concepts. For new employees, a comprehensive, online training system is being developed. This system will be housed in Canvas, an online learning platform, and will take 12 weeks to complete. An agent committee is working on the development and implementation of the Canvas-based learning platform.

Major challenges. The major barrier to professional development identified was time. Employees state they are overcommitted, making it a challenge to participate in professional development.

University of Illinois Extension

The University of Illinois Extension professional development efforts range across a wide spectrum, utilizing multiple strategies, including a combination of face-to-face and technology-based efforts (A. Taylor, personal communication, April 2, 2015).

Onboarding new employees. A new online system is currently under development to complete basic pre-hire information prior to a new employee's first day on the job. On his/her first day, the formal onboarding process would include a series of online courses, such as a welcome from the Director, history of Extension, reporting, etc. Academic professional staff are assigned a mentor and also participate in face-to-face trainings at the regional and state levels.

Professional development for experienced employees. Experienced employees receive a variety of trainings and also participate in regional and state trainings. Program areas provide specific trainings throughout the year, and the Illinois Joint Council of Extension Professionals provides a variety of professional development opportunities at an annual conference. These conferences have included nationally known speakers to deliver professional development. Finally, monthly webinars and meetings with county directors are used to identify professional development needs of employees and provide educational opportunities accordingly.

New ideas and concepts. Technology is being used more fully for professional development. The online program described above is a major new effort. In addition, the organization is developing more comprehensive inclusion and diversity professional development.

Major challenges. Time and money are major barriers for professional development. A major reorganization effort a few years ago decreased professional development as a priority in the organization, so a rebuilding of professional development capacity is taking place.

University of Kentucky Extension

The University of Kentucky Extension professional development efforts focus on a core strategy to meet the needs of both new and experienced employees through a combination of face-to-face and technology-based efforts (K. Jones, personal communication, April 2, 2015).

Onboarding new employees. All new Extension employees participate in an orientation upon being hired. County Extension agents are provided a guidebook that includes human resource

materials, the organizational structure of Kentucky Extension, as well as information on program development. This orientation is followed by a face-to-face core training of three sessions over a 12-month period. The emphasis is on program development principles and practices, including building linkages and relationships, situation analysis, priority setting, program design, program implementation, evaluation, and accountability. All new employees are also required to complete a specified number of in-service trainings per year. New agents are paired with experienced agents who serve as mentors. Mentors complete training prior to being assigned.

Professional development for experienced employees. Experienced employees receive a variety of trainings, and like new employees, are required to complete a specified number of in-service trainings per year. In addition, they are required to assist in the development and delivery of new educational programs and materials, as well as contribute to research and academic publications. Study leave focusing on enhancing specific knowledge and skills is also available to experienced employees.

New ideas and concepts. Moving to an online training environment is a focus within the University of Kentucky Extension system. Civil Rights trainings and Orientation/History of Extension are now conducted via archived webinars for all Extension employees. In addition, utilization of experienced agents and specialists as trainers in the core-training program offered to new employees is a new focus.

Major challenges. Technology, technology support, and the availability of trainers with appropriate subject-matter skills were identified as professional development barriers. The development of collaborations between agents and specialists to serve as co-facilitators and trainers during the core-training sessions is also a challenge.

Table 3 summarizes the professional development methods used by several Extension systems to enhance program development competencies in new and experienced Extension professionals.

Table 3. Summary of Professional Development Opportunities from Case Studies

Strategy	Arkansas	Colorado	Illinois	Kentucky	Texas
Face-to-Face	O,E	O,E	O,E	O,E	O,E
Online	O	O	O	O	O
Mentoring	O	O	O	O	O
Notebooks/Documents	O	O		O	O
Webinars		O,E	E	O,E	O,E
Formal Assessment	O				

O = Onboarding experiences for new professionals

E = Professional development for experienced professionals

Implications and Recommendations

Knowledge and practice can quickly become out-of-date in today's complex and rapidly changing world. Professional development must adapt to an ever-changing society. Extension and its professionals must also view professional development as a continual learning process designed to stay current and to anticipate future organizational and/or clientele needs (Sims, 1998).

Share professional development best practices for improved program development. As Extension continues to learn more about professional development as it relates to program development, it becomes imperative to share ideas and best practices among institutions since context plays an important role in professional development (Avalos, 2011). Effective professional development is an ongoing, learner-centered, and collaborative process that recognizes educators as adult learners (Abdall-Haqq, 1996). There are numerous Extension organizations that have excellent resources or provide mechanisms to share resources. These include the National Association of Extension Program and Staff Development Professionals (NAEPSDP), eXtension, Epsilon Sigma Phi (ESP), and various subject-matter associations.

Balance theory and practice. A balance of professional development time must be spent on developing theory and application of theory in practice to improve program development. The andragogy in practice model developed by Knowles, Holton, and Swanson (2005) can be a useful tool when designing professional development for Extension professionals to ensure a balance between theory and practice. The goals and purposes for learning (which include individual, institutional, and societal growth), individual and situational differences, as well as the core adult learning principles (learner's need to know, self-concept of the learner, prior experience of the learner, readiness to learn, orientation to learning, and motivation to learn), should all be considered by those planning professional development. Effective professional development is job-embedded (Hunzicker, 2011), which allows Extension professionals to use their practice as a learning opportunity.

