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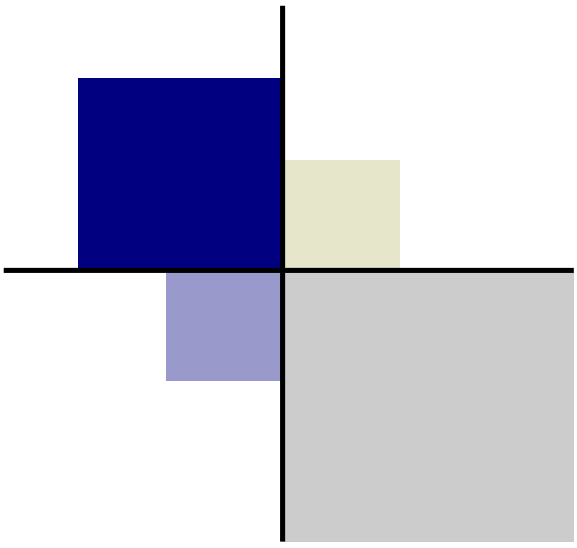

Special Issue:
Urban Extension

Julie Fox, Guest Editor
Donna J. Peterson, Editor

Foreword

A few years ago, a small group of spirited professionals with passion for urban communities came together from across the Cooperative Extension System. Focused on one collective purpose—raising the priority of urban engagement—we mobilized systems-level support through the *National Framework for Urban Extension*. This framework provides a sustainable and integrated approach to Extension's role in urban communities. I like to think of this as giving each of us sanction at the local, regional, and national levels to engage in a transformative change process leading to a creative modern movement where momentum met common ground and lifelong friendships were formed.

As urban professionals, we felt excitement and a sense of urgency to drive a process that would elevate the importance of urban Extension. To start, we gathered insights into what makes Extension unique within the interdependent urban–rural continuum. This allowed us to break free from our own academic disciplines, from the shackles of habit, custom, and the mundane to explore new ways to learn, discover, and engage as we bring urban knowledge together. Our gatherings were akin to a modern times rendition of Teddy Roosevelt's "rousing of the people on the land" for the purpose of establishing an effective and compelling community spirit with the urban populations we serve, in the systems in which we work, and in the advancement of the next generation of Extension colleagues who undoubtedly will help shape and redefine urban community priorities.

This special issue of the *Journal of Human Sciences and Extension* focuses on urban Extension, offering a comprehensive series of articles from experts who have synthesized our changing urban landscape of opportunity. Our hope is that these articles will position, guide, and inform program, policy, and system decisions by honoring the past and driving us energetically towards the future vitality of Extension as we serve the changing demographics of our country.

As Chair of the National Urban Extension Leaders, I invite you to take this journey with urban educators, colleagues, and friends from across the nation who are committed to engaging in conversations and advancing the collective future and impact of urban Extension.

Patrick Proden
Oregon State University, Outreach and Engagement
March 2017

The National Urban Extension Leaders (NUEL) advocates and advances the strategic importance and long term value of urban extension by being relevant locally, responsive statewide, and recognized nationally. NUEL's Steering Committee consists of 17 people with a balanced representation from the Extension Committee on Organization and Policy's (ECOP) five regions, one representative from ECOP, and one representative from the National Institute of Food and Agriculture (NIFA). For more information, see http://www.nuelaction.org

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Discovering What Makes Urban Extension Unique Within the Interdependent Urban–Rural Continuum: Editors' Introduction to the Urban Extension-Themed Issue of *JHSE*

Introduction

The world has become more urbanized, challenging Extension to explore innovative approaches that are relevant locally, responsive statewide, and recognized nationally. This issue of the *Journal of Human Sciences and Extension (JHSE)* focuses on urban Extension. The invited articles build upon the National Urban Extension Framework, published in 2015 by the National Urban Extension Leaders (NUEL), and decades of applicable insight documented through

- national urban Extension conference publications,
- *Journal of Extension* articles,
- special reports on urban Extension,
- urban university outreach and engagement scholarship, and
- urban Extension abstracts in conference proceedings from the Joint Council of Extension Professional (JCEP) organizations.

Evidence of strategic urban Extension approaches span decades as captured in a 2015 Literature Database for Metropolitan Extension. Recent commitments include the national Extension Committee on Organization and Policy (ECOP) 2016 urban programming priority and ECOP's 2017 emphasis to continue the alliance with the National Urban Extension Leaders (NUEL) while maintaining Extension educational strength in rural America. Regional investments in urban Extension range from special events in the southern and northeast regions to research projects in the north central region and formation of the Western Center for Metropolitan Extension and Research.

To define Extension's work in densely populated areas, terms like urban, metro, and city have been used almost synonymously. City is one term used by the Census Bureau to refer to a concentration of population. The Census Bureau's urban–rural classification delineates geographical areas. Metropolitan Statistical Areas are geographic areas used by federal statistical agencies. But it is not just about geography. For example, U.S. Department of Agriculture's Economic Research Service assesses economic and social diversity of nonmetro America through classifications such as rural–urban continuum codes. Regardless of the term and implied meanings, Extension personnel and partners continue to explore best practices for Extension to implement as a catalyst for co-discovery and community change in large cities.

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Each city, county, state, and region brings unique context based on the area's political, environmental, economic, social, and other external factors. Even with varying contexts, shared commitment unites professionals who persistently address factors influencing Extension's work in densely populated communities where complexity, diversity, and urban–suburban–rural flows create challenges and opportunities.

JHSE seeks to bridge research and practice on topics such as human development, family studies, agricultural education, leadership development, Extension, health and wellness, nutrition, and program planning and evaluation. This special issue continues JHSE's commitment to promoting the practical implications of research – the goal of this issue is to add to the national conversation on urban Extension through a diverse collection of articles for decision makers to efficiently draw upon as they consider urban dynamics and Extension investments. The intent is not to diminish the importance of rural and suburban Extension work but is to better understand unique characteristics of Extension in urban communities. Ultimately, Extension innovation along the entire rural–urban continuum creates connections and impacts that align with Extension's mission.

Authors address the distinct aspects of Extension in urban settings through meaningful examples of research, practice, and theory related to Extension positioning, programs, personnel, and partnerships. Contributing authors review historical foundations, current applications, and future influences of urban Extension. This special issue highlights the work of invited authors who have specializations in urban Extension and who represent a range of geographic perspectives. These authors' distinct circumstances and varied experiences collectively benefit Extension. Common themes include engaging diverse stakeholders, valuing partnerships, mobilizing limited resources, and implementing Extension's relevant approach to technical and human dimensions of innovation in metropolitan communities.

Invited Articles

- Positioning Extension in large metropolitan communities is the focus of the first article. Reumenapp describes America's changing urban landscape and addresses challenges, essential elements, and current examples.
- Personnel in the city is the topic of the second article. Fox reports on a Competency Framework Development process used to identify unique skills, knowledge, and attitudes of County Extension Directors working in large cities nationwide.
- Understanding the challenge of scale in urban Extension programming is confronted as Tiffany provides examples of program strategies for 8.5 million residents in New York, the country's largest city. Tiffany visually displays Extension programs for community nutrition, youth development, and other impact areas. This mapping supports program planning and evaluation.

- To further understand program strategies, Harder and Wells introduce Florida's urban Extension strategic plan and explain initial qualitative research with Tampa Bay Extension agents. This intensive study incorporates Ajzen's theory of planned behavior and provides insight into the practitioner's point of view on urban Extension philosophy and strategy.
- Emerging programs aligned with Extension expertise include urban food systems and urban agriculture. Diekmann, Bennaton, Schweiger, and Smith summarize innovative programs in California's nine-county San Francisco Bay Area. Their insight applies to Extension professionals working on urban agriculture programming, partnerships, and research.
- Obtropta expands the urban agriculture discussion to include community-based green infrastructure in New Jersey. This article provides an example of Extension's focus on one of the most important urban issues in one of the country's most urbanized areas. The author details Extension's relevant approach to community and student engagement, credible technical assistance and education, applied research and evaluation, and diverse resource portfolio management to improve urban priorities.
- Soule makes a significant addition to Extension programming through her timely article on terminology and steps to provide youth with programs and spaces that are inclusive of all sexes, gender identities, gender expressions, and sexual orientations. She defines terms, describes inclusive program elements, and presents practical steps for Extension professionals. This information provides a foundation to increase knowledge and confidence of Extension personnel and volunteers.
- Gaoloach, Kern, and Sanders present a programming alternative by illustrating Extension subject-matter centers and project strategies developed in the western region as a new option or addition to more traditional programming provided through county Extension offices. These centers align Extension resources with the needs of urban audiences and involve both community and campus-based professionals.
- Young and Jones reflect on the past and look to the future through their research in urban areas of Kentucky. They provide local and national perspective on historical and emerging approaches to enhance urban Extension. Their research in 2013 and 2016 provides insight into barriers and solutions for urban Extension programming efforts.

Conclusion

The articles in this issue of the *Journal of Human Sciences and Extension* provide a foundation to continue urban Extension conversations with existing and new allies. As a peer-reviewed, open-access, online journal, *JHSE* disseminates knowledge and information to academicians, educators, and practitioners. Research and practice shared in this issue can be used by Extension leaders at all levels to support decision making as they evaluate investment priorities to advance

the Extension mission in urban communities. Community and campus-based Extension professionals can evaluate past, current, and future scenarios. Diverse stakeholders engaged with urban community priorities can adopt or adapt approaches and examples presented; they can also connect with Extension to establish collaborative relationships to address urban issues. Students and professors of Extension education can use this issue of *JHSE* for applied research to create the future.

To expand on existing literature, invited articles intentionally concentrated on positioning, personnel, programs and projects, and partnerships. Impacts demonstrate how Extension is relevant locally, responsive statewide, and recognized nationally with new partners such as the National League of Cities and the National Association of Counties (NACo) Large Urban County Caucus – organizations that share Extension's interest in healthy cities. The actual value of the author contributions will be realized as Extension professionals replicate and adapt these examples in the context of urban communities across the country. *JHSE* is excited to publish this special issue on urban Extension. Innovation is evident as Extension leaders test new ways to position Extension, invest in personnel, pilot new programs, integrate technology, and develop diverse resource portfolios.

Julie Fox, Guest Editor
Urban Extension-Themed Special Issue

Donna J. Peterson, Editor
Journal of Human Sciences and Extension

Resources

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National Urban Extension Conferences, http://cityextension.osu.edu/conferences

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U.S. Department of Agriculture's (USDA) Economic Research Service rural-urban continuum codes, https://www.ers.usda.gov/data-products/rural-urban-continuum-codes

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America's Changing Urban Landscape: Positioning Extension for Success

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Michigan State University

For the Cooperative Extension Service (Extension) to have a substantive urban presence and impact, it will be vital for local Extension staff, state Extension systems, and the national Extension system to understand how to position Extension for success in large metropolitan regions. To do this, Extension should examine its history of working in cities, work to overcome a number of internal barriers or challenges that are defined in Extension literature, and develop a deeper understanding of the unique and complex set of characteristics and features of urban environments. As Extension does this, it will be important for it to move forward in a manner that ensures it is relevant to local metropolitan residents while being responsive to the needs of communities statewide. It will also be imperative that Extension be recognized locally, statewide, and nationally for its work; however, Extension is not starting from scratch as it has more than a 60-year history of working in cities. Extension should learn from best practices within the numerous strong urban and suburban operational and educational models present in a number of states.

Keywords: metropolitan, history, demographics, barriers, marketing, best practices

Introduction

For the Cooperative Extension Service (Extension) to have a substantive urban presence and impact, it will be vital for local, state, and national Extension leaders to understand how to position Extension for success in America's changing urban landscape. Successful "positioning" will require Extension to define and delineate its unique niche in metropolitan areas. This niche will need to differentiate Extension from other organizations in urban centers that are doing similar work by bringing the full range of Land-Grant University resources to the community.

To begin to define the right niche for Extension that will allow it to successfully position itself in urban and metropolitan settings, Extension should examine its history of working in cities to understand successes and failures so it might respond to the current call to serve urban residents and communities in an informed manner. Extension will most likely need to overcome a number of internal barriers or challenges that are defined in Extension literature. Extension will need to

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develop a deeper understanding of the unique and complex set of characteristics and features of urban environments, including the economic, demographic, geographic, and political shifts or changes that have occurred and continue to occur in urban settings. As Extension moves forward, it will be important to do so in a manner that ensures Extension is relevant to local metropolitan residents while being responsive to the needs of urban communities statewide. It will also be imperative that Extension be recognized locally, statewide, and nationally for its work; however, Extension is not starting from scratch as it has more than a 60-year history of working in cities. It should learn from best practices within the numerous strong urban and suburban operational and educational programming models present in a number of states.

To assist Extension in thinking about how it needs to position itself in American's changing 21st century landscape, this article provides a brief overview of Extension's history and mission to work in cities, presents a set of barriers or challenges that have been defined in Extension literature, and outlines a number of changes that have occurred and continue to occur within today's urban environments. It will conclude by presenting a set of urban Extension examples along with issues or questions that still need to be explored around effective positioning of Extension.

Extension's History in Cities

Since its creation in 1914, the mission of Extension has been to provide access to the research and resources of the Land-Grant Universities through educational programming that translates science for practical application to empower people to change aspects of their practices, attitudes, behaviors, and lives (Bailey et al., 1909; National Institute of Food and Agriculture [NIFA], 2017). The vision for Extension outlined in the Smith-Lever Act was to do more than attend to the needs of agriculture and rural America; it advocated for an Extension system that would improve the vitality of all communities to create a better America (Peters, 2002; Rasmussen, 1989). Despite some internal and external debates that have been occurring for more than 50 years about where Extension resources should be invested, there is no policy or legislation that prohibits Extension, or Land-Grant universities, from working in metropolitan areas (Fehlis, 1992; Panshin, 1992). Although the traditional basis of Extension was founded on delivering programs to rural communities and families, population shifts have required Extension to broaden its reach (Henning, Buchholz, Steele, & Ramaswamy, 2014; Webster & Ingram, 2007). In the 21st century, for Extension to effectively carry out its authorized mission of improving the vitality of communities to create a better America, there is a growing call for Extension to recognize and support the fact that its mission must include serving urban, as well as rural, audiences (Argabright, McGuire, & King, 2012; Bloir & King, 2010; Borich, 2001; Fehlis, 1992; Harriman & Daugherty, 1992; Henning et al., 2014; Krofta & Panshin, 1989; National Urban Extension Leaders [NUEL], 2015; National Urban Extension Task Force, 1996; Panshin, 1992; Webster & Ingram, 2007).

The call for Extension to expand and enhance its efforts in metropolitan areas is not new. The discussion about the need for Extension to focus some of its resources on cities started 60 to 70 years ago (Borich, 2001; Ford Foundation, 1966). In a literature review on urban Extension, one of the first references found was to a multiyear, eight-city "experimental" urban Extension effort funded by the Ford Foundation in the mid-1950s. The Ford Foundation funded the project in response to the substantial migration out of cities, the resulting urban sprawl, and the growing racial tensions in cities (Borich, 2001; Ford Foundation, 1966).

Today, the number of urban and suburban users of Extension resources and participants in Extension programs in many states outnumber rural clientele (Beaulieu & Cordes, 2014; NIFA, 2017). For example, a 1985 national survey of 4-H clientele showed that by that time about two thirds of Extension users resided in urban or suburban areas (Christenson & Warner, 1985). Nevertheless, Extension's historically perceived rural, agrarian focus has left many urbanites unaware of Extension's existence (Christenson & Warner, 1985; National Urban Extension Task Force, 1996). In several studies, metropolitan residents typically indicated a lower level awareness of Extension, much less use of Extension resources, and lower participation in Extension programs than their rural counterparts (Jacob, Willits, & Crider, 1991; NUEL, 2015; Warner, Christenson, Dillman, & Salant, 1996). Urban and suburban populations that do have some knowledge of Extension are often skeptical that Extension has the expertise or commitment to apply its resources to perform in cities (National Urban Extension Task Force, 1996; Albertson et al., 2007). Even so, urban communities have ever increasing and urgent needs for educational opportunities and research-based information (Henning et al., 2014; Raison, 2014).

Extension has more than a 100-year history of demonstrated expertise to meet the needs of people (Beaulieu & Cordes, 2014; Gould, Steele, & Woodrum, 2014; Henning et al., 2014). Historically, this success been more rurally located than in urban and suburban environments (Borich, 2001; Webster & Ingram, 2007), but Extension is generally respected for its objectivity, neutrality, and ability to connect people to research-based resources (Beaulieu & Cordes, 2014; Henning et al., 2014; NIFA, 2016; Western Extension Directors Association [WEDA] Urban Task Force, 2010). This is one of the major reasons Extension scholars contend that urban challenges and problems could be addressed, and potentially successfully impacted as similar rural issues have, by Extension's educational programming and services (Beaulieu & Cordes, 2014; Fehlis, 1992; Franz & Townson, 2008; Peters, 2002; WEDA Urban Task Force, 2010; Young & Vavrina, 2014).

Challenges for Successfully Positioning Extension in Urban Environments

Extension faces a number of obstacles in expanding beyond its historically rural roots into cities (Borich, 2001; Panshin, 1992; Webster & Ingram, 2007). To position Extension to achieve successful impacts in metropolitan environments, Extension will need to address a number of

internal organizational or system challenges. Although most of the barriers identified in a review of Extension literature are primarily Extension practitioner supposition, the literature suggests a fairly consistent set of barriers that include limited or declining resources, Extension history and politics, access to broad university technical expertise, programming designed for metropolitan audiences, and staffing (Fehlis, 1992; Henning et al., 2014; Panshin, 1992; Warner et al., 1996).

Limited or Declining Resources

Over the past several decades, stable or declining budgets have inhibited the ability of Extension to expand staffing in urban areas or develop new programs without it being at the expense of traditional constituencies and programs (Fehlis, 1992; National Urban Extension Task Force, 1996; Warner et al., 1996). The federal Extension budget has remained relatively stable for more than two decades (NIFA, 2016), and many state and county Extension budgets have been reduced as local governments lost revenue during the economic recession of the last decade.

Extension Politics

For decades, a philosophical debate has occurred across the national Extension system about how many Extension resources should be focused on urban areas. In some places, an adversarial situation has arisen of rural versus urban (Panshin, 1992). There are strong voices on both sides of the debate both internally within Extension and externally amongst past, current, and potentially new clientele groups. Those in favor of a rural agricultural emphasis passionately and tenaciously argue that increased attention to urban areas will mean fewer resources for rural and agricultural areas (Panshin, 1992). These arguments are not without cause, given Extension's declining financial resource streams described above; however, urban and rural communities and residents are interdependent because many complex socioeconomic issues are not contained by arbitrary county lines or city boundaries (Henning et al., 2014; NUEL, 2015).

It must be remembered that Extension has been present in cities for more than 60 years (Ford Foundation, 1966). Granted, in many locations, Extension might only have a token existence (Panshin, 1992), but there is a considerable amount of successful Extension work being conducted in cities as reported through the *Journal of Extension*, national urban Extension conferences, and special reports. As noted previously, the number of urban and suburban users of Extension resources and participants in Extension programs in many states outnumber rural clientele (Beaulieu & Cordes, 2014; NIFA, 2017), while more than 30 years ago, a national study of 4-H clientele indicated two-thirds of the clientele lived in metropolitan areas (Warner et al., 1996).

Societal problems and challenges are not contained within arbitrary municipal boundaries. With the interdependence of rural and urban communities, and the large number of people living in

metropolitan areas, it is necessary for Extension to have a meaningful presence in cities. Additionally, it would be naïve of Extension not to acknowledge the political imperative for it to work in cities. Not only does more of the U.S. population live in metropolitan and urban areas, but more of the federal and state legislatures that approve funding for Extension are composed of representatives from metropolitan areas than representatives from rural areas (Krofta & Panshin, 1989).

Access to Broad University Technical Expertise

Effective urban Extension programs need to be informed by research and based on best practices because urban issues are very complex (Henning et al., 2014; National Urban Extension Task Force, 1996). Solutions do not always conform to traditional university disciplines or department structures. Progress toward sustainable, high quality urban environments requires an interdisciplinary approach formed by scholars from a broad spectrum of academic disciplines (Bull, Cote, Warner, & McKinnie, 2004; WEDA Urban Task Force, 2010). Contributions and insights from single disciplines, while important, are not sufficient to help transform urban society. Any university response must be interdisciplinary in nature which accentuates the need for Extension to engage with more units of the Land-Grant University in addition to the colleges of agriculture (Blewett, Keim, Leser, & Jones, 2008; Henning et al., 2014; Vines, Watts, & Parks, 1963).

Programming Designed for Metropolitan Audiences

As communities began to change due to expansion and shifts in populations so did Extension programming (Borich, 2001; Schaefer, Huegel, & Mazzotti, 1992; Webster & Ingram, 2007). In the last half century, to effectively position Extension in urban settings, Extension has diversified its educational programming portfolio to respond to the needs of people living in urban and metropolitan areas (Beaulieu & Cordes, 2014; Fehlis, 1992; Gould et al., 2014); however, much of the curricula, delivery methods, and programming currently offered for urban residents is adapted from rural experiences and not specifically developed for an urban audience (Krofta & Panshin, 1989; National Urban Extension Task Force, 1996; WEDA Urban Task Force, 2010). Although some of the materials and delivery methods adapt well, others do not (Borich, 2001). Urban audiences may have difficulty relating in meaningful ways to examples in teaching material that were not designed from an urban perspective (Webster & Ingram, 2007). Program delivery methods and techniques must also vary widely to take into account the rich urban tapestry of diversity and commonalities found in urban centers (Fehlis, 1992; National Urban Extension Task Force, 1996; WEDA Urban Task Force, 2010). According to Rasmussen (1989), the ability to effectively make adjustments to ensure programmatic relevancy and effective delivery will determine the future of Extension. Programs need to be targeted to key issues and audiences and planned for visible impact (Krofta & Panshin, 1989).

Additionally, Extension needs to continue to expand its use of technology to reach urban audiences (Dromgoole & Boleman, 2006; Guenthner & Swan, 2011; Robideau & Santl, 2011). Advances in technology and its expansive use in Americans' everyday lives have transformed and will continue to transform our society (Guenthner & Swan, 2011; Robideau & Santl, 2011). Today, people are constantly using electronic technology for entertainment, communication, learning, and business. Two studies found that Extension clientele demonstrate typical technology use patterns (Guenthner & Swan, 2011; Robideau & Santl, 2011). Extension clientele have identified some advantages to using technology, which include saving travel time and expenses, reaching new audiences, and having opportunities for multiple delivery systems as major advantages of distance education (Dromgoole & Boleman, 2006); however, they also indicated they experienced a number of barriers to using technology. The most common barriers identified were connectivity, lack of access to technology, and lack of competencies associated with technologies (Dromgoole & Boleman, 2006).

Staffing

Cities and metropolitan areas are a mixture of values, attitudes, norms, and beliefs that have become woven together to create a distinctive culture. Nonetheless, Extension staff must realize that all ethnic minorities are not the same, nor do they share the same experiences or values just because they live in the same community (Krofta & Panshin, 1989; Webster & Ingram, 2007). To successfully respond to the needs of urban residents, Webster and Ingram (2007) explained that it is important for Extension educators to understand the perspectives of urban communities and the many economic, demographic, geographic, and political nuances that have historically and continually helped shape them. If Extension staff are seeking to offer programs and work effectively with urban residents, a basic understanding of the urban context is important to the success of the program and the acceptance of Extension.

Many Extension educators have little or no experience working with such diverse audiences or communities as those found in metropolitan areas (Webster & Ingram, 2007). Additional training on how to work with urban audiences and educational delivery methods is needed (Fehlis, 1992; National Urban Extension Task Force, 1996; Western Region Program Leaders Committee [WRPLC], 2008; Young & Vavrina, 2014). To position Extension staff to conduct high-quality work in urban settings will require individuals with sound training in the field of community development, applied social sciences, or other closely related fields (Beaulieu & Cordes, 2014); therefore, Extension needs to also consider what degrees, background, and experiences are necessary to adequately prepare an individual to serve as an urban Extension educator (Beaulieu & Cordes, 2014; Fehlis, 1992). Extension must be positioned as an organization staffed to meet the needs of a broader, more diverse urban and metropolitan population (Harriman & Daugherty, 1992; Krofta & Panshin, 1989).

The Urban Context

Understanding the current, as well as the historical, urban context will be important for Extension to successfully position itself for impact and recognition in urban environments. The "urban context" is the complex mix of characteristics and features that comprise urban environments (LeGates, 2011). Most simplistically, it is the combination of social, demographic, political, and environmental factors that make urban environments different, and in some cases unique or distinct, from rural environments. Local, state, and national Extension personnel need to have a knowledge and appreciation of the unique urban environment in which they work as well as some understanding of the history of the area (Boyer, 1996; Peters, 2002; Rasmussen, 1989).

In the last 100 to 150 years since Extension was created and the national network of Land-Grant Colleges and Universities were established, there have been many economic, demographic, geographic, and political changes in the United States. These changes include a continuous shift of the country's economic base from rural areas into urban areas causing increased urban employment opportunities (Ferleger & Lazonick, 1994). In conjunction, the sustained improvements in agricultural productivity reduced the need for the number of on-farm laborers while actually increasing crop and livestock outputs (Ferleger & Lazonick, 1994).

These changes have led to the ongoing geographic shift of the population toward urbanization. As urban and suburban centers have sprung up across the country and continued to expand in most parts of the country, so have the number of governmental units (Hogue, 2013). There are also increased numbers of civic or religious organizations and for profit and nonprofit organizations in urban centers that are doing similar work to some Extension efforts (NUEL, 2015). These entities can be potential partners or competitors.

Improvements in nutrition, health, medicine, and occupational and public safety now allow many Americans to live longer than their great grandparents, grandparents, and parents lived. Longer life spans and immigration are some reasons the U.S. population continues to grow. While the population has grown, it has also become more racially and ethnically diverse (U.S. Census Bureau Public Information Office, 2012).

Although these economic, demographic, geographic, and political changes are often discussed, what is not often discussed are the causational effects that Land-Grant Universities have had on some of these changes, and in turn, how these changes have or should be impacting the work of Extension, especially in urban centers where the majority of the U.S. population now live. For Extension to have a substantive metropolitan presence, it will be imperative for leaders at all levels to continually consider societal and environmental changes.

Economic Changes

The passage of the 1862 Morrill Act has been described by some scholars as a teleological shift in the history of higher education in the United States (Kerr, 1963; McDowell, 2003; Ward & Moore, 2010). The legislation caused an unprecedented opening of higher education to a wider portion of the nation's population than ever before and certified that the applied sciences were indeed appropriate material for university study (Ward & Moore, 2010). This had a democratizing effect on the curriculum that was just as transformative as the opening of college enrollment beyond the socially and economically privileged classes (Veysey, 1965; Ward & Moore, 2010). The linkages of the Land-Grant Universities to the daily lives of citizens earned them the designation of "democracy's colleges" and cemented the connection between American colleges and universities to communities (Campbell, 1995; Glass & Fitzgerald, 2010).

As Land-Grant Colleges and Universities established state-level Extension systems, trained agronomists were placed in almost every agricultural county across the United States to work directly with farmers to increase the production, food safety, and security of America's food system (Mayberry, 1991; National Association of State Universities and Land-Grant Colleges [NASULGC], 1987; Ross, 1969). Subsequently, as agricultural productivity increased and farm labor demands decreased, excess workforce located in rural areas sought employment elsewhere, primarily in urban centers (Ferleger & Lazonick, 1994).

Furthermore, Land-Grant engineering alumni played a large and direct role in the rapid technological development seen in the United States in the late 19th and early 20th centuries (Marcus, 2004). According to Ferleger and Lazonick (1994), there is evidence that America's Land-Grant Universities provided the foundation for the higher education infrastructure that produced the bulk of agricultural scientists and industrial engineers in the United States. These scientists and engineers became the critical human resources in the managerial workforce for government and business that allowed for the development of the world's foremost technology-based economy in the United States in the 20th century.

Demographic and Geographic Changes

In the last century, the geographic distribution of the American population has dramatically changed (U.S. Census Bureau, 2017). By 1992, the United States' population had shifted from rural to urban and minority populations were growing rapidly (Harriman & Daugherty, 1992). The United States Census Bureau showed that by 2010, more than 80% of the population lived in metropolitan areas, and the Census Bureau's population forecasts indicate this trend is likely to continue. Projections show that during the next few decades, America will continue to become an older and more diverse population (U.S. Census Bureau Public Information Office, 2012).

Consequently, America's cities and metropolitan areas have become a diverse mixture of cultures, attitudes, norms, and beliefs. Some urban areas, like many cities in the South and West, are growing and economically thriving, while many older cities in the Northeast and Midwest, often referred to as "Rust Belt" cities, are losing population, struggling economically, and endeavoring in redevelopment efforts (WRPLC, 2008). Because of the unique mix of demographic and economic factors, each urban area has a distinct culture (Beaulieu & Cordes, 2014; NUEL, 2015).

As the population of the country has moved from farms and small towns to cities and metropolitan areas, so have many economic, social, and environmental challenges and problems. Rural and urban residents share common issues such as poverty, affordable housing, food security, family financial security, affordable and accessible health care, public safety, water quality, and waste management (Fehlis, 1992; Henning et al., 2014). Although the challenges and problems are often the same, the underlying causes are frequently different (Fehlis, 1992). Nonetheless, metropolitan and rural communities and residents are interconnected and interdependent. It has become clear that the complexities of issues found in cities do not stop at the city boundary or the rural county line (Henning et al., 2014; NUEL, 2015). Shared urban and rural prosperity is only possible with flourishing urban centers and sustainable rural communities (Schwartz, 2015).

Political Changes

Most metropolitan areas are comprised of multiple governmental jurisdictions, governed by numerous local, city, and county elected officials. The complexities of today's economic, social, and environmental issues usually affect multiple governmental jurisdictions. While some services are coordinated across multiple jurisdictional boundaries (like economic development, transportation, recreation and planning), many social, public safety, and educational services are provided only within a single jurisdiction. These single jurisdictions are often cities, other local units of government, or counties. When issues cross jurisdictional boundaries, as they most often do in metropolitan areas, providing services and finding solutions to them are often politically influenced (NUEL, 2015).

Urban areas have not only multijurisdictional governmental units and service providers but also large numbers of civic, religious, nonprofit, and for-profit organizations. Frequently, significant numbers of these organizations do work similar to some Extension efforts (NUEL, 2015). These entities can be potential partners or competitors, collaborating or competing for clientele, funding, and public recognition of their work and impacts. Navigating these relationships takes skill and political savvy; Extension has been in the power sharing, collaborative, partnership building business for more than 100 years (Peters, 2002; Rasmussen, 1989). Nonetheless, the unique culture of each individual urban area, the multifaceted sociopolitical landscape of

working in urban settings, the complex nature of many urban issues, and the collaboration with or competition from other service providers will require a new Extension engagement model in metropolitan areas (Boyer, 1996; NUEL, 2015).