Focus on work-life balance. Increased workloads and use of time, as well as increased personal costs, are burdens preventing some Extension professionals from engaging with professional development opportunities (Lakai et al., 2012). Maintaining a work-life balance can help reduce stress and increase both wellness and effectiveness (Ensle, 2005). Training new Extension professionals on effective time management skills can be an important step in helping educators balance professional development with their other responsibilities and also reduce on-the-job stress (Baker & Hadley, 2014). Burnout can be costly to Extension and harmful to its professionals (Sears, Urizar, & Evans, 2000). Extension professionals able to manage their time and commitments have been shown to be more effective; thus, training in this area should be proactive (Place & Jacob, 2001).

Start professional development earlier in the employee's Extension career. It may be advantageous to start the professional development process earlier. The timing of professional development opportunities with the start date of new employees was a concern found by Baker and Hadley (2014). Specifically, program planning was mentioned as a competency that needed to be developed early in an Extension educator's career so he/she does not feel things were done incorrectly prior to receiving professional development. For example, Virginia Cooperative Extension created a multimodule 4-H agents' training program to teach youth development competencies consistent with the National 4-H Professional Research, Knowledge, and Competencies (4HPRKC) taxonomy. Written and verbal evaluations indicated the program, a first-year requirement for new Extension professionals, was informative, interactive, and responsive to participants' needs (Garst et al., 2007).

Mobilize online and hybrid learning for professional development. More of the professional development process as it relates to program development should be moved online to address time and cost constraints, as well as the preferences of the newest generations entering the workforce. There is growing evidence that online education is a viable option for Extension professional development, and that Extension professionals are interested in and receptive to this option (Senyurekli, Dworkin, & Dickinson, 2006). A hybrid course featuring both online and face-to-face interaction may be an ideal method for teaching Extension professionals about program development as a balance between cost and time constraints and the preferences of Extension professionals to interact face-to-face. These professional development opportunities and related resources should be archived so professionals can easily refer to the information presented (Baker & Hadley, 2014).

Implement individualized professional development plans. Stone and Coppernoll (2004) suggest the creation of an individual professional development plan to guide employee competency development. This plan is created in partnership between a supervisor and the employee outlining specific professional development goals and steps to meet those goals. This process reinforces a best practice that learners should select what they need to learn to meet their career goals (McLoughlin & Lee, 2008). Results from the effort currently in development in Texas may provide support for this strategy in the future.

Involve employees as stakeholders of professional development. Extension professionals should help identify the knowledge, skills, and behaviors needed for developing their job competencies (Stone & Bieber, 1997). Just as Extension involves stakeholders in the program development planning process, so should employees as direct stakeholders be involved in the professional development planning process. Stone and Bieber (1997) suggest that Extension professionals will effectively grow their competencies by being involved in the planning process, and will also fully know their job responsibilities.

Use a variety of professional development methods. Extension professional development opportunities should use a variety of interactive methods and techniques to keep learning fresh and to take into consideration the variety of learning style preferences of participants (Baker & Hadley, 2014; Davis, 2006). As seen from the case studies above, each institution takes a different approach to professional development for program development, and no two institutions use the same mixture of methods for onboarding or experienced professionals. Situational differences across institutions, including cultural, geographical, and budgetary, mean that some methods are better suited than others. However, it is clear that no institution utilizes a single method alone.

Motivate Extension professionals to engage with professional development. Due to their busy professional lives, it is necessary to motivate Extension professionals to seek out professional development opportunities by helping them realize the benefits of these opportunities (Lakai et al., 2012). Effective professional development for Extension professionals depends upon the motivation of the Extension educator to improve professionally and achieve organizational goals (Dromgoole, 2007). It is imperative that Extension professionals who desire to excel choose to continue to develop themselves professionally. Efforts such as the certification program being developed in Texas or the youth development certificate offered by Clemson University (Clemson University, 2015) might provide additional internal motivation to continue the learning process. In addition, Extension administration and supervisors must continue to provide the rationale and opportunities for continued professional development.

Conclusion

The ability of Extension to continue to develop relevant, high quality educational programs is directly dependent on the implementation of the Program Development Model and the professional development of Extension professionals. It is likely that professional development will continue to transition to online and hybrid methods in the next few years to take advantage of advances in technology and increases in comfort levels with technology. Professional development issues of balancing work, motivation to engage with professional development opportunities, and perhaps even the individualization of professional development will become increasingly important with the next generation of Extension professionals. It is important to remember that professional development needs to occur throughout an Extension employees' career. While professional development is heavily stressed in the onboarding and early career stages, it is necessary for it to continue past that point to ensure that quality, relevant programs continue to be planned, delivered, and evaluated. In situations where time and budgets are challenges faced by Extension, increased or steady professional development activities may be the most appropriate response. The future of the organization and its Program Development Model greatly depends upon competent Extension professionals. Professional development may

look different today and in the future, but it is important to keep in mind that the competencies of Extension professionals are upon what Extension's success is built.