Examples of Successful Positioning in Cities

There are a number of states that have strong urban and suburban operational and educational programming models that could be the foundation for state-level recommendations or models to successfully position Extension within metropolitan environments (WEDA Urban Task Force, 2010; WRPLC, 2008). Countless examples of these can be found in the *Journal of Extension* (www.joe.org) and as evidenced by presentations and exhibits at the National Urban Extension Conference (University of Georgia Agricultural Extension, 2015; University of Minnesota Extension, 2017).

The Michigan State University (MSU) Urban Collaborators and the Urban Planning Partnerships (UPP) are strong examples of effective metropolitan community development programs. These programs are joint outreach initiatives between the MSU Urban and Regional Planning Program and MSU Extension (Kotval, 2003; Albertson, Holmes, & USU Metro Urban Task Force, 2007). Another good example is the classes offered by the University of California, Davis (UC Davis) as part of a public or private partnership. UC Davis sees this program as the key to successful urban land development (Albertson et al., 2007). The University of Wisconsin Extension established an urban partnership that was important in helping them start a Small Business Development Center. The Center was established to help potential entrepreneurs in urban areas struggling with restoration and renewal (Albertson et al., 2007).

In the West, the University of Washington in Seattle and Portland State University offer urban "outreach" programs that are decidedly different from most Extension programs in western cities (WEDA Urban Task Force, 2010). These programs are much more focused on student service learning capstone projects. In Portland, Extension is engaged in complex collaborations around such important research problems as sustainable food systems, urban rural interdependence, storm water research, and conversion of public transportation and county fleet vehicles to biodiesel (WEDA Urban Task Force, 2010).

Multifaceted urban Extension centers or multiple neighborhood-based Extension offices located in densely populated urban areas are ways some states are working to facilitate access for urban residents to Extension programs, resources, and technical assistance of Land-Grant Universities. Implementing the urban center concept has allowed several states to effectively use existing resources, develop new resources, and establish themselves as vital catalysts for political, social, and economic change for families, individuals, and communities in urban environments (MSU Extension, 2016; Albertson et al., 2007).

The centers can serve as a primary source of support to field-based staff in cities in implementing comprehensive, research-based, interdisciplinary Extension outreach and educational programs targeted to specific identified clientele (Albertson et al., 2007). The urban Extension center model has been implemented in nine of Alabama's most metropolitan areas, as well as Pittsburgh, Detroit, New York, and Minneapolis to name a few (Alabama CES, 2015; Cornell University, 2017; MSU Extension, 2016; Penn State Extension, 2015).

An important element of these examples is the value of featuring the Extension name, presence, and mission-focus when partnering, innovating new programs, and communicating with multiple stakeholders. Examples also illustrate how Extension leaders establish relationships and provide relevant Extension imaging, messaging, and programming.

Conclusions

For more than 100 years, Extension has a history of positioning itself for success within America's changing economic, demographic, and political landscape. Extension has demonstrated technical expertise in the national system of Land-Grant Universities and success in adapting and delivering educational programs to meet the needs of people (Beaulieu & Cordes, 2014; Gould et al., 2014; Henning et al., 2014). A review of Extension history shows that for more than 60 years, this expertise has been applied with success in scattered cities and metropolitan settings across the United States (Borich, 2001; Ford Foundation, 1966). To expand its footprint and impacts in cities, suburbs, and large metropolitan regions, Extension should strive to document best practices and learn from the numerous operational and educational programming models present throughout its national network. Extension should explore the potential to use these successful examples to build a foundation of state-level recommendations or models for successfully positioning Extension within metropolitan environments (WEDA Urban Task Force, 2010; WRPLC, 2008). Extension can also learn best practices from other civic, religious, for-profit, and nonprofit organizations that are located in urban settings and have a documented history of successful impacts.

A review of Extension literature provides insight into some of the obstacles or barriers Extension will need to overcome as it works to position itself for expanded success in urban areas. They include limited or declining resources, Extension history and politics, access to broad university technical expertise, programming designed for metropolitan audiences, technology, and staffing (Fehlis, 1992; Henning et al., 2014; Panshin, 1992; Warner et al., 1996). At this point, these barriers have primarily been identified and reported in the literature by Extension practitioners who are documenting their experiences working in urban settings. Extension might benefit from a more thorough examination of the barriers identified by practitioners to validate and potentially expand the list, along with looking for city, suburban, regional, and/or national patterns across the national Extension network. A more thorough documentation and understanding of potential

internal and external barriers could assist Extension in more accurately identifying the challenges it faces in successful positioning and crafting successful solutions.

Extension has an expansive expertise in understanding and working in rural communities but understands the 21st century urban context to a lesser degree (Boyer, 1996; Peters, 2002; Rasmussen, 1989). Extension could benefit by drawing on the knowledge of numerous Land-Grant Universities to assist local Extension staff, state Extension systems, and the national Extension system to have a deeper knowledge and appreciation of the unique urban environment. Locally, Extension staff and state Extension systems might also benefit by understanding the local history of the residents and the area to increase the effectiveness of working in those settings.

Extension has a lot of expertise from which it can pull to successfully position itself in urban settings, but it also does not have all the answers. The national- and state-level Extension systems continue to search for solutions to some of the obstacles they experience. To take advantage of the opportunities in urban settings, it will be important that Extension approaches this challenge with a "both/and" mentality toward its work in rural settings. The expansion of Extension's work in cities, suburbs, and large metropolitan areas should not come at the expense of its work in rural communities and with agricultural producers (Rasmussen, 1989). Rural and urban residents and communities are connected and interdependent (Henning et al., 2014; NUEL, 2015). The complexities of issues found in cities do not stop at the city boundary or the rural county line. Shared urban and rural prosperity is only possible with flourishing urban centers and sustainable rural communities (Schwartz, 2015) and should be the goal for which Extension strives as it positions itself to achieve programmatic relevancy and effective delivery of Extension and Land-Grant University resources in urban settings. As Rasmussen (1989) indicated, the ability to effectively make these adjustments will determine the future of Extension.

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What is Unique About Extension Personnel in the City?

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Extension's pursuit to better attract, develop, retain, and structure competent personnel in the city requires new strategies to build on the knowledge base established through previous research and practice. With the support of numerous national organizations, this study utilized a Competency Framework Development (CFD) process to systematically tap into the knowledge of County Extension Directors serving in large urban communities. Findings indicated these local leaders need specific knowledge, skills, attitudes, and beliefs that are both similar and unique when compared with results from other Extension competency studies. Competencies identified included building social and financial capital, strategic planning and organizing, resource attraction and management, advocacy and impact accountability with multiple stakeholders, and others. A primary difference was that diversity, complexity, and scale in urban communities influenced the extent to which competencies are demonstrated. Research results can be applied to a competency model that incorporates intentional recruiting and hiring practices that reflect the diversity and priorities of the community, competency-based professional development, competitive compensation and retention tactics, and staffing structure and strategies. Further research can include CFD with various types of Extension personnel and perspectives. Extension leaders can continue learning alongside others who can help inform administrators about human capital policies and practices.

Keywords: human resources, competencies, urban, metropolitan, county Extension director, staffing, workforce, diversity

Introduction and Theoretical Framework

Diversity, complexity, and scale in urban communities challenge leaders to consider how Extension attracts, develops, retains, and structures competent talent. Throughout Extension's history, Extension leaders have examined and tested models for effective urban Extension personnel (Brown, 1965; Harriman & Daugherty, 1992; Krofta & Panshin, 1989; Miller, 1973; Schaefer, Huegel, & Mazzotti, 1992; Yep, 1981; Young & Vavrina, 2014). While there are similarities to staffing and workforce development in all geographic areas, there are opportunities to explore the unique context of personnel serving the Extension mission in large

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cities. When the National Urban Extension Leaders (NUEL) conducted a strategic analysis of emerging urban Extension themes in the literature, personnel was identified as an area of focus (NUEL, 2015).

A fundamental element of human resource systems is identification of competencies, which are defined as a set of observable performance dimensions, including individual knowledge, skills, attitudes, and observable behaviors or characteristics (McClelland, 1973; Mirabile, 1997). Competencies have also been described as collective team processes and organizational capabilities (Athey & Orth, 1999). The value of competencies and competency models includes organizational competitiveness (Lado & Wilson, 1994; Prahalad & Hamel, 1990; Vakola, Eric Soderquist, & Prastacos, 2007), an essential factor in urban communities where thousands of agencies, businesses, and nonprofit organizations vie for limited resources and champion their causes in a congested environment. Professional competencies needed by Extension personnel have been studied as a determining factor for relevant selection, training, and retention of talent (Benge, Harder, & Goodwin, 2015; Haynes, 2000; Lakai, Jayaratne, Moore, & Kistler, 2014).

Many state Extension systems incorporate competencies into human resource practices, and several authors have identified Extension personnel competencies based on different types of positions, program areas, geographic areas, stage of career, or demographics of personnel.

- For example, in 2002, the Personnel and Organizational Development Committee (PODC) of the Extension Committee on Organization and Policy (ECOP) synthesized the work of 10 states and numerous studies and encouraged Cooperative Extension Systems to use 11 core competencies for professional development of campus- and field-based faculty and staff (Maddy, Niemann, Lindquist, & Bateman, 2002).
- A few comprehensive dissertations were published on competencies, including survey research in Ohio (Cochran, 2009) and Varner's (2011) qualitative study with millennials in Nebraska.
- In 2013, ECOP identified key characteristics of 21st century Extension professionals by studying Extension job postings, surveying Extension directors, and conducting focus groups with successful Extension professionals (Hibberd, Blomeke, & Lillard, 2013).
- One program-specific competency framework is the 4-H Professional Research, Knowledge, and Competencies (PRKC) model (Stone & Rennekamp, 2004).
- In 2000, a position-specific study examined 127 county Extension administrators from 22 states to assess 15 supervisory and management competencies deemed necessary for success as a county Extension administrator (Haynes, 2000).
- Additional advancements concentrated on specific competencies, such as Washington State University Extension's development of cultural competency training (Deen, Parker, Hill, Huskey, & Whitehall, 2014).

The majority of the findings provide a consistent framework (see Table 1) but do not focus on the distinctive competencies of professionals working in or influencing Extension's work in urban communities. One study by Ritsos and Miller (1985) focused specifically on urban Extension professionals in Ohio and included similar competencies, such as public relations as an interpersonal competency, professionalism as a personal competency, organizational skills as a competency related to the business of Extension, and program management.

Table 1. Summary of a Sample of Extension Competency Studies

Competency Categories	**ECOP - Maddy, Niemann, Lindquist, & Bateman, 2002**	**Dissertations - Cochran, 2009 and Varner, 2011**	**ECOP - Hibberd, Blomeke, & Lillard, 2013**	**Program, Position, or Competency-Specific Studies (2000-2014)**
Interpersonal	– Engagement – Diversity, pluralism, and multiculturalism – Interpersonal relations – Community and social action process	– Communication – Diversity – Interpersonal relationships – Teamwork and leadership – Customer service – Inclusiveness	– Communication – Diversity – Teamwork	– Communication – Cultural competence – Relationship building – Facilitation – Collaboration and partnerships – Customer focus
Personal	– Professionalism – Leadership	– Professionalism – Leadership – Continuous learning – Flexibility – Self-direction – Balance	– Personal standard of excellence	– Professionalism – Leadership – Accountability – Self-management – Initiative – Decision making
Programs, Projects, and Products	– Educational programming – Information and education delivery – Subject matter	– Successful teacher – Subject matter competent	– Extension program and teaching – Subject expertise – Translate research results	– Program planning development, and evaluation – Integrate research, teaching, and Extension
Other		– Entrepreneurial – Problem-solving – Change manager	– Entrepreneurial spirit	– Problem-solving – Volunteer development

Purpose and Objectives of the Competency Framework Development Process

To better understand what it takes to serve as an Extension leader in urban or metropolitan designated areas, a competency study was conducted of county Extension directors working in large counties. County Extension directors were selected due to their critical role in navigating community and organizational complexity and the dynamic interaction between internal and external environments (Jamali, 2005). The present study aimed to systematically tap into the knowledge of practitioners – people who do the job, not those who write about it or instruct it. By establishing a structured set of assessable competencies, Extension leaders can evaluate and improve learning experiences and guide learners to relevant resources to meet their professional development goals. Results will inform Extension administrators, human resource professionals, and other leaders as they attract, hire, develop, and retain talent for Extension in large cities.

A secondary objective of the present study was to pilot test the Competency Framework Development (CFD) process available through eXtension, with the intention of conducting additional inquiry focused on other types of urban Extension positions, such as educators or agents, specialists and consultants, paraprofessionals, and volunteers. Beyond the scope of the research conducted at one point in time, the CFD framework allows Extension professionals accessibility to the data in order to continue refining, updating, and adding value related to the functions of an urban county Extension director.

Methods

A Competency Framework Development (CFD) for Urban County Extension Directors (UCEDs) included a multistage process to identify skills, knowledge, attitudes, and beliefs. For the purpose of this study, the term county Extension director was used as a reference to any title used for local Extension leaders serving large cities or other geographic areas designated by the U.S. Census Bureau as urban or metropolitan. Prior to the applied research, The Ohio State University's Office of Responsible Research Practices determined the project was exempt from review by the Institutional Review Board. The study began with an analysis of existing materials, including position descriptions, competency assessments, professional development resources, and relevant literature. The researcher collaborated with Eduworks to facilitate the CFD process with at least one representative UCED from each of ECOP's geographic regions. Eduworks partners with eXtension to provide expertise in competency-based training, education, and credentialing. Five participants were selected with guidance from the National Urban Extension Leaders (NUEL) steering committee and professional development action team. Participants not only represented different geographic regions but also represented diversity of professional background, years of Extension service, proximity to campus, and demographics. The ideal number of participants for this type of inquiry is four to six. An online poll was used to schedule three online sessions within a two-week period.

Competency framework development is a participatory process to identify a collective set of competencies that define the requirements for effective performance in a specific job, profession, or organization (Campion et al., 2011; Cummings, Andrews, Weber, & Postert, 2015). Practitioners participated in the systematic process that included three facilitated online sessions, using interactive technologies that included Zoom videoconferencing for dynamic communications and Google Docs for real-time data review. The first practitioner session included an introduction to the CFD process and clarification of terms, such as knowledge (what a UCED needs to know), skills (what a UCED actually does), assessments (what indicators demonstrate degree of ability), and UCED beliefs about what is important in his or her work. In the second session, practitioners suggested competencies through round robin discussion and open dialogue. During this session, the facilitator began developing an online spreadsheet that was used to clarify meaning. Before the third session, each practitioner independently reviewed the emerging competency framework spreadsheet to begin thinking about potential indicators for each competency. During the third session, assessment methods were identified for each competency. All sessions were based on interviews and were consensus-driven. Following the online sessions, the spreadsheet was made available for participants to review.

Findings

Results of the Competency Framework Development process with Urban County Extension Directors included evidence that these professionals need specific knowledge, skills, attitudes, and beliefs with some being similar and others unique when compared to findings from previous studies (Table 1). The competencies identified by the practitioners included those outlined in Table 2. In addition to the summary, examples provide additional detail on the knowledge, skills, and beliefs linked to each of the nine competencies.

Table 2. Summary of Urban County Extension Director Competencies

Competency Categories	**Competency Framework Development (CFD)** http://eduworks.com/cfd/nuel-ced/#
Interpersonal	– Builds social and financial capital with foundations, corporations, government, and other local sources
Personal	– No personal competencies were identified as unique to urban environments and the categories were intentionally not used as prompts
Programs, Projects, and Products	– Implements and understands Extension programming in the complex urban context
Other	– Demonstrates sensitivity to the local socio-cultural context and community history – Advocates for their urban area, including its importance and unique assets

Interpersonal Competencies

Building social and financial capital with foundations, corporations, government, and other local sources is something all county Extension directors accomplish. In large counties with multiple jurisdictions and thousands of public and private organizations, UCEDs need to exemplify this competency of engaging with existing and potential stakeholders. Those skills could include

- serving on and leading community boards and committees;
- inviting and facilitating involvement in Extension programs;
- targeting specific outcomes in communications;
- building an advocacy network of foundation, corporation, and government personnel;
- identifying emerging needs;
- cultivating funding relationships; and
- navigating complex external and internal funding systems.