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Cooperative Extension Program Development and the Community-University Engagement Movement: Perspectives from Two Lifelong Extension Professionals

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For over 100 years, Cooperative Extension has been bringing university research and resources to communities to help them address critical issues. Historically, Extension was one of the first university engagement models in the country. In the last 20 years, community-university engagement models on campus have intersected and competed with Extension work. These engagement models are challenging Extension's long-established Program Development Model. Extension is only one vehicle or methodology for engagement work. For Extension to continue to leverage an important place in community-university engagement, it must more fully align the Program Development Model with the standards for assessing successful community-university engagement. Extension professionals also need to examine the program development process with an eye toward the scholarly process for doing engaged work, as well as understand and practice program development in the context of today's academic and community environments. Recommendations are provided to advance quality Extension program development within community-university engagement models.

Keywords: Cooperative Extension, program development, context, engagement, community-university engagement, engaged scholarship

As an outreach arm of Land-Grant Universities, Cooperative Extension (Extension) systems are an integral part of evolving community-university engagement models (Kellogg Commission on the Future of State Land-Grant Universities, 1999). Historically, Extension was one of the first university engagement models in the country (Coon, 2010). Select university faculty sharing information with the public through publications and farmers' institutes to improve country life were an outreach precursor to Extension (Kett, 1994). However, the creation of the Extension system formalized community-university engagement at Land-Grant Universities (Rasmussen, 1989).

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Community engagement within higher education has evolved over the past twenty years. Universities from Land-Grant to private to regional institutions have redefined their mission, vision, and action concerning how they engage with their communities (Glass & Fitzgerald, 2010). These changing models for engagement have important implications for Extension's long-established Program Development Model of planning, design and implementation, and evaluation (Seevers & Graham, 2012).

Engagement is defined as:

the partnership of 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. (Fitzgerald, Smith, Book, Rodin, & CIC Committee on Engagement, 2005, p. 3)

What differentiates community engagement work from outreach is the relationship between the university faculty and staff and their community partners.

Outreach and engagement are different. *Outreach* (sometimes called service) is often a one-way flow of information or expertise from the university to the community. Outreach tends to favor the university or university expertise over the community's knowledge or needs. For example, outreach is often sponsored solely by the university with a focus on what campus experts can provide to the community, such as campus-based educational events, expert services, or faculty conducting information dissemination (Franz, 2011b; Franz & Townson, 2008; McDowell, 2001). In comparison, engagement requires a reciprocal partnership between university and community stakeholders where knowledge and resources are exchanged for mutual benefit (Franz, 2011b). With engagement, the community and the university together define the issue at hand, co-develop the methodology to address the issue, collaborate on action, monitor progress, reflect and critique the programming process, and create new questions to research or address in the future (Clinical and Translational Science Awards Consortium, 2011). The power of this symbiotic engagement is the potential for co-creation of knowledge that informs new research, engaged pedagogy, and community-based programming in an ongoing cycle. In community-university engagement, the residents of the community participate together to address issues through community-based research (Israel, Eng, Schulz, & Parker, 2013), service learning (Furco, 2002), or other scholarly endeavors.

Engagement as a mutually beneficial collaboration between the university and community makes research useful outside the academic community. Engagement also results in teaching that enables learning beyond campus and service benefitting those outside the academic community (Peters, Jordan, Adamek, & Alter, 2005). The Association of Public and Land-Grant

Universities has stated, “today’s engagement is scholarly, is an aspect of learning and discovery, and enhances society and higher education” (Fitzgerald, Bruns, Sonka, Furco, & Swanson, 2012, p. 7). This relationship between the community and university to mutually discover and use knowledge to empower citizens is the foundation of Extension work. Community members engage with Extension professionals on advisory committees to conduct needs assessments, design and implement programs, and evaluate impact (Seevers & Graham, 2012).

Engaged Scholarship and Extension Program Development

Over the past 25 years, Boyer’s (1990) book, *Scholarship Reconsidered: Priorities of the Professoriate*, has challenged the traditional definition of academic scholarship. Rather than limiting scholarship to the work of laboratory-based original research, he charged the professorate to adopt four types of scholarship: discovery, integration, application, and teaching and learning. This widened definition successfully opened the door for higher education to recognize academic work differently and redefine the depth and richness of the work of the university (Fitzgerald, Burack, & Seifer, 2010).

Glassick, Huber, and Maeroff (1997) applied Boyer’s redefinition of scholarship by looking at the variety of work done by the professorate. They determined the common characteristics of scholarship, no matter what type of academic effort occurs. In their companion book to Boyer’s (1990) work, the authors identified common standards of successful engaged work. They indicated high quality engagement includes (1) clearly articulating goals, (2) adequate preparation, (3) appropriate methods, (4) gaining significant results, (5) effective presentation of the work, and (6) reflective critique (Glassick et al., 1997).

The six standards for engaged scholarship are encompassed in Extension’s Program Development Model (Table 1). Universities succeeding in institutionalizing community-university engagement have aligned organizational systems, people, processes, and policies around engagement (Beere, Votruba, & Wells, 2001). For Extension to continue to leverage an important place in community-university engagement, it must more fully align the Program Development Model with the standards for assessing successful community-university engagement. This alignment helps university faculty and administrators experience a direct connection between Extension programming and faculty performance related to community-university engagement.

Table 1. Comparison of Extension's Program Development Model and Standards for Assessing Community-University Engagement

Cooperative Extension Program Development Model (Seevers & Graham, 2012)	Standards for Assessing Faculty Community-University Engagement (Glassick et al., 1997)
Program Planning	Clear Goals Adequate Preparation
Program Design and Implementation	Appropriate Methods Effective Presentation
Program Evaluation	Significant Results Reflective Critique

Scholarship, defined as original intellectual work that is communicated and validated by peers, (Franz, 2011b), plays a crucial role in Extension work. Scholarship has two dimensions; one is direct and one is indirect. First, the work is directly rooted in research and knowledge generated around a specific issue. Second, the process of designing and implementing engagement or Extension work is a scholarly activity that indirectly brings to the process of engagement a level of quality that enriches the Extension program. This lays a scholarship foundation to strengthen the quality and impact of future Extension programs (Long & Bushaw, 1996).

Extension professionals need to examine the process of program development with an eye to the scholarly process of doing engaged work. For example, Extension professionals should consider the following questions during program development. Are they setting benchmarks and standards for the program development process by clearly articulating goals and the initial context for the program? Have they monitored the community setting to be prepared for the factors that can influence the program? After implementation, has the professional reflected upon the process and learned from the experience? Has this reflection generated new insights and thoughts for improving the program? Have Extension professionals shared not only their program development process with others, but have they shared the lessons learned with their advisory committee, program designers, and their peers? Extension program development as engaged scholarship supports high program quality including effective content and engagement processes leading to individual, family, and community impact through transformative learning that leads to deep outcomes for clients (Coon, 2010; Franz & Townson, 2008).

Changes Impacting Extension's Program Development and Engagement

Extension professionals need to understand and practice program development in the context of contemporary academic and community environments. The challenges outlined below specifically impact the ability of Extension professionals to engage successfully with communities. These challenges also influence the type and quality of engaged scholarship created by Extension professionals.

Campus Expectations

A major component influencing the implementation of Extension programs is the university culture and related expectations. Extension historically resides in a Land-Grant University context where the institutional mission, vision, and working definitions include engagement. In many community-university engagement models, Extension has been expanding partnerships with new colleges on campus for program development to add the knowledge base of these colleges and expand Extension's reach (Coon, 2010). The expansion of service learning and community-based participatory research for engaged pedagogy and research across campus provides Extension professionals with new program opportunities. Examples are youth engaged as researchers on urban community gardening (Krasny & Doyle, 2002) and undergraduates as Extension interns to better leverage scarce resources (Morris, Pomery, & Murray, 2002).

Tenure and promotion expectations are changing on some campuses as faculty determine what counts for tenure and promotion. There is a movement to evaluate tenure and promotion dossiers based on the faculty member's appointment rather than one set of standard criteria that tends to only reflect research appointments (Franz, 2011b). Universities are finding this requires having clear criteria for the scholarship of research, teaching, and engagement. Faculty, promotion and tenure committee members, and university administrators are beginning to support the wider forms of scholarship suggested by Boyer (1990) rather than using only research scholarship criteria to determine promotion and tenure for all candidates. Even with this change in the lenses used to assess promotions and tenure, some academics still question if community-engaged scholarship is true academic work (Calleson, Jordan, & Seifer, 2005).

Campuses and funders are also moving from supporting disciplinary work to emphasizing multidisciplinary, interdisciplinary, and transdisciplinary efforts to better address complex societal issues. *Multidisciplinary* approaches include academics working sequentially or parallel to each other, *interdisciplinary* work finds academics working together on an issue from their disciplinary lens, and *transdisciplinary* approaches include academics working together on an issue from a shared framework that integrates multiple disciplines (McNall, Barnes-Najor, Brown, Doberneck, & Fitzgerald, 2015). The move to transdisciplinary approaches results in a wider scope and more depth of on-campus partnerships to support more effective service learning and community-based participatory research (Furco, 2002; Israel et al., 2013).

Faculty, graduate students, and administrators committed to community-university engagement are articulating specific expectations to support engagement. One study in particular found faculty, graduate students, and administrators expect (1) a university center for student engagement and community partnerships, (2) a clear working definition of engaged scholarship, (3) faculty incentives and training to support engaged work and engaged scholarship, (4) a friendly class schedule and academic calendar to mesh with community needs, (5) job

descriptions that include engagement, (6) time to build long-term partnership with community partners that is honored by the promotion and tenure process, (7) metrics and measures to assess the impact of engagement, and (8) multiple opportunities for engaged faculty to meet each other and discuss their work (Franz, Childers, & Sanderlin, 2012). Some undergraduate students also expect to be engaged with local communities (Garst, Franz, Peters, Smith, & Baughman, 2012).

Changing Extension Structure and Specialization

The traditional model of Extension program development has its foundation in an Extension faculty specialist conducting research on a subject. He/she then developed an educational program or other series of activities to translate the research into application. County Extension educators were then trained to implement the program and evaluate it with the state specialist (Rasmussen, 1989).