UCEDs need to know the funding landscape of their county, expectations of funders, community benefits of Extension, and internal mechanisms and organizational structure. UCEDs are driven to provide local impact and recognizes that funders are investors in impacts. They value social capital and believe Extension brings intrinsic and extrinsic value to the community. Assessments of this competency would be evidence of the UCEDs participating on boards and in interest groups relevant to their constituents and obtaining funding for county Extension programs and personnel.

Personal Competencies

Previous Extension studies included various personal competencies, such as professionalism and leadership (Table 1). In the CFD process, categories were intentionally not used as prompts. In this study, no personal competencies were identified as unique to urban environments; however, this does not suggest that personal competencies are not perceived as important from the practitioner perspective. Further inquiry could add clarification to the competencies, skills, knowledge, and assessment factors related to UCEDs' personal competencies.

Business of Extension Competencies

UCEDs fulfill functions of a county Extension director and need to be knowledgeable about the history, mission, and practices of Extension. They know the role and responsibilities expected of a county Extension director. But while this might seem simple, this is especially important when hiring directors who are not familiar with Extension. They can discern when to preserve traditions, when to develop new opportunities, and when to blend the two.

Planning and organizing involves adaptive management, managing staffing capacity, abiding by grant requirements, addressing legal regulations, and administering a strategic plan of work. They utilize current best management and leadership practices as they align resources with priorities, collaborate with research partners, apply community appropriate solutions, and monitor organizational compliance. UCEDs are adaptive and knows the change process. Their implementation of planning tools that result in high-quality Extension programming is an assessment for this competency.

Management of finances, human resources, infrastructure, programming, and other resources is a core competency. UCEDs work with county government, state-elected officials, municipal government, and the university to forecast funding and resource needs; identify, pursue, and defend appropriate funding sources; and manage facilities, equipment, funds, and human resources. They continually manage the ever-shifting balance of resource capacity and opportunity evaluation. They need to know the current language of and technology for fiscal and resource planning, best practices in budgeting and negotiations, government structure and systems, and their university structure and systems. UCEDs are fiscally responsible and accountable to multiple internal and external stakeholders. UCEDs' resource portfolios and business compliances are relevant assessments. With more diversified funding portfolios, personnel must invest more time and expertise in sourcing and managing multiple resources on various timelines beyond county, state, and federal fiscal cycles (Krofta & Panshin, 1989).

UCEDs understand the local market and optimizes the advantages of Extension through competition for resources and collaboration with other programs. Skills include analyzing local programs and Extension strengths in target areas, identifying competitors and collaborators for funding and services, and generating and deploying resources to meet the needs of the target area. UCEDs know their local market, their competition, emerging trends in the community, and programming. It is more than knowledge as UCEDs see opportunities and challenges brought on by market change and how Extension programs can fill gaps and complement emerging trends. Assessment gauges how UCEDs both competes and collaborates with local programs to leverage resources as needed. A larger, more competitive environment requires Extension to align human resource expertise to operate in a more specialized and complex environment.

Accountability and integrity are key factors for the competency of gathering, analyzing, and reporting Extension program impacts to different audiences in a timely manner. While all county Extension directors exhibit this competency, what is essential for UCEDs are their abilities to select meaningful measurements for diverse audiences, differentiate reporting for target audiences, and attribute specific contributions to Extension and other collaborators. They value integrity in evaluation and the importance of honestly reporting successes and failures. They know emerging data gathering and analysis techniques and what data are meaningful for each target audience. Furthermore, the ability to work in transdisciplinary teams of experts while

documenting both the Extension impact and community change is paramount (National Extension Urban Task Force, 1996; Young & Vavrina, 2014).

Program, Project, and Product Competencies

Implementing and understanding Extension programming in the complex urban context is vital for UCEDs. They need to recognize the complexities of their urban county and understand how those complexities impact needs and delivery of Extension programming. UCEDs work with educators and partners to select applicable programs, identify delivery methods and costs, and align resources for relevance to their counties. Assessment of this competency includes metrics such as growth of specific audiences and capacity building to meet growing demand.

Other Competencies

UCEDs must be sensitive to local sociocultural context, community history, and Extension's past performance in the county. UCEDs must be sensitive to the urban application of Extension programs and philosophy. Skills include

- leveraging the strengths of diverse demographics;
- reflecting community demographics in advisory groups;
- managing conflict resolution;
- conducting situation and issue assessment; and
- displaying an understanding of institutional and socially constructed racism, sexism, and classism.

UCEDs believe that cultural competence is a lifelong-learning process, value the many voices of their varied audiences, and know the histories and complexities of their communities. Due to the magnitude of diversity in metropolitan areas, cultural competence and ensuring inclusivity are essential for all personnel. While this is an expectation throughout Extension, the scope in urban areas intensifies the degree to which personnel apply related competencies (Krofta & Panshin, 1989; Webster & Ingram, 2007). Assessments could include new programs that are sensitive to local urban issues.

Advocating the importance of their urban area and communicating the advantages and assets of urban Extension to internal and external stakeholders is another important competency for UCEDs. Skills include common abilities such as leveraging social media to highlight urban strengths and developing additional capacities to communicate about urban, suburban, and rural interdependencies.

Reflections, Conclusions, and Recommendations

In large cities, diversity, complexity, scale, and other factors influence the extent to which Extension personnel apply related competencies such as

- demonstrating interpersonal skills as they navigate multiple stakeholder agendas;
- exhibiting knowledge of the business of Extension as they manage multiple funding streams, lead an inclusive team, and operate within internal and external parameters.
- displaying program and project expertise as they align external and internal resources to service existing and new audiences; and
- communicating with local sensitivity and respectful cultural competence as they reach a large and diverse audience.

The number and depth of competencies related to the business of Extension verify the value of investing in UCEDs who focus on leadership, management, and administration, rather than directly on programming. They still understand and are active players in market-driven program planning, but their primary focus remains on partner and resource development.

The Process

The CFD is a relatively new process based on a combination of instructional systems design and skills identification methods, such as the task analysis process for curriculum development (Norton, 1998). As used in this study, the process presented some challenges, such as identifying qualified candidates who could commit the time required on dates that worked with other participants. The interactive technology, an exceptionally skilled facilitator, and the technology assistance supported an effective process. Although participants used different terms like urban, metro, city, county, or other labels to define their scope of work, they expressed how much they appreciated the opportunity to talk with others who were in a similar position. Collegial support increases retention (Benge et al., 2015)—a key factor in creating stable and sustainable urban Extension teams. Opportunities for regular and consistent communication among urban staff across the country can assist in developing important support networks necessary for effective urban programming (NUEL, 2015).

Future Research

With the progress of the National Urban Extension Leaders and support of the Extension Committee on Organization and Policy, there is renewed commitment to developing the capacity and competency of urban Extension educators, specialists, and administrators. The focus of this study was on individual competencies of one type of Extension position. Further research could

- supplement this research with additional inquiry based on other perspectives, such as administrators, advisory group leaders, and educators, beyond UCED self-reports;
- expand the research to gain insight into personal competencies such as professionalism and leadership;
- conduct CFDs for other positions using the practitioner point of view of educators and agents from various program areas, specialists or consultants, and volunteers—all of whom are requisite resources in urban Extension with short- or long-term commitments;
- consider variances based on stage of career with Extension, as some talents are new and temporary, and others are developed in later stages of a long-standing career;
- conduct multivariate analysis of Extension personnel competencies from various programs, geographic location, tenure with Extension, and other demographic factors; and
- test CFD process variables, such as number of hours and days of inquiry; types of interactive technologies; and pre-, post-, and mid-process activities.

Integrating Competencies into Extension Human Resource Practices

Competencies alone, while critical, are not enough. Findings from this study can be applied to a comprehensive integrated competency model that incorporates flexible staffing models for a varied set of positions; recruiting and hiring practices to attract talent that reflects the diversity and priorities of the community; and competency-based professional development. To effectively work in metropolitan communities, Extension needs to develop the professional skills of faculty and staff at all levels in order to work in a highly complex and integrated nature (NUEL, 2015). One CFD participant referred to this as "real learning for real life." Instructional designers can develop competency rubrics for courses, map course components to competencies, modify courses, and update assessments.

A comprehensive integrated competency model could also include a staffing structure that supports UCEDs and their teams; competitive compensation; and recognition, retention, and succession planning to reduce the loss of social capital that results from staff turnover. The CFD can inform Extension's recruiting and hiring practices as the next generation of professionals prepares to work on complex issues found in diverse urban areas. Hiring procedures need to be streamlined and improved to appropriately match faculty, staff, consultant, volunteer, and administrator skill sets to position descriptions and roles (Harriman & Daugherty, 1992). At times, it will be necessary to use a project-driven hiring model allowing for a greater mix of core personnel and additional professionals with specific expertise necessary to respond to the broad array of metropolitan issues. The next step for Extension leaders is to integrate core competencies and allocate resources accordingly.

Extension can learn alongside others through new research and the open source Competency and Skills System (CASS) project (www.cassproject.org) that provides competency portability to facilitate competency-based education, training, and credentialing. Extension leaders benefit from looking inward, as well as outward, to management literature to get the most from the science and practice of competency modeling (Russ-Eft, Watkins, Marsick, Jacobs, & McLean, 2014; Stevens, 2013). Competency models are collective sets of competencies that define the requirements for effective performance in a specific job, profession, or organization (Campion et al., 2011).

Beyond Individual Competencies

Future investigation could focus on organizational competencies as well as interorganizational and organizational learning relevant to the urban context. This inquiry could begin with applied research with human resource professionals involved in various components of talent acquisition, development, and retention to explore how competencies can be integrated into practice. Ultimately, findings would be incorporated into personnel structure, staffing plans, and investment models in urban areas. New and existing urban Extension professionals would have access to competency-related learning modules to take control of their own professional development and learning plans.

In a rapidly changing world, organizations need to continually identify new opportunities beyond existing competencies if they are to survive (Doz, 1996; Mintzberg, 1994). According to the NUEL (2015) national framework report, a simple retrofit or one size fits all approach with rural and urban staffing presents the challenge of aligning competencies with position descriptions, professional development opportunities, recognition, and retention strategies. It remains clear that Extension faculty and staff working in metropolitan areas need a set of competencies similar to those of Extension professionals in other geographic settings, along with some additional, modified, or enhanced skills and attributes based on the unique characteristics and priorities of large counties. A primary difference is that diversity, complexity, and scale in urban communities influence the extent to which competencies are demonstrated. Extension personnel continue to be embedded in the community as trusted resources, serving in a unique position to function as neutral, trusted facilitators that bring people together to deliberate and deal with local issues (Kellogg Commission, 1999). The answer to whether Extension will remain important, in major part, lies within the competency of each of the Extension professionals (Bull, Cote, Warner, & McKinnie, 2004).

Project findings and resources are available at http://cityextension.osu.edu/competencies

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Extension in the City: Meeting the Challenges of Scale

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The urban share of the United States and global population has been climbing steadily since well before the inception of Extension. As of the 2010 census, more than four out of five U.S. residents lived in urban areas, with 71% of the total U.S. population living in cities with more than 50,000 residents, and 10% living in smaller urban clusters. Cornell University established Cooperative Extension offices in New York City (CUCE-NYC) well after the Extension system was developed in rural and suburban counties throughout New York State. NYC is the largest city and part of the largest metropolitan area in the U.S., creating significant challenges of scale for Extension programming. The ratio of NYC residents to CUCE-NYC staff is roughly 125,000:1. CUCE-NYC works to mobilize limited resources to create large and positive impacts on individuals, families, communities, and institutions. Strategies to achieve these goals include partnership development, community recruitment, leadership development, and ecological efforts to foster setting-level change. Key CUCE-NYC strategies are grounded in sustained, intensive connections to communities, organizations, and other human ecological contexts. Geospatial mapping of program activities enables assessment and improvement of program reach and impact.

Keywords: New York City, ecological approach, system-level change, community engagement, partnership, multipliers, geospatial mapping, demographic transition

Background

Satellite images show the high degree of urbanization in North America and many other sections of the globe (see Figure 1). The urban share of the U.S. and global population has been climbing steadily since before the inception of Extension (see Figure 2). The first national census of the U.S. population in 1790 reported about 1 person in 20 lived in urban areas. When the Morrill Act passed in 1862, approximately 1 in 5 U.S. residents lived in cities. By the 1887 Hatch Act, more than 1 in 4 residents lived in urban areas. By 1890, when the Second Morrill Act passed, 35% of the U.S. population was urban. When the Smith-Lever Act passed in 1914, urban residents comprised nearly half of the population. When the Evans-Allen Act and National Agricultural Research, Extension, and Teaching Policy Act passed in 1977, about 74% of the U.S. population lived in urban areas. By 1994, when the University of the District of Columbia and Tribal Land-Grant institutions were established, over 75% of the U.S. population was urban.

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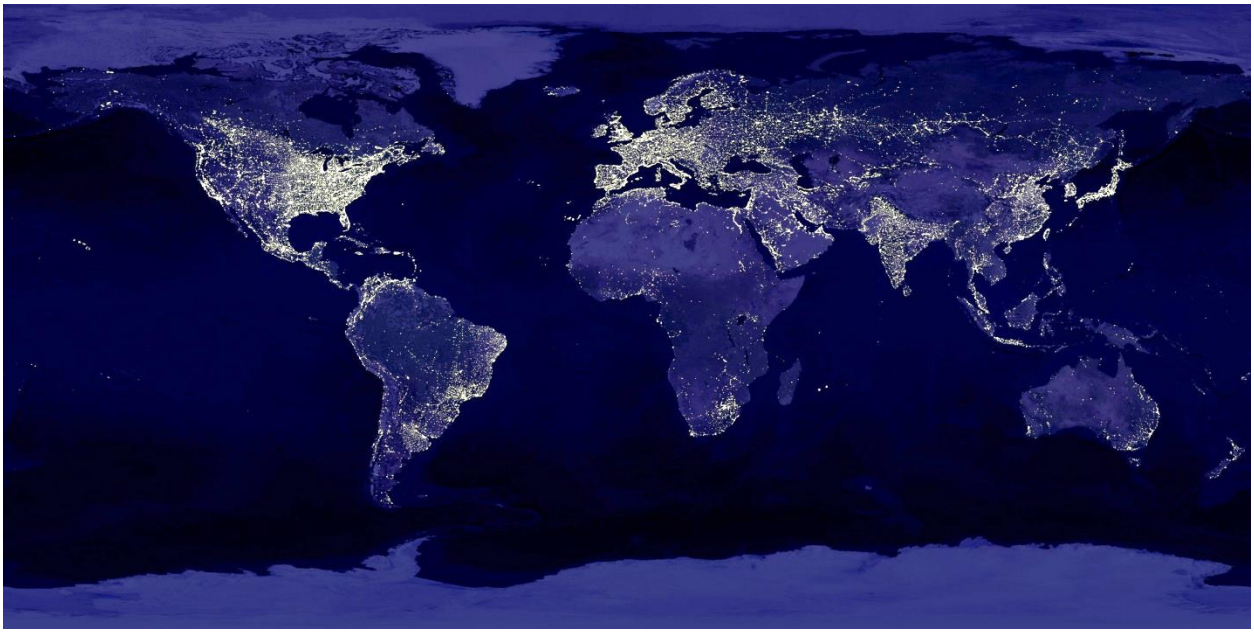
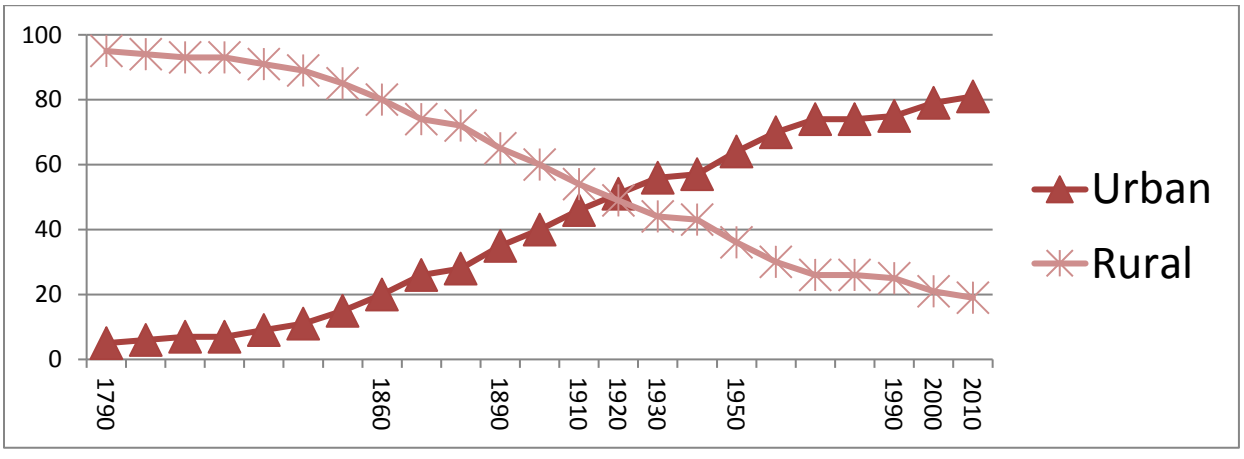
Figure 1. The Earth at Night