The Extension community engagement model of state specialists and county educators has changed in many Extension systems to a structure with specialists at multiple levels of the organization at a state, regional, or county level. Extension professionals may still be based in county offices or just as likely located in regional offices. Extension professionals have become more specialized to bring specific resources and knowledge to complex community issues. Shifts in funding have resulted in a more regional approach to the delivery of Extension programs. The expectation to reach citizens more broadly has also often led to Extension professionals serving a broader geographic area (Coon, 2010; Morse, 2009).

As Extension staffing has changed, so have implications for Extension program development. With more specialization, the program designer is just as likely to be implementing the program with a team of specialists who were involved with its development (Morse, 2009). Extension professional specialization can challenge university-community engagement best practices when engagement processes or content require a generalist approach. These specialized professionals may find it difficult to deeply engage with communities due to the scale of the geography.

Funding and Accountability

One trend in higher education over the last two decades has been decreased public funding for Extension programming and increased funding for community-engaged research and pedagogy. For example, the Federal government now dedicates a large amount of funding through the National Science Foundation for scientists to plan, measure, and report the broader community or societal impacts of their work, not just the campus-based intellectual merit of the work (National Science Foundation, 2015). 4-H Youth Development professionals have also found they now must compete with other youth development organizations for federal funds previously restricted to 4-H.

Less public funding for Extension has decreased the amount of traditional long-term, in-depth programming produced by Extension professionals and increased the number of short-term projects in which they participate due to specific funding requirements. This trend requires Extension professionals to more fully build evaluation on program impact into programming to measure and articulate the private and public value of the program to sustain funding and the organization (Franz, 2011a, 2015; Kalambokidis, 2004, 2011). These funding changes have also influenced Extension's programming relationship with governments as public revenue becomes more restricted and government increases its focus on economic development and regional approaches to services (Coon, 2010).

Technology and Access to Information

Early Extension professionals implemented programs face-to-face with clientele, travelling to homes and businesses to provide education for individuals and families. These early educators also met with Extension groups to teach lessons and share information. As mass media developed, Extension professionals used radio, newspapers, and television to expand their reach to consumers to disseminate information and market programs (Johnston, 1982; Romero-Gwynn & Marshall, 1990).

Today's technology, including personal computers, tablets, smart phones, and social media, changes the reach and other aspects of Extension programs such as program delivery and work efficiencies (Diem, Hino, Martin, & Meisenbach, 2011). The explosion of web usage and increased internet capabilities of information consumers present new opportunities for Extension program development. Mobile technologies, applications, and devices have enabled consumers who spend considerable time online to access information, video, webcasts, and social media networks at any time and any location. Online access to information can fit more easily into the demands of a busy lifestyle. The project also found a growing percentage of the population watching online video from May 2008 to May 2010, rising 14% from 52% to 66%. The highest level of video consumption was in Millennials (80% in 2010), while the lowest video consumption was by people 74 years of age and older (20%). An additional change impacting Extension professionals is that the Pew Research Center's Internet and American Life Project found that the internet has surpassed newspapers and radio as the place where people go for news (Zickuhr, 2010a, 2010b, 2010c). In 2010, the internet ranked just behind television as a leading source of news. The increasing trend in the use of the internet has grown as technology has become increasingly mobile, and smart phones and tablets have become more prevalent (Zickuhr, 2010a, 2010b, 2010c). Nicosia (2014) projects that by 2018, 90% of mobile users will engage in social media through their mobile devices, while presently it is close to 80%.

These trends in internet, social media, and mobile device use have implications for Extension program development. How do professionals promote and market programs to stakeholders who

are constantly online? For a population that accesses information regularly through the web, how is Extension engaging technology users in online learning? For example, Extension professionals in Iowa developed a program to help families adopt environmentally sustainable lifestyles while simultaneously enhancing family development. The professionals planned an Eco Family day at a university research station, but no one came. They decided to meet families where they were by providing the program content totally online through a blog, webinars, and online activities. The program now engages a wide variety of families and individuals new to Extension across Iowa and the country (Santiago, Franz, Christoffel, Cooper, & Schmitt, 2013).

Through the use of technology, Extension professionals have more control over the consistency of programming. Educational programs can be delivered with the same approach across an entire state, region, or nation. The opportunity to connect with consumers in multiple formats online over an extended period of time allows Extension professionals to deepen the dosage of the program in an interactive and engaging fashion, especially with young adults. Through technology, the professional is challenged to assess the responsiveness of the participant and the impact of the program. How does the professional know who is accessing the educational program delivered online? Is the consumer changing their knowledge, skills, and behaviors due to the program? Sophisticated analytics and innovative program evaluation help assess the level of engagement and impact of the user.

Increased access to information through technology impacts how Extension programs are being planned, implemented, and evaluated (Diem et al., 2011; Schneider, Brock, Lane, Meszaros, & Lockee, 2011). The Extension professional is no longer the sole source of expertise on most topics. Competition for information dissemination and learning opportunities comes from a variety of sources ranging from the internet to businesses, nonprofit organizations, and other educational institutions. As a result, Extension professionals are challenged to adapt program development to this environment.