(Image Credit: NASA/GSFC/Craig Mayhew and Robert Simmon)

As of the 2010 census, more than 4 out of 5 U.S. residents lived in urban areas, with 71% of the total U.S. population living in cities with more than 50,000 residents and 10% living in smaller urban clusters (U.S. Census Bureau, 2010). The demographic transition from 80% rural in 1860 to 81% urban in 2016 creates challenges and opens up vast possibilities for Extension educators serving U.S. communities. Extension work that is characterized by strong understandings of urban and rural contexts, that grasps the many implications of the rural to urban demographic transition, and that prioritizes both urban Extension work and rural-urban collaborations can assist in addressing equity-related challenges in communities and within the Extension system (Lee & Keys, 2013).

Figure 2. Percentage of Total U.S. Population Residing in Urban and Rural Areas (U.S. Census, 1790-2010)



Cornell University established Extension offices in New York City (NYC) in 1948, initially specializing in providing nutrition programs and later expanding to focus on urban agriculture, family and 4-H youth development, workforce development, urban environment, and other program areas. This article offers a snapshot of the current challenges and opportunities Cornell University Cooperative Extension's NYC (CUCE-NYC) programs face and the strategies used in serving NYC's dynamic and diverse communities.

Challenges of Scale

NYC is the largest city in the United States, with more than 8.5 million residents as of mid-2015 and a recent rate of population growth stronger than any seen since the 1920s (City of New York-Planning, 2016a). The largest metro area in the country (U.S. Census Bureau, 2015), it is at the core of a multistate metropolitan area with more than 20 million residents and lies at the heart of the Northeast's profoundly urbanized I-95 corridor connecting communities along the east coast. Residents of NYC hail from across the globe, with more than 200 languages spoken. Along with English, languages most frequently spoken include Spanish, Chinese, and French Creole. Half of NYC residents speak a language other than English at home (City of New York-Planning, 2016b). More than 37% of current NYC residents were born outside of the United States (U.S. Census Bureau, 2016a). Population groups who are potentially underrepresented within and underserved by institutions like Extension comprise the majority of NYC residents. More than 25% of NYC residents are African American; 29% are Hispanic or Latino; 13% are Asian; 33% are White, non-Hispanic; and 1% are American Indian, Alaska Native, Native Hawaiian, or Pacific Islander (U.S. Census Bureau, 2016a). With more than 111,000 American Indian and Alaska Native residents, NYC has the largest First Nations population of any city in the United States (Indian Country Media Network, 2013).

NYC is a city rich in innovation and social capital, presenting a complex mix of assets for Extension programming on which to build when addressing challenges. Although food deserts are common and rates of adults who eat five or more servings of fruits and vegetables daily are lower than elsewhere in the state, NYC has the lowest rate of adult overweight or obesity of all regions in New York State (New York State Department of Health [NYSDOH], 2016a, 2016b). Harsh disparities are all too common, and many residents of the city face the health and social impacts of poverty. Forty three percent of children in the Bronx and 33% of children in Brooklyn live in poverty, while 1 in 5 children in the other boroughs live in poverty (NYSDOH, 2016c). Nearly 1 in 5 NYC students leave school before completing a high school degree, a rate higher than any other region in the state (NYSDOH, 2016d). NYC residents experience death rates from asthma at more than double the rates found in most regions throughout the state (NYSDOH, 2016e).

NYC has a powerful history of community engagement and institutions to support popular education and political voice, from settlement houses to community boards. Community-based organizations, governmental institutions, and private sector firms provide unique partnership opportunities and contexts for Extension education. Extension programming benefits from the city's strong and easily accessible data infrastructure, such as neighborhood-level community health profiles (City of New York-Health, 2016b) and maps (City of New York-Health, 2016a).

Extension in New York City

Urban Extension work can be organized in multiple ways. CUCE-NYC is a medium-sized, program-based Extension organization, specializing in nutrition and health; family and youth development (including 4-H); urban agriculture and food systems; and fostering translational research collaborations involving faculty, students, and NYC communities. The staffing structure is oriented toward program delivery and partnership development. Two administrative positions, one information technologies position, and two data entry positions support approximately 60 program delivery staff including community educators, Extension and research support specialists, program leaders, and Extension associates. The staff are demographically diverse and offer programming in multiple languages; workshops in Spanish slightly outnumber those conducted in English. Organizations like CUCE-NYC are bridges linking Land-Grant Universities with urban communities, connecting research science with community-generated insights and practice, and ideally, fostering collaboration and dialog between rural and urban communities and constituencies.

CUCE-NYC is embedded in the unique New York State Extension System. Outside of NYC, local Extension associations work under the guidance of Cornell University but are incorporated not-for-profit organizations legally governed by local boards of directors. The broad state legislative charge to the Cornell University Cooperative Extension system is "extending to the people of the state of New York, not enrolled in such colleges, the educational programs of the New York State College of Agriculture and Life Sciences and the New York State College of Human Ecology at Cornell University and subjects related thereto" (New York State County Law 224(8)(b)).

This charge is a big mandate for the relatively small organization serving NYC. The ratio of NYC residents to CUCE-NYC staff members is roughly 125,000:1. CUCE-NYC staff members are university employees and the NYC office is therefore structured differently from the county-based Extension associations that make up the largest part of the state's Extension system. Extension work in the city is directed toward this broad legislative charge, working to bridge NYC residents with Cornell research and educational programs, particularly those generated by the Colleges of Agriculture and Life Science and Human Ecology. CUCE-NYC sustains a close partnership with Cornell's NYC-based medical school. CUCE-NYC collaborates in staffing and

directing the Community Engagement in Research component of Weill Cornell Medicine's NIH-funded Clinical and Translational Sciences Center, a unique mobilization of Land-Grant and Extension resources in support of clinical research, medical science, and health care access.

How can an organization with a staff of 60 educators who provide direct programming for tens of thousands of participants make a significant and sustained impact on the largest city in the United States? The challenges of scale faced in NYC are not unique—most Extension work mobilizes limited resources to create large and positive impacts on individuals, families, communities, and institutions. The strategies used in NYC to accomplish these include partnership development, community recruitment, leadership development, and ecological efforts to foster setting-level change (changes in organizations, families, communities, and policies). The overall ethic informing CUCE-NYC programs prioritizes intensive, sustained engagement of participants and of organizational partners.

Strategies

Key CUCE-NYC strategies are grounded in sustained, intensive connections to communities, organizations, and other contexts that social-ecological theory identifies as significant for supporting families and promoting human health and development (Bronfenbrenner, 1979, 2005). Strategies for meeting the challenges of scale often overlap and complement one another. For example, community recruitment of program participants relies on and fosters ongoing partnerships with the schools, agencies, or other organizations that serve them. Also, organizations that have witnessed and hosted Extension workshops often seek staff training to conduct similar workshops or to integrate skills into their ongoing operations, multiplying the reach and resonance of Extension efforts. Examples of these complementary strategies follow.

Community Recruitment of Staff and Participants

Expanded Food and Nutrition Education Program (EFNEP). EFNEP is one of the cornerstones of CUCE-NYC programming and is a model for community recruitment of staff and participants. Frequently, educators first engage EFNEP as program participants. Core to EFNEP's approach since its founding in 1969 is "the goal of hiring educators from the communities in which they work. Educators are trained and supervised by nutrition professionals. This model brings necessary content expertise along with credibility offered by paraprofessional educators because of life experiences similar to those of program participants" (Dollahite, Pijai, Scott-Pierce, Parker, & Trochim, 2014, p. 102). EFNEP educators engage participants with evidence-based, highly interactive, multisession workshops promoting healthy eating and physical activity, enabling participants to find financially and practically feasible ways to integrate what they learn into their day-to-day lives (Boscia, 2016). CUCE-NYC EFNEP educators offer workshops in the languages of the communities they serve, which are

often the communities where they reside. Languages include Spanish, English, French Creole, Chinese, Korean, and others. With support from supervisors, educators are charged with arranging workshops, sustaining organizational partnerships (e.g., with schools and child care centers), recruiting participants, and gathering pre/post-education evaluation documents.

Workshop sites and organizational partnerships are relatively stable, and over the long-term many cycles of eight-session workshop series are conducted in a given location. Because of the consistent integration of data gathering for research and evaluation into EFNEP activities, all educators complete training in research involving human participants and are certified by Cornell's Institutional Review Board for Human Participants to serve as research team members. The EFNEP team collaborates closely with campus-based faculty who direct the statewide program, support research activities in NYC, and offer training in evidence-based curricula, facilitation, and effective educational practices. During the most recent fiscal year (2016), 4,566 adults and 4,817 youth completed EFNEP workshops in NYC; collectively, EFNEP educators offered 114,427 noncredit instructional activity contact hours.

4-H. Like EFNEP, 4-H programming relies on community recruitment of staff and program participants. NYC 4-H has developed a systematic approach (including a career ladder within the organization) for program participants interested in deepening their involvement in program delivery efforts. One of the distinctive features of 4-H in NYC is its ability to engage adolescents, while other 4-H locations in the state see a drop in participation as youth grow older. NYC 4-H offers a range of activities, including one-time events like National Youth Science Day. School-based clubs, offered during school time as well as after school, are led jointly by youth with support from adult teachers. A Youth Leadership Academy (YLA) meets at CUCE-NYC's main office to teach youth the hands-on learning activities and facilitation skills they use and refine in their local clubs. The YLA offers a chance for discussion, community building, and general skill development. Internships and temporary staff positions enable 4-H youth to further hone their skills at the same time they support program efforts, with some 4-H youth participants also returning to join the CUCE-NYC staff.

Youth who "age out" of 4-H frequently stay connected through a youth-organized and led Collegiate 4-H group that draws graduates of the NYC 4-H program together even while they attend colleges and universities. One of the missions of Collegiate 4-H is to assist other NYC youth to understand college application processes and to navigate the challenges of going to college, a support that is particularly important since many youth are the first in their families to attend college.

During the 2016 fiscal year, NYC 4-H involved 5,529 youth and 216 volunteers in direct educational activities (14,916 noncredit instructional activity contact hours). This demonstrates how the efforts and commitment of a very small staff of one full-time Extension associate and

two part-time program aides can be multiplied by embedding clubs and activities within schools and organizations where they draw on local talent for leadership.

Partnerships

Juntos. The 4-H program and other youth development activities such as the Assets Coming Together (ACT) for Youth Center of Excellence demonstrate the importance of building sustained partnerships as another strategy for addressing the challenges of scale. Juntos, a 4-H program aimed at preparing Latino students for educational advancement and college attainment, is an example of a partnership involving multiple parties. Juntos connects Latino youth and families in the Bronx with resources that will support their academic success. Partners include the National 4-H Council, North Carolina State University (the developer of the Juntos approach), CUCE-NYC, New York Life (the insurance company that provides both funding support and a pool of committed volunteers), a NYC Department of Education middle school (site of the intervention where the principal, vice principal, social worker, guidance counselor, and parent coordinator are members of the Juntos team), and the 60 eighth grade students and their families who participate in the program.

The Juntos program involves one-on-one coaching, family workshops, and a 4-H club focusing on academic success and public speaking as well as life skills, and field trips. In the past year, Juntos students have successfully navigated the intensive NYC high school selection and application process, and 20 have applied to specialized high schools emphasizing mathematics, science, and the arts and performance. Parents report feeling the program opened doors of opportunity and increased their connection with their children as well as increased their involvement with their children's educations.

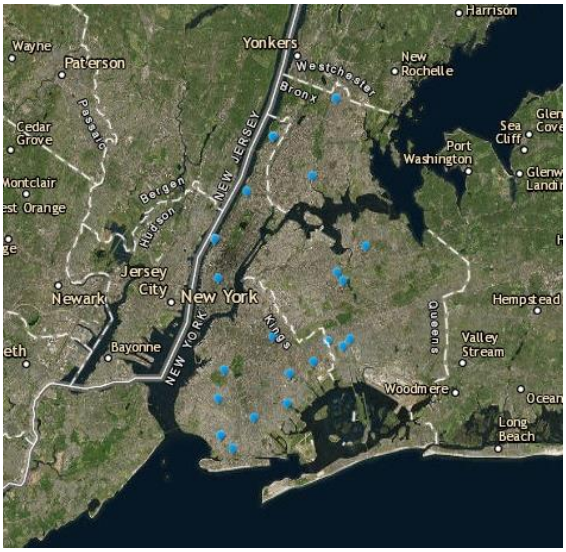
Volunteers from New York Life conducted *My Financial Future* workshops with Juntos students and carried out multiple other roles, including participating in the family graduation ceremony. The testimonies of parents and the experience of volunteers strengthened New York Life's commitment to on-going partnerships with 4-H. Juntos is staffed by one full-time Extension support specialist with support from the CUCE-NYC family and youth development program leader (a senior Extension associate), a 4-H Extension associate, and 4-H program aides. Partnership and volunteer engagement are critical to its success and to the potential for multiplying the activities and approaches in future initiatives.

CUCE-NYC's Hydroponics/Aquaponics/Aquaculture Learning Labs. The Learning Labs are sustained by a strong, ongoing set of partnerships with NYC schools and community-based organizations. Hydroponics and aquaculture depend on elaborate infrastructures for growing plants, raising fish, and engaging youth in learning activities (see Figure 3).