Volunteerism

Volunteers are a growing part of Extension program development as baby-boomers retire and a wider variety of capable and caring older adults are encouraged to contribute to their communities. The Corporation for National and Community Service (2014) projects the number of baby boomer volunteers could increase from a medium projection of 11.2 million in 2015 to a medium projection of almost 18 million in 2035. This trend creates new challenges and opportunities for Extension program development. Recent retirees have deep experience in the workforce and multiple skills and talents honed through their work life. However, these highly competent retirees may not be content to only assist in the delivery of programs. These community members are becoming adept co-creators of program development as they work in partnership with Extension in their communities.

This maturing volunteer force is increasingly assisting with planning, teaching, and implementing programs developed by and with Extension staff. Extension master volunteer programs such as Master Gardeners, Master Naturalists, and Master Water Stewards are important examples of this trend in volunteer support for university-community engagement (Posthumus et al., 2013). Extension volunteers, youth and adults can increasingly take on more in-depth program development roles in needs assessment, program design, teaching, or collecting and analyzing program quality or impact data. For example, volunteers are becoming more viable as program evaluators (Franz, 2009) and assisting with program data analysis (Franz, 2013). These volunteers are also partners in co-creation of knowledge through community-based participatory research or other scholarly endeavors (Franz, Piercy, Donaldson, Westbrook, & Richard, 2010).

Recommendations to Advance Quality Extension Program Development Within Community-University Engagement Models

The multiple community-university engagement models being used by Land-Grant Universities impacts how Extension approaches program development. The following recommendations will help Extension build on its strong and successful history of community-university engaged work to maintain or increase its engagement footprint and leverage at Land-Grant Universities.

Extension's greatest strength is the relationship between campus and field-based professionals to jointly plan, implement, and evaluate programs (McDowell, 2001). However, this relationship has eroded over the last several decades due to changes in staff from funding cuts and changing performance expectations for both campus and field Extension professionals. The community-university engagement models at Land-Grant Universities provide a superb opportunity to rebuild these relationships to better connect community and university partners.

Rapid changes in technology for education and communication require deep professional development for Extension professionals to gain and use up-to-date technology skills. Without this support for updated program needs assessment, implementation, and evaluation, Extension will fail to be an important player in community-university engagement.

Extension professionals in all units of the organization need to support, implement, evaluate, and celebrate a co-creation environment with Extension volunteers and learners. The role of expert information disseminator is losing ground in today's community-university engagement models in favor of higher-level learning and action to address complex community issues. Extension workers adept at community engagement are required to be experts in engagement processes, as well as subject matter content.

Extension program leaders and university department chairs need to integrate engaged scholarship more fully into Extension program development, rewards, and performance reviews to enhance credibility with partners across the university. The overlap between the Extension Program Development Model and standards for measuring engaged scholarship should be used to support this integration.

Extension professionals need to be supported as highly credible scholars by increasing their level of engaged scholarship (Coon, 2010). They have the important role and obligation of bringing community voice and community members into engaged scholarship.

All Extension professionals, from national and state leadership to those in the field, are positioned to impact understanding and quality of program development as contexts and learners change. This will help ensure that community-university engagement models employ best practices for addressing difficult issues on campus and in communities. The use of best engagement practices in Extension program development needs to be catalyzed by the involvement of Extension professionals in key engagement organizations such as the Engagement Scholarship Consortium, Campus Compact, Imagining America, the International Association for Research on Service-Learning and Community Engagement, and the Higher Education Network for Community Engagement.

Above all, Extension professionals need to articulate and celebrate the unique role that Extension has played, currently plays, and can play in community-university engagement. This requires helping campus partners and decision makers understand Extension's mission, audiences, programs, and impact. Sharing examples of successful Extension community engagement builds on the Extension Program Development Model, which should drive this celebration to help Extension boldly hold a respected and effective place in community-university engagement at Land-Grant Universities.

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Looking Ahead: Envisioning the Future of the Extension Program Development Model

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This article synthesizes key points from this special issue of the Journal of Human Sciences and Extension and provides recommendations for and predictions about the evolution of the Extension Program Development Model. A foundational question addressed by each of the authors of this special issue and summarized in this chapter is, “If your recommendations regarding the Extension Program Development Model were followed, what would Extension look like in five years?”

Keywords: Extension, program development, applied research, visioning, program logic, stakeholder engagement, program evaluation, needs assessment, public value

This special issue of the *Journal of Human Sciences and Extension* closely examined the current state of the Cooperative Extension (Extension) program development model and provided a glimpse into Extension’s future through the eyes of both Extension professionals and researchers. This conclusion synthesizes key points from this special issue and offers recommendations for future Extension practice. The authors who contributed to this special issue were challenged to answer a central question, “If your recommendations regarding the Extension Program Development Model were followed, what would Extension look like in five years?” (Table 1 on pages 172-173).