Figure 3. CUCE-NYC Hydroponics Mini-units at the Brooklyn Environmental Study Center

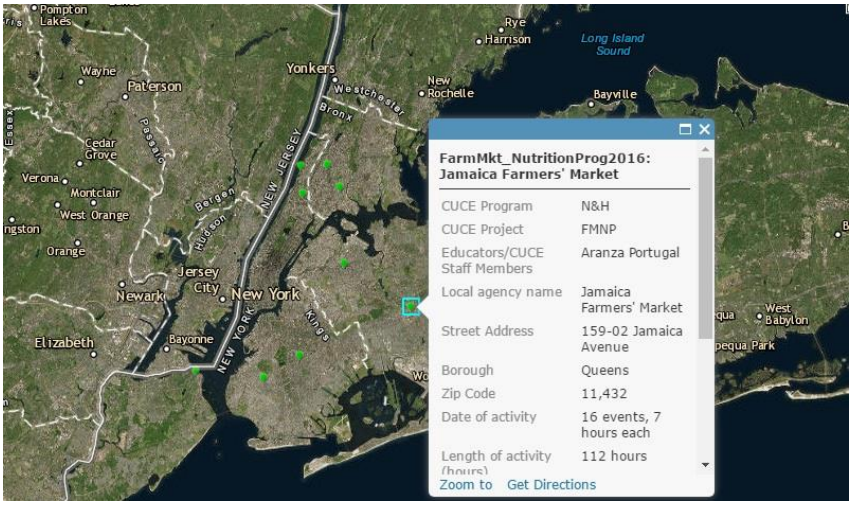
This infrastructure infuses the partnerships with an additional aspect—the necessity of ensuring learning labs have stable locations for the technology, plants, and fish required, and at the same time, ensuring they are staffed and maintained. Under the partnership, schools and community-based organizations provide space (currently about 4,000 square feet in several sites across the city) and CUCE-NYC provides staffing. The program's founding director (an Extension associate) circulates from site to site (see Figure 4), teaching high school students, providing professional development for teachers, developing and maintaining innovative equipment, and sustaining the complex partnerships and contractual agreements on which the program relies. The program director is supported in this work by an entry level laboratory technician, a position that is supported by CUCE-NYC's capacity funding and is designed to develop the capabilities of an emerging Extension professional. High school student interns help to implement the program during the school year and most intensively during the summer, when they also take on mentoring roles for younger children in community-based organizations. Cornell graduate and undergraduate students, working in collaboration with Ithaca-based faculty members and Cornell's controlled environment agriculture working group, join the NYC team, serve as interns, and help staff the learning labs. Student activities include partnering with community-based organizations on joint funding proposals and conducting research on the impact of programs such as the learning labs on youth career trajectories, STEM engagement, and agricultural career interest.

Figure 4. CUCE-NYC Hydroponics Program Sites Throughout NYC (blue dots)



The Farmers' Market Nutrition Program (FMNP). FMNP offers yet another model in which partnerships sustain programming. The state Department of Agriculture and Markets supports the program, which has sites throughout New York State as well as in NYC. A faculty member in Cornell's Division of Nutritional Sciences serves as principal investigator and her staff provides strong program support. CUCE-NYC staff sustain partnerships with farmers' markets throughout the city, coordinating information distribution and cooking demonstrations with market managers and engaging visitors to the markets in educational activities. Further, the FMNP provides an excellent context and learning experience for dietetic interns from a number of colleges and universities (Boscia, 2016). The FMNP engaged 18,161 visitors to NYC farmers' markets in food demonstrations and nutrition education during FY 2016 (see Figure 5).

Figure 5. Farmers' Market Nutrition Program Sites: Data Tab for Jamaica Farmers' Market



Parenting Education Program. Partnerships sustained by CUCE-NYC's Parenting Education Program are based on the understanding that to engage parents and other adults responsible for raising children, it is most effective to offer workshops in locations that are safe and familiar to them. The same is true for other programs. Many participants face obstacles ranging from lack of transportation to lack of time or lack of trust, meaning that Extension educators need to go the extra mile to make programs accessible. CUCE-NYC's parenting education program is small, staffed by one part-time, high-expertise Extension support specialist. With the majority of workshops conducted in Spanish or a fluid combination of Spanish and English, the program works in partnership with schools, child care centers, churches, and community-based organizations to provide intensive, interactive parenting workshops that address issues identified by participants as high priorities. The average workshop involves 11, two-hour sessions in the workshop series. They are repeated in partnership sites as frequently as feasible, usually annually or every two to three years. This model of partnership overlaps closely with community recruitment of participants. In 2016, 142 parents, the plurality of whom were immigrant, Spanish-speaking women, participated in the workshops (3,814 noncredit instructional activity contact hours).

Translational research partnerships with faculty have recently enabled CUCE-NYC to develop new parenting education programming. Supported by a donor interested in boosting family literacy and grounded in research on young children's acquisition of language and spatial skills (Casasola, Bhagwat, Doan, & Love, in press), the program engages low-income families in NYC child care centers in activities that build the foundation for their young children's lifelong literacy. The team developing this project includes faculty, undergraduate students, Extension educators, community outreach workers, and staff of early child care centers. Activities during 2016 included recruitment of two child care centers to participate in the pilot project, training of undergraduate students in the teaching and assessment activities aimed at boosting language acquisition and spatial skills development among young children, identification and recruitment of parents to participate in the expansion of the project (moving from researcher-conducted interventions to child care-provider interventions to family-based interventions), and development of curriculum materials in English and Spanish. Initial field testing of those materials took place in January 2017. Data gathering and intervention among low income urban families complemented earlier research with higher income families near Ithaca and low income families in rural upstate New York counties.

Training of Trainers and Leadership Development

An area of significant growth in CUCE-NYC is work to multiply the impact of Extension education citywide by providing training of trainers and leadership development workshops. Workshops by staff address program areas ranging from positive youth development to implementing hydroponics programs in school classrooms. These workshops are generally

conducted on a fee-for-service basis and are designed in collaboration with the organizations sponsoring them. Rather than advertising topical workshops open to all via individual enrollments, CUCE-NYC generally provides workshops for networks of people who already share an organizational context or who are part of an existing network. This aligns with the emphasis on taking ecological approaches that foster setting and system-level change to promote optimal human development.

Fostering Setting- and System-Level Change

All of the previously summarized strategies rely on ecological approaches in which individuals are seen in the context of the settings in which they live and work. Recruiting staff and program participants in the context of their communities and with sensitivity to their shared circumstances promotes individual learning and growth at the same time as it fosters contextual supports for the behavioral changes that sustain learning and growth. Long-term partnerships enable organizations to develop and change during the course of program delivery, and training of trainers enhances the integration of Extension knowledge and skills into increasing numbers of organizational settings and into the core practices of an increasing number of professionals.

Program Mapping for Planning and Evaluation

There are numerous ways to keep track of Extension programs and partnerships, including maintaining inventories of collaborations and contacts, documenting the social network relationships of Extension educators and campus-based faculty, and conducting program-specific evaluation activities. All of these are of value. One key planning and evaluation strategy used by CUCE-NYC involves creating interactive maps of program activities throughout the city.

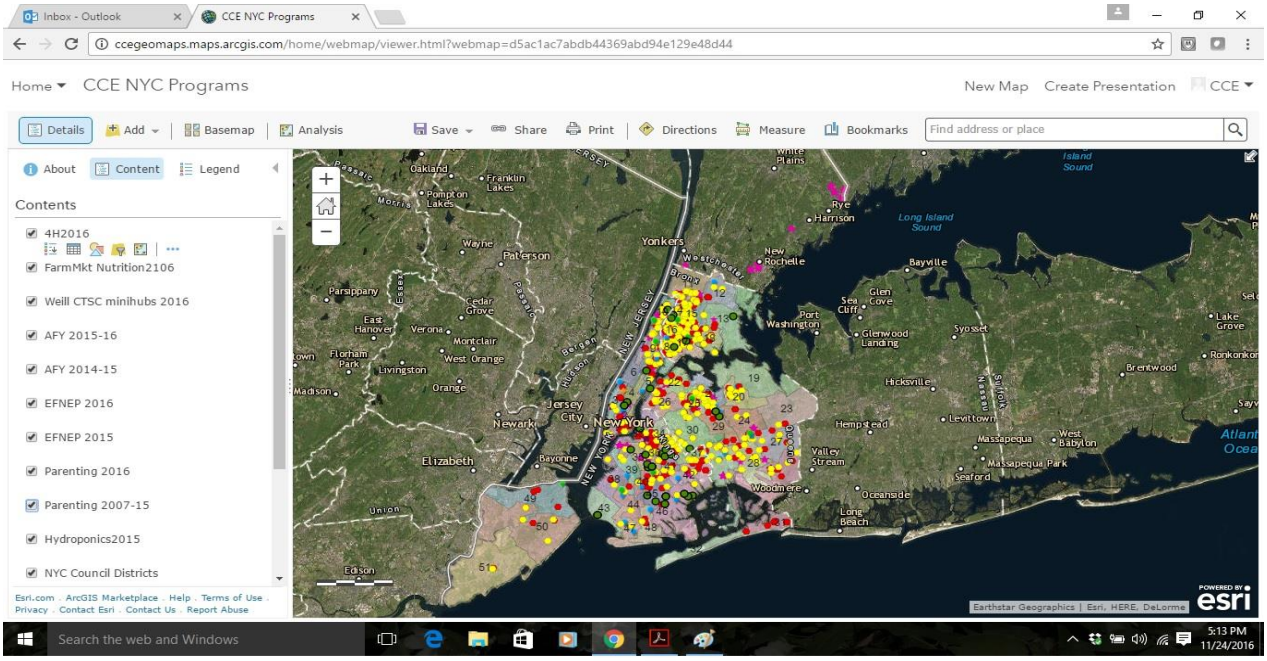
Geographic Information Systems (GIS) technology is increasingly user-friendly and university infrastructures provide technical support for geospatial mapping. Maps provide a powerful visual tool for assessing program reach and intensity, relationships among programs and community characteristics, and opportunities for enhanced program delivery. Maps also spark candid discussion and creative thinking by program staff and organizational partners.

The program mapping project relies on a partnership between university faculty including a GIS specialist from the City University of New York's School of Public Health and staff from each of CUCE-NYC's program areas. Data and interactive maps of program activities are housed at Cornell's Institute for Resource Information Services (IRIS), which supports Extension Geospatial Mapping projects.

Each of CUCE-NYC's programs compiles data about workshops and other events onto a simple spreadsheet that includes location information. Each line of the spreadsheet represents a unique

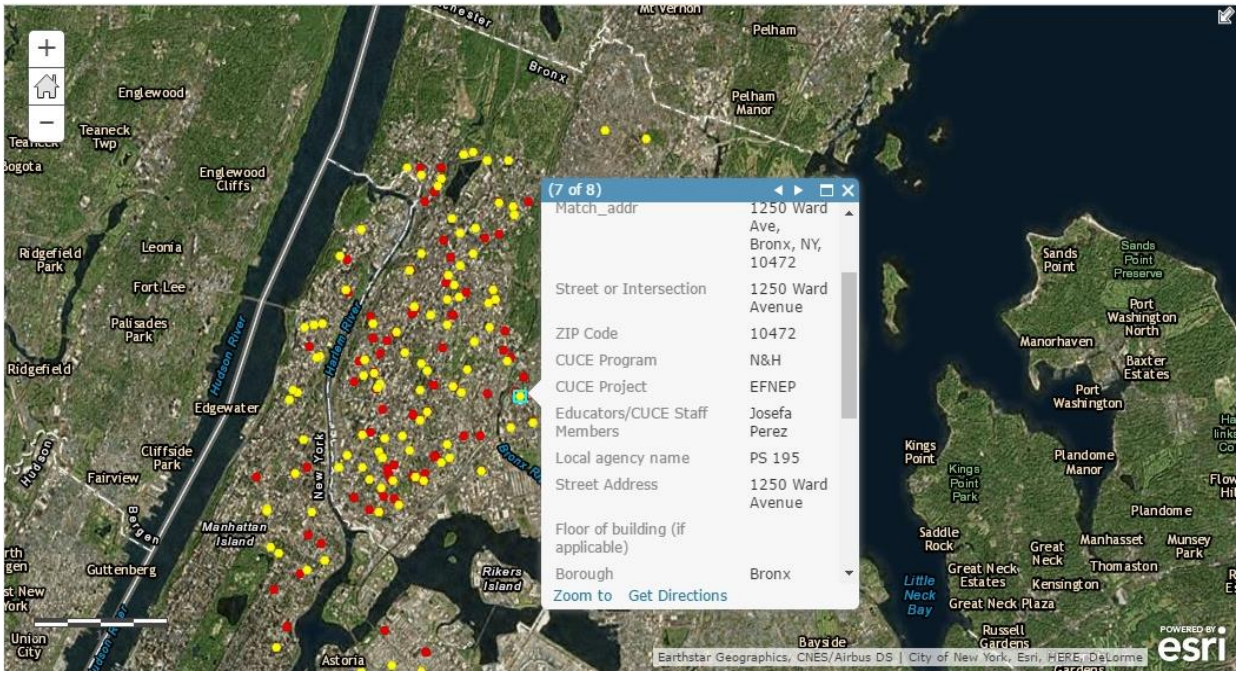
activity (such as a one-time event, a multi-session workshop series, a semester-long high school internship program, or a teacher-training program), with each column capturing specific information such as the activity's location, the staff member responsible, the contact at the community partner organization, and the number of youth and adult participants. The data are then geocoded and added to an interactive desktop geodatabase to produce an interactive map (see Figure 6).

Figure 6. Screenshot of Interactive CUCE-NYC Program Map Showing Content Options and Program Delivery Sites Citywide (Bird's Eye View)



Multiple program activities might take place in the same location, drawing on the same community connection; thus, each dot on the map might represent many events or workshops. Clicking on a program marker at a particular point on the map pulls up specific data on each activity that took place in that location. Each program has a unique type of icon (e.g., stars for parenting education or blue dots for aquaponics/hydroponics learning labs), and years are represented by different colors, enabling program staff to easily identify changes in program delivery patterns over time (see Figure 7).

Figure 7. EFNEP Program Delivery FFY 2015 (red) and FFY 2016 (yellow): Record 7 of 8 for Program Activity at a Location in the Bronx



By turning map content layers on and off and by zooming in and out, CUCE-NYC programs can be visualized one at a time or together, in high-resolution within specific neighborhoods or from a bird's eye view including all five NYC boroughs, and in relation to other public domain or custom map layers (for example, census or public health data, legislative boundaries, locations of farmers markets, or public transportation). CUCE-NYC's program mapping system has been designed to support future impact assessment and related research using a statistical model that incorporates changes over time, location, program delivery, and community co-variates in assessing risk and protective factors at the community level. The CUCE-NYC team anticipates this will be of particular value in identifying community-level change associated with intensive programs like EFNEP, where individual-level change is already carefully assessed. The research plan involves (a) identifying bounded locations (e.g., ZIP codes) where CUCE-NYC provides intensive programming in one or more content areas, (b) identifying closely matched comparison locations (ZIP codes in NYC with similar demographics but less intensive CUCE-NYC program delivery), (c) compiling prior period baseline information on health and social indicators in comparison and program delivery locations, (d) compiling longitudinal (current and future data) on the indicators of interest, (e) tracking change in both comparison and program sites, and (f) identifying statistically significant differences which may have resulted from intensive program delivery. Engagement of program staff and community partners in developing and interpreting data generated by this model will increase its use in program planning and implementation.

To summarize, CUCE-NYC's current uses of interactive program maps to address the challenges of scale include

- tracking and planning program delivery,
- identifying and addressing gaps in coverage,
- identifying opportunities for cross-program collaboration,
- developing partnerships, and
- communicating with elected representatives.

The interactive program maps enable the CUCE team to see areas where program delivery is strong and to see gaps in program delivery. Clear understanding of programmatic strengths and weakness is a key component of CUCE's efforts to make a significant and sustained impact on the largest city in the United States.

Challenges of History—Mapping the Future

The United States Cooperative Extension System was constructed when the majority of the U.S. population lived in rural contexts; however, at the earliest moments of Extension's development, the demographic transition of the United States from predominantly rural to predominantly urban was well underway. Meeting the challenges of this demographic transition can inform and strengthen Extension overall—in rural contexts as well as in urban communities. Rural-urban polarization is neither optimal nor inevitable. Extension programming and research in NYC demonstrates many complementary interests of rural and urban residents.

A wealth of information is available to inform programming that addresses differences and similarities between rural and urban conditions. The U.S. Census Bureau recently published *Rurality Matters*, a direct comparison of population characteristics in mostly urban, mostly rural, and completely rural U.S. counties. This information is useful in understanding the importance of the demographic transition for Extension programming in urban as well as rural contexts (U.S. Census Bureau, 2016b).

Profound commonalities in social assets and challenges exist in urban and rural contexts. For example, in both urban and rural settings, around two-thirds of people are employed or in the work force, the median age is around 50, approximately 22% of the populations are under 18 years old, and one in 10 or 11 children lives with a grandparent. There are also differences which may contradict common perceptions of rural and urban populations. For example, the poverty rate in completely rural counties is 15.8% while in mostly urban counties it is 9.7%. More people in completely rural counties live alone (15.3%) than in urban counties (10.3%) (U.S. Census Bureau, 2016b). A nuanced understanding of rural-urban similarities, differences, and potential areas of common ground will assist in developing and disseminating urban

Extension programs, exchanging programmatic insights and practices that strengthen and transform Extension education across contexts, and building political support for urban Extension activities.

In particular, mapping programs and community characteristics offers a starting point for assessing and integrating urban Extension opportunities in current Extension contexts. Extension programs and organizations that have historically served rural constituencies and addressed what are framed as rural concerns might be able to use maps to visualize census and health data. This will help identify how the rural to urban demographic transition is unfolding within specific service areas. Educators and Extension faculty can readily use census data to explore questions that can inform Extension program planning. If GIS technology is unavailable, marking a printed map can show program delivery locations. Either a digital or a paper map will contribute to discussions about Extension program delivery. Are the locations of currently offered programs easily accessible to all? If not, additional locations for conducting Extension activities can be identified as well as the potential community partnerships that will help to sustain them. Are population densities changing, with some locations losing population and other locations experiencing increased density? What languages other than English do people speak at home, and are Extension educators and/or volunteers fluent in those languages?

When program activities are mapped, it becomes easy to see how well Extension services reach potential participants. What does the distribution of mapped events illustrate about the reach of Extension programs or about gaps in Extension services? Extension systems have created a wealth of programs that can address the interest of participants that are currently not fully engaged. Juntos, the overall 4-H growth strategy, and the Farm Services Agency's urban outreach initiative are examples. Professional development initiatives like Opening Doors (http://diversity-project.org) can help to build staff capabilities.

The strategies used in NYC work in other contexts as Extension seeks to mobilize limited resources to create large and positive impacts with individuals, families, communities, and institutions. Systematically fostering and assessing partnership development, community recruitment, and leadership development, as well as working to promote setting-level change in organizations, families, communities, and policies are key to this effort. These are strategies that help to meet the challenges of scale faced throughout the Extension system and create the foundation for relevance, adaptability, and success. Each of these strategies can be monitored and evaluated. Key factors evidencing success in partnerships include duration and diversification of activities over time. Program delivery data and characteristics of staff hired demonstrate whether community recruitment is succeeding or needs to be enhanced. Carefully crafted "success stories" can be used to explore how setting level change unfolds as the result of educational activities. As described in the program mapping section, community-level change in health and educational outcomes can be identified in studies comparing communities where there

is intensive Extension programming with communities not yet reached. Social network analysis can be used to document the number and characteristics of collaborations between Extension educators and research faculty. Interactive data sharing methods will help to ensure Extension educators and leaders draw on monitoring and evaluation findings in adapting and developing their programs. As CUCE-NYC's program mapping project develops, story maps (https://storymaps.arcgis.com) will offer an additional way to visualize, assess, and spark creative discussion about partnerships within and beyond the city.

Extension is uniquely positioned to bridge rural-urban interests and to foster equity for all. In order to accomplish this in a context where 81% of the population lives in urban areas, programs and funding streams must increasingly prioritize urban needs and capabilities as well as urban-rural linkages. The rural to urban demographic transition has been unfolding since the 1800s. Strengthening urban Extension resources will aid Extension overall in seizing unique opportunities for fielding creative programs that serve the increasingly diverse, increasingly connected 21st century U.S. population.

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Tampa Bay Extension Agents' Views of Urban Extension: Philosophy and Program Strategies

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The purpose of this article was to explore the concept of urban Extension as perceived by Extension agents within the Tampa Bay area, one of Florida's fastest growing metropolitan areas. From a theoretical perspective, it is critical to understand Extension agents' beliefs about urban Extension because behaviors are directly related to attitudes (Ajzen, 2012). In 2016, a qualitative investigation was undertaken to explore the perspectives of 23 agents working within the Tampa Bay area. Results showed the majority of agents believed that context and client needs are unique for urban Extension, and that to a lesser extent, unique agent expertise is required. Further, these beliefs impacted how agents reported their approach to programming, with an emphasis on providing convenience and seeking partnerships. Difficulties were identified related to identifying the role of Extension in a resource-rich environment of service providers, which contributed to the existence of a perceived disconnect between urban audiences and Extension. Opportunities exist for Extension leadership to provide strategic organizational support that will enhance agents' abilities to succeed in the metropolitan environment.

Keywords: metropolitan, programming, theory of planned behavior, partnerships

Introduction

The influence of the United States' changing population on how and where Extension implements its mission has become a national conversation. Extension professionals are seeking to develop and implement strategies that will allow Extension to maximize and demonstrate its potential impact in all locations and for all people. This desire has generally been met with a recognition that the original model of Extension was designed to meet the needs of a very different era and it is now time to determine the best model(s) moving forward. New networks such as the National Urban Extension Leaders and the Western Center for Metropolitan Extension and Research have embraced the challenge and have been instrumental in creating the space to have conversations about how Extension should be functioning to meet the needs of 21st century America.

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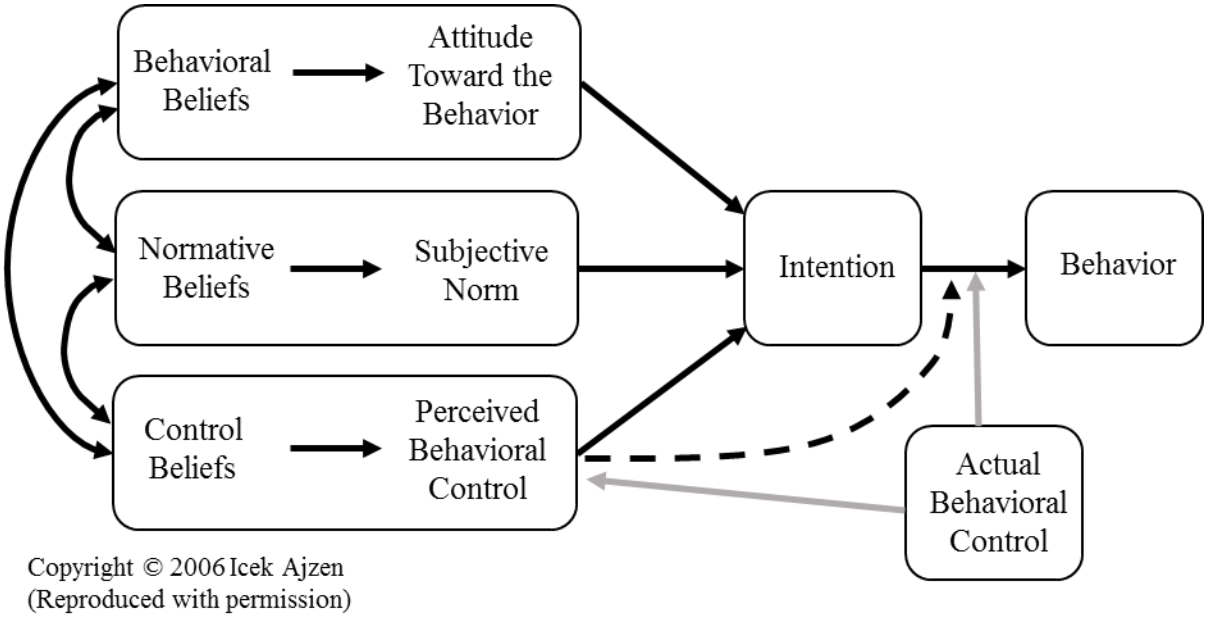
At the University of Florida (UF), the conversation has focused on developing a strategic plan for Extension in metropolitan areas. In 2014, a select group of Extension faculty across administrative and agent ranks within the Institute of Food and Agricultural Sciences (IFAS) was convened as an Urban Extension Task Force by the Dean of the Florida Cooperative Extension Service. Amongst the goals for that Task Force were charges to build an urban program that collectively strengthened all of UF/IFAS Extension and to develop key principles for urban Extension. What resulted is known as the Strategic Plan for Extension in Metropolitan Regions, a framework that "identifies a series of quantifiable steps that guide activities and resources to accomplish predetermined outcomes, along with a suggested time frame for implementation and the responsible agency or partnership" (UF/IFAS Extension, 2015, p. 1).

The Strategic Plan (UF/IFAS Extension, 2015) is a comprehensive document which outlines essential elements and performance indicators in the following four areas: (a) institution, (b) resources, (c) partnerships, and (d) implementation. The Strategic Plan is available in its entirety at http://extadmin.ifas.ufl.edu/urban.shtml. Upon completed development of the Strategic Plan, the UF/IFAS Extension leadership team held a retreat to determine the best course of action given the numerous possibilities presented in the Strategic Plan. One outcome of that retreat was the decision to conduct an extensive needs assessment within Florida's four major metropolitan hubs (Jacksonville, Miami, Orlando, and Tampa) to collect the data needed to drive decisions related to the implementation of the Strategic Plan. The 18-month project is ongoing and focuses on collecting data from county Extension faculty and staff as a primary method to assess and prioritize the gaps between where UF/IFAS Extension currently is and the optimal performance indicators in the Strategic Plan. The approach is designed to support the informed allocation of resources as UF/IFAS Extension works to sustain and enhance the quality of human life for all Floridians.

Recognizing the importance of Extension agents within the UF/IFAS Extension system, the needs assessment process in each metropolitan area begins with the goal of discovering what the local agents think about Extension in an urban environment. From a theoretical perspective, it is critical to understand Extension agents' beliefs about urban Extension because behaviors are directly related to attitudes (Ajzen, 2012). According to the Theory of Planned Behavior (Ajzen, 2012), a behavior occurs as the result of intention. Intention is influenced most closely by a person's attitude toward the behavior, social pressure related to the behavior (subjective norm), and the person's belief about his or her ability to perform the behavior (Ajzen, 2006) (see Figure 1). Antecedents of these variables are behavioral beliefs, which describe what a person believes will happen as a result of engaging in the behavior; normative beliefs, which describe what a person believes he or she is expected to do by those who are important to him or her; and control beliefs, which describe what a person believes are factors supporting or hindering the behavior (Ajzen, 2012).

Figure 1. Visual Illustration of the Theory of Planned Behavior



For example, an Extension agent who believes that partnerships are critical to Extension's success in an urban area, feels positive social pressure to engage in partnerships, and believes he or she is capable of cultivating partnerships is far more likely to do so than someone who has fewer positive factors contributing to behavioral intention. Tying this theory back to the UF/IFAS Extension needs assessment project, investigating Extension agents' attitudes and beliefs about urban Extension and what is possible within the urban environment offers insight into how they will actually perform in their roles; therefore, it is prudent to examine agents' perspectives about their work as a central component of any discussion about urban Extension. Toward that end, the purpose of this article is to explore the concept of urban Extension as perceived by Extension agents within the Tampa Bay area, one of Florida's fastest growing metropolitan areas.

Methods

Study Design

Merriam and Tisdell (2016) identified a basic qualitative study as appropriate when researchers are "interested in (a) how people interpret their experiences, (b) how they construct their worlds, and (c) what meaning they attribute to their experiences" (p. 24). We felt strongly that it was imperative to begin any discussion about urban Extension by listening to the experiences of the Extension professionals who work in metropolitan areas every day and so followed the basic qualitative study approach.

Context

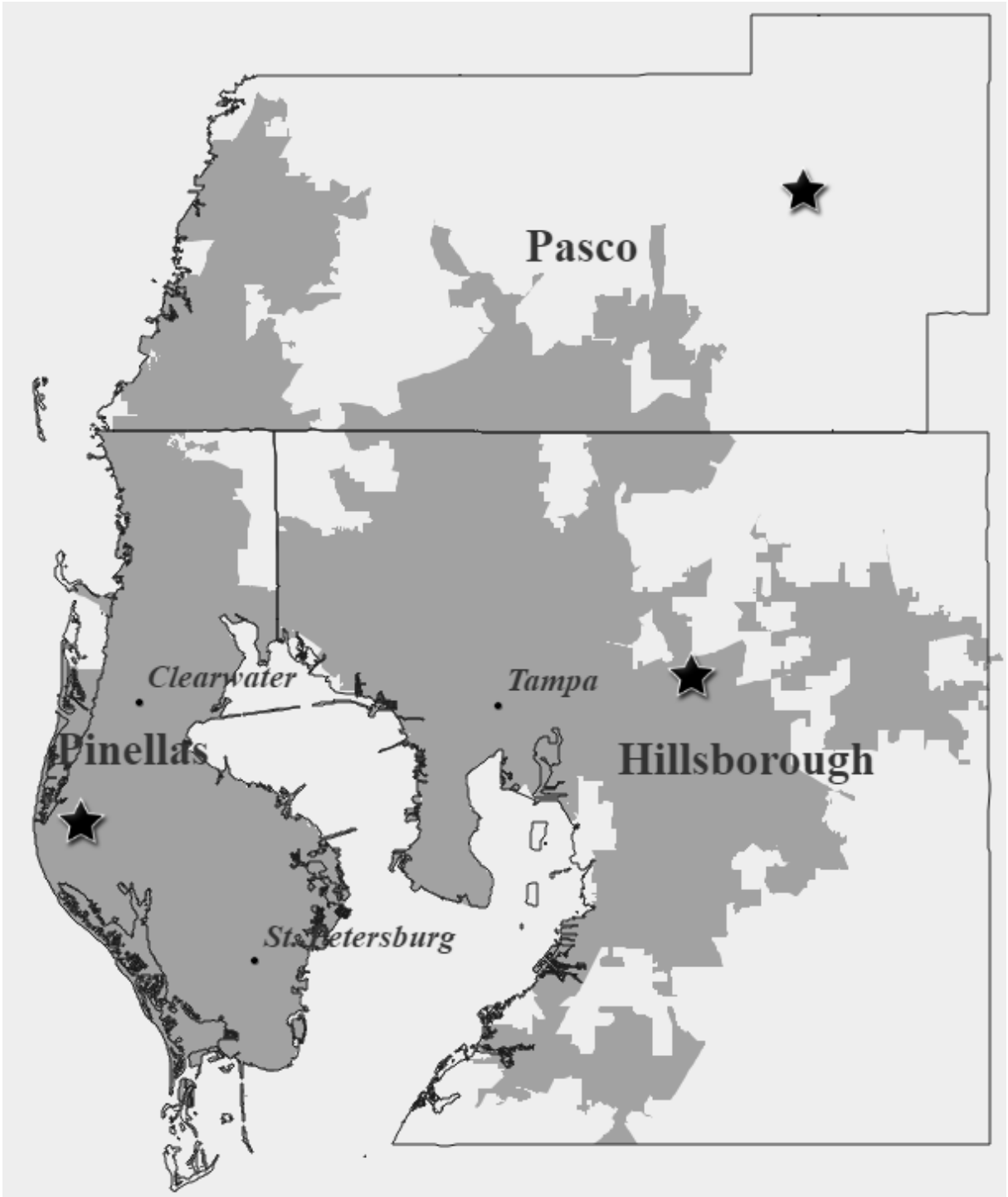
The Tampa Bay metropolitan area is located on the Gulf coast of Florida, approximately halfway down the state's western border. According to the Florida Metropolitan Planning Organization Advisory Council (2010), the Tampa Bay-St. Petersburg urbanized area is estimated at 2,441,770 people. Table 1 describes the population, racial, and ethnic composition of the Tampa Bay-St. Petersburg urbanized area (U.S. Census Bureau, 2010, 2015).