Provide Public Good Through Assertive and Nimble Initiatives That Meet Local Needs

Extension provides critical programs to meet local, regional, state, and national needs. Extension has the power to take research-based information and disseminate it rapidly within a local context. When programming occurs at a local and culturally appropriate level, better programmatic outcomes tend to occur (Durlak & DuPre, 2008). Extension professionals are often made aware of issues within a community context, and as a result, Extension is often poised to develop relevant programs and services. As Extension continues this important work,

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it must also articulate the impact of this work so the public (including relevant stakeholders and decision makers) understands how valuable Extension is (Franz, 2015). When the public understands the economic, environmental, and social good Extension provides to the communities it serves, programs have a deeper and more meaningful impact, and the organization is more fully supported.

Extension must continue to make bold advances in collaborative research with both the universities and communities they serve. Findings from pilot studies or ongoing programs should be more quickly disseminated to Extension practitioners so real time adaptations and modifications in programming can occur. This dissemination must occur outside of the *local* sphere and be disseminated at a national level. Tools such as Extension journals, professional conferences, eXtension, and other resources have proven successful for bridging research and practice. Furthermore, successful pilot programs must be transitioned into ongoing program offerings at the appropriate scale. Although flexibility and nimbleness are characteristics not often associated with large systems like Extension, these are the qualities that it must exhibit to be competitive in a connected, global society. When Extension stakeholders have quick and easy access to information via the Internet, Extension must demonstrate an ability to be timely and relevant.

Establish Program Logic in Support of the Extension Program Development Model

Research-based knowledge undergirds Extension programs. At the center of this process is the Extension Program Development Model (SeEVERS & Graham, 2012) that bridges program development and corresponding program evaluation. Establishing program logic, as a map of how we think our program works, is not only important, it is necessary. Umbrella models as proposed by Arnold (2015) offer an emerging approach for effectively modeling Extension programs that will help Extension move beyond foundational logic models to articulate program theories of change and action.

Our program models need to be dynamic rather than static, and grounded in current research and practice to best serve targeted stakeholders. For example, one community may need a very different version of an Extension program due to its needs, funding, or overall receptiveness to a particular program or intervention. In the future, we envision a renewed commitment to capacity development in support of program planning. This capacity development would help local educators understand and articulate program theory and action, and how to plan local programs under the umbrella model. Local educators would pay careful attention to the implementation of programs, taking responsibility for the program's theory of action, which local educators can best influence.

Table 1. Five-Year Projections from Special Issue Authors Regarding the Extension Program Development Model

Chapter	Key Points
Chapter 1: Changing Context	<ul style="list-style-type: none"> Extension systems articulate clearly and often their program development model and the value of using that model at the organizational, team, and individual levels by Extension educators and volunteers. Our special issue of <i>JHSE</i> is used as an undergrad and graduate text for program development and Extension education courses, as well as presentations for the American Evaluation Association (AEA) and the National Association of Extension Program and Staff Development Professionals (NAEPSDP). There is a more consistent and accurate definition of <i>program</i> used in Extension work.
Chapter 2: Ensuring Public Value	<ul style="list-style-type: none"> Public value studies are conducted of key Extension programs (similar to <i>PROSPER</i> and Chazdon's Master Gardener studies). Extension educators and administrators more fully engage program evaluators, communicators, researchers, and economists in measuring and articulating the public value of Extension programs. Extension grant proposals require measuring and articulating the public value of the effort proposed.
Chapter 3: Needs Assessment	<ul style="list-style-type: none"> Extension needs assessment will reflect a conceptually coherent, logical, and well integrated plan. Technology will be integrated into the design and implementation of Extension needs assessments supported by sufficient IT platforms. Data visualization and representation will be a ubiquitous strategy for engaging stakeholders in Extension needs assessments. Needs assessments, as well as assets, will be fully reflected in hybrid Extension needs assessment models.
Chapter 4: Program Design	<ul style="list-style-type: none"> Extension program areas would develop <i>umbrella models</i> built on current research and that articulate program theory of change and theory of action. Local educators would use the umbrella models to plan their own programs. Doing so would ensure that all Extension programs in that area would be working toward a common set of outcomes, and would also provide the local educator a place to start, rather than building their local programs from scratch. There would be renewed commitment to capacity development related to program planning. This capacity development would focus on helping local educators understand and articulate program theory and action, as well as how to plan local programs under the umbrella model. Local educators would pay careful attention to the implementation of programs, taking responsibility for the program's theory of action, which is one thing the local educators have most control over.

Chapter 5: Program Implementation	<ul style="list-style-type: none"> • Innovations in Extension program delivery will be identified more rapidly. • Programs will be easier to both disseminate and replicate. • Extension programs will have a stronger emphasis towards evidence practice. • Programs will become both more locally orientated, but also nationally replicable due to the noting of programmatic adaptations and deviations.
Chapter 6: Program Evaluation	<ul style="list-style-type: none"> • Evaluation would be a part of the natural cycle of program development in Extension. Evaluation would be part of the planning process from the beginning, during the needs assessment, planning, implementation (through process evaluation), and at the end (through summative evaluation). But it would not end there, the results of evaluation would provide feedback for strengthening the program which would then be adjusted, redesigned (if necessary), and re-implemented. In other words, it is a continuous cycle. • Extension evaluators would promote an approach to writing impact stories based on ideas of public value and informed by evaluation evidence. • Staff at all levels of Extension and their supervisors understand the value of and appreciate evaluation. As a result they view evaluation as critical to their success and actively pursue the development and use of standard evaluation methodologies with all work that they do. Extension programs are recognized for their excellence and rewarded for their accountability through continued and increased funding.
Chapter 7: Stakeholder Involvement	<ul style="list-style-type: none"> • Rapid evolutions in communications technology, changing audience demographics, resource constraints, etc., will influence how Cooperative Extension engages public audiences. • Extension's delivery system will continually adapt in order to effectively engage new and existing audiences. • The number and types of stakeholders with which Extension organizations work will expand and include far more than those directly participating in programs.
Chapter 8: Professional Development	<ul style="list-style-type: none"> • Extension embraces the concept of life-long learning for our employees as we do for our clientele. • Extension embraces the involvement of our employees as stakeholders in the professional development process. • Extension embraces the use of multiple and various hybrid models of learning as it relates to professional development.
Chapter 9: Community- University Engagement	<ul style="list-style-type: none"> • Extension fully embraces the engaged scholarship movement rather than ignoring it or seeing it as a competitor. • Extension embraces contemporary program delivery trends to expand program reach. • Extension program leaders and department chairs/heads integrate standards for assessing community-university engagement with the Extension Program Development Model.

Designing and Implementing Programs with Evaluation in Mind

Many Extension programmers are guilty of *under-resourcing* program evaluation. The work of Nichols, Blake, Chazdon, and Radhakrishna (2015) suggests that when programs are planned with evaluation in mind, the results of these evaluations are often more useful to those delivering the program. More importantly, evaluation contributes to a cyclical process of consistent programmatic improvement that better serves Extension communities. This emphasis on program evaluation as a part of the program process enhances an orientation in Extension towards evidence-based practices and an appreciation of evaluation at multiple levels of Extension professionals. When evaluation is *useful* rather than required, professional buy-in to a programs evaluation can be enhanced.

Program adaptation is a hallmark of effective Extension practice. The field of Extension education has long acknowledged that local needs should take precedence over *checking boxes* that a program was followed to the letter. Reconciling the need to deliver evidence-based programs with that of specific groups and communities is directly associated with the process of program implementation. In Extension programming, it is important not only to measure what outcomes a program achieved, but also to what degree a program was delivered as designed. When we understand what went well (and for that matter what did not) while a program was being delivered, we can make *real time* decisions about program adaptation to ensure our participants are receiving the very best program possible (Gagnon, Franz, Garst, & Bumpus, 2015). Given the increasing attention focused on how specific program outcomes are achieved, greater attention to program implementation positions Extension to build stronger programs, as well as intentionally guide program outcomes. Noting and understanding these adaptations will help to further real time program modification, and thus enhance the experiences of Extension program participants and those delivering the programs.

Balance Research Needs for All Stakeholders

While statically rigorous research designs and findings may communicate program virtues within the research community, such methods may mean little to community stakeholders involved in the decision making process. We must attempt to fully uncover who we serve. As highlighted in the work of French and Morse (2015), in Extension, we often fail to recognize all of the populations we serve, whether information is discovered from a quick web search or a phone call to an Extension professional. Furthermore, as we balance gold-standard research with real-world Extension settings, we must become comfortable with and confident in the language and practice of applied research. The dissemination of information can no longer go the traditional route of much Extension work—the development and evaluation of a local program, only communicated to a local group. Social media must be fully embraced alongside a rapidly changing audience with differing resource constraints, the audience we serve may no longer communicate through

traditional channels. An eye towards being both consistent and contemporary must be aimed inward on the Extension community. Our workforce should better reflect the demographics of the communities we serve. Additionally, it should no longer be considered acceptable to halfheartedly embrace rapidly changing communication platforms (such as social media). Extension should be leading this area in innovation rather than catching up.

Extension researchers and professionals must continue to acknowledge that Extension work often takes place in an applied setting, therefore navigating both the real and the research worlds.

Program evaluation must remain adaptable to these changes, while remaining methodologically robust to continue to elevate the quality of research conducted in Extension settings (Nichols et al., 2015). Although it may be a difficult balance to acquire and maintain, it is a necessary challenge.

Future Directions

Throughout its history, Extension has pursued relevance—a pursuit that has reflected respect for tradition, as well as a desire for innovation. Although our field is imperfect, and we have many opportunities to grow, our ability to recognize these flaws, and more importantly, our continuous efforts to correct them, demonstrate the continued relevance of Extension for the next 100 years. To be successful as a field of compelling research and practice, we must continue to implement programs and educational services that serve our constituents at their level. We must do this by thinking beyond public television, face-to-face workshops, and printed newsletters; we must further embrace current and future technologies to remain relevant in the eyes of stakeholders.

As we build upon the legacy of those who created the field of Extension, we recognize that they worked in a very different paradigm than we do today. Our field faces pressure from all sides to do more with less; we cannot allow for innovation to be stymied by bureaucratic limitations. We need to enable our front line professionals to identify, act on, and solve problems. More importantly, we must allow them to fail upwards, as failure often serves as a strong foundation for future success.

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