Table 1. Race and Hispanic Origin (Percent) by County and City in the Tampa Bay Area

	Race						Hispanic Origin	
Area	White	Black or African American	Asian	Two or more races	Native Hawaiian and other Pacific Islander	American Indian and Alaska Native	Hispanic or Latino	White alone, not Hispanic or Latino
Hillsborough County	75.0	17.7	4.1	2.6	0.1	0.5	27.0	51.0
Pinellas County	82.9	11.0	3.5	2.1	0.1	0.4	9.1	74.9
Pasco County	89.1	5.8	2.5	2.1	0.1	0.4	14.0	76.5
Tampa	62.9	26.2	3.4	3.2	0.1	0.4	23.1	46.3
St. Petersburg	68.7	23.9	3.2	2.5	0.1	0.3	6.6	64.3
Clearwater	79.8	10.9	2.1	2.4	0.1	0.5	14.2	71.1
United States	77.1	13.3	5.6	2.6	0.2	1.2	17.6	61.6

The U.S. Census Bureau's (2010) definition of an urbanized area including 50,000 or more people was used to delineate the boundaries of the Tampa Bay-St. Petersburg urbanized area. The urbanized area included the cities of Tampa, St. Petersburg, and Clearwater as well as smaller unincorporated areas (see Figure 2); locally, the urbanized area is most commonly referred to as the Tampa Bay metropolitan area and will be referred to in this article simply as the Tampa Bay area. Portions of three counties (Hillsborough, Pinellas, and Pasco) were included in the urbanized area. The main Extension office for each county is identified with a star in Figure 2, which illustrates where the office is located in relation to the urbanized areas. All of these counties were included in the study.

Figure 2. Boundaries of the Tampa-St. Petersburg Urbanized Area for 2000 and 2010



Participant Recruitment

Potential participants for the research were identified by asking the County Extension Directors (CEDs) for Hillsborough, Pasco, and Pinellas counties to provide a list of agents whom they thought should be interviewed. The CEDs were also invited to participate, which resulted in a total of 25 potential participants. Each potential participant received an introductory email from one of the researchers and a copy of the informed consent. Of the invited, 23 individuals agreed to participate in the research, one individual declined, and one individual failed to respond.

Given the need to protect the confidentiality of study participants, only a summary of group characteristics is provided. The majority of participants were female. Agents represented a wide range of ages and experience, spanning all four ranks within the University of Florida promotion and permanent status system. All major program areas were represented. A few agents had multicounty assignments, but most were assigned to a single county. The greatest number of participants were from Hillsborough County, while the fewest were from Pasco County, which is consistent with the size of the county faculty in all three locations. Pseudonyms have been assigned to further protect the confidentiality of participants when providing quotes in the findings section.

Data Collection

A semi-structured interview guide (Merriam & Tisdell, 2016) was used to collect data. Participants were asked to describe, "What do you think of when you hear the term 'urban Extension' or think of Extension working in a metropolitan area?" Probing questions were used as appropriate. Additional questions were included in the interview guide, but that data was not reported in this article. Questions covered four categories derived from the Strategic Plan for Extension in Metropolitan Regions (UF/IFAS Extension, 2015): (a) institution, (b) resources, (c) partnerships, and (d) implementation.

Data collection occurred between July and September 2016. Twenty-two interviews were conducted over the phone, and one interview was conducted in person. All interviews were audio recorded and ranged in length from 31 to 155 minutes with an average of 60 minutes. Transcriptions of each interview were created by one of the researchers, reviewed for accuracy, and then sent to the participant for member checking (Lincoln & Guba, 1985). Any revisions suggested by participants as a result of member checking were accepted.

Data Analysis

Data were analyzed using the constant comparative method (Merriam & Tisdell, 2016) of analysis. Each participant's response was read carefully, and codes were assigned to key

phrases. Simultaneously, memos were kept as recommended by Yin (2011), which helped to organize the codes into meaningful concepts and categories.

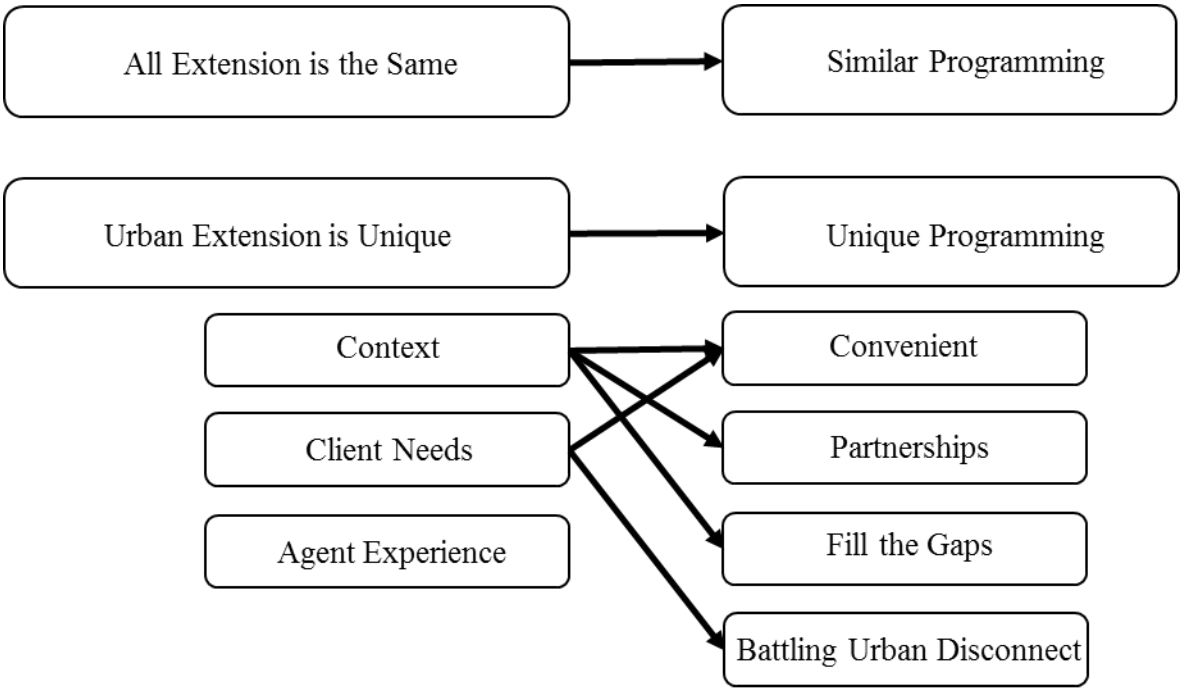
In addition to conducting member checks to improve the trustworthiness of the research, we have provided a detailed description of the context and extensively used quotes within the findings to aid the reader in making transferability judgments (Lincoln & Guba, 1985). An audit trail was created to address dependability and confirmability (Lincoln & Guba, 1985). Audit trail records include (a) audio recordings of each interview, (b) interview transcriptions, (c) member checking correspondence, (d) memos, (e) coded transcripts, and (f) written correspondence between the authors during and after data collection. Finally, the use of multiple sources and different investigators allowed for triangulation of the data as recommended by Lincoln and Guba (1985) to address credibility.

We recognize the potential for our personal biases to influence the research. The lead author is a strong supporter of Cooperative Extension, but particularly of Extension agents. She, like Seevers, Graham, and Conklin (2007), believes agents are the most important part of the Extension system and has prior experience as a 4-H agent in a rapidly urbanizing county in Colorado. The second author, also a strong supporter of Cooperative Extension, worked in the state office for a UF/IFAS Extension program for two years and has worked collaboratively with Extension agents throughout the state on a variety of projects. Adhering to the trustworthiness procedures outlined by Lincoln and Guba (1985) and described in the preceding text was important to guard against our biases skewing the findings.

Findings

The experiences of Extension agents working in the Tampa Bay area are best viewed through their philosophical views and the program strategies they implement as an outgrowth of their beliefs. Accordingly, the findings have been separated to explore each major theme and its subthemes. Agents' philosophical views of urban Extension and urban areas are presented before program strategies, consistent with Ajzen's (2012) theory that people's behaviors are influenced by their attitudes and beliefs. The data for this study revealed connections did exist between philosophical views and program strategies used within the urban environment. Beliefs about context were the most influential drivers of program strategies as shown in Figure 3.

Figure 3. Conceptualized Connections Between Philosophical Views of Urban Extension and Program Strategies



Philosophical Views of Urban Extension

The Oxford Dictionary (2016) defines philosophy as "a theory or attitude that acts as a guiding principle for behavior" ("Noun," para. 1). Agents working within the Tampa Bay metropolitan area tended to espouse one of two attitudes about urban Extension. Agents either felt Extension in urban areas was the same as Extension anywhere else, or agents believed in the uniqueness of urban Extension. At times, agents acknowledged some unique differences but believed Extension was the same in spite of those differences.

Agents who believed Extension was the same everywhere discussed similar programming needs across contexts as evidence supporting their viewpoints. Tracy asked, "Is there really a difference?" and explained the program requests received from urban audiences did not differ from those received from rural audiences. Similarities in programming needs were identified for 4-H, health, and wellness. Bill said, "I think most of the programs that Extension has right now can fit very easily into an urban environment with just a little bit of adjustment in the way that we approach the problems we face." Concern was expressed about differentiating Extension contexts, as indicated when Tracy asked, "When they are pushing this urban versus rural, are we really doing a favor or dissatisfaction to a lot of our programs by separating them?"

In contrast, the uniqueness of urban Extension was articulated by the majority of interviewed agents. That uniqueness was explained in terms of unique context, unique clientele needs, and unique agent expertise. Variation in how the agents viewed each of those subthemes existed.

Context. The urban context was described as unique in several ways. Carla and Betty described the urban context as the "inner city" and "the suburbs" (Betty). High population density was identified as another unique characteristic by multiple agents. In the Tampa Bay area, Pinellas County is particularly unique in that it is "so densely populated and built out, there really is not a demarcation of urban versus rural" anymore (Kristin). Sarah expressed a desire for research and publications geared toward the "urban environment" to address the educational needs of people engaging in agriculture on the limited land available in the highly populated areas. Additionally, Bill noted differences in population density create differences in "environmental needs relative to types of loads and frequencies of pollution events."

The presence of high numbers of other service providers within the urban context was also mentioned as a unique characteristic, with Kristin describing the Tampa Bay area as "resource-rich." Bill expressed "a need for social coordination" between service providers. Owen shared, "I think about how we're not the only game in town—there's a lot of different partners doing a lot of different things, quite a few with missions quite similar to Extension." The Boys and Girls Club and the Health Department were identified as examples of providers with similar missions.

Clientele needs. Agents described the uniqueness of clientele needs within the Tampa Bay area. Leila shared a historical perspective, noting the expectation from years ago was to conduct traditionally focused programs but then as times changed, "it was a lot easier to do focus groups and find out where the needs were and be able to develop the programs to target those particular needs. And it was kind of obvious that the needs on the east [rural] side were different from the west [urban] side."

The differences in clientele needs led Sophia to "tailor" her programs to fit each audience. An example was provided by Heidi, who explained, "For me, its youth programs that are not solely animal-based. So, bringing in projects that interest, and that kids in the city can do."

Agent expertise. To a lesser extent, the need for unique agent expertise was expressed. The Tampa Bay area already has a regional urban sustainability agent, a unique position within UF/IFAS Extension, as well as an urban forestry agent. Additionally, interest in hiring new agents with expertise in city planning, job creation, business development, and engineering was expressed. Sarah described how the lack of space available to run commercial agricultural operations created a significant need for expertise in landscape maintenance. While heavily urbanized counties might have less of a need for a traditional production agriculture agent, there is an increasing demand for agents with expertise in small-scale farms, the cottage food industry, and backyard poultry.

Program Strategies

Almost every agent interviewed answered the question, "What do you think of when you hear the term 'urban Extension' or think of Extension working in a metropolitan area?" Agents were asked to describe aspects of how he or she approached programming, which makes sense given the relationship between attitudes, beliefs, and behavior theorized by Ajzen (2012). Consistent with the philosophical views described by agents, operational program strategies ranged from traditional to highly innovative.

Convenient. The need to make Extension convenient in urban areas was prevalent in the data. Agents in the Tampa Bay area continue to conduct "traditional face-to-face classes" (Cynthia), but some are held away from the Extension office at places like libraries. Mia explained, "We have bricks and mortar, but that's not necessarily where we offer the programs because when you're in an urban office, you have to go to the people." Potential clientele are deterred by the perceived distance to the office from their residence; Erica felt clientele "think we're all light years away—that it's far too far for them to drive." Yet Erica also admitted, "Honestly, I love it when we can teach a class here because I can get 100 people in our conference center and teach them in one hour. If I go to other places in the county, I may have 20 or 30 people and then I also have travel time. So I understand people's concerns about driving a distance." Transportation and accessibility barriers were identified, with Betty noting the county office was "not really accessible to a lot of the clientele that is considered an urban audience" due to a lack of convenient public transportation options, such as a bus route. The idea of opening an Extension satellite office in a "heavily urbanized area" (Owen) had been discussed by one county, with the concept that Extension could have "a little store with a lot of information where people could go in and we could be right in the urban area where maybe it's a Wi-Fi hotspot where people could come in with their coffee" (Owen). Although the concept began as a joke, that office eventually came to see "how it really might make sense" (Owen). Such an idea would integrate traditional face-to-face delivery with an innovative location; a hybrid between old and new strategies.

Partnerships. Providing education to the highly populated Tampa Bay area was described as a challenge by Alexis: "You know we have close to a million people in my county and I'm one person. So it's like how do we reach, we're still one person whether we're reaching 3,000 people or 3 million." Forming partnerships was a strategy used to address the challenge. Agents referenced working with local contacts such as food banks, churches, and Boys and Girls Clubs. Another agent partnered with a large university in Tampa to host educational films. Working in this manner allows Extension to "leverage their presence and to get more visibility for the value of Extension overall" (Kristin).

Filling the gaps. Related to the idea of developing partnerships was a strategy for Extension agents to fill the gaps rather than compete with other service providers. The idea that Extension should be "establishing themselves as a niche provider of services for which there might be a gap" (Kristin) resonated with multiple participants. Tracy described finding the niche as "tweaking the program for the space that's available" so as not to overlap with other youth service providers. However, Owen described the tension of working in a pluralistic Extension system, sharing, "People talk about it in terms of almost, as if we're in competition with [other service providers]." The difficulty of filling the gaps was articulated by Mia: "We are very rich in resources so trying to kind of carve out a niche for Extension and what we offer can be a big challenge in an urban area."

Urban disconnect. The challenge for Extension to have a clear identity within the urban setting is compounded by the existence of an urban disconnect. Most urban residents lack awareness of Extension as a resource. Alexis expressed the frustration of being able to easily reach the "choir people" (as in "preaching to the choir") but not being able to attract other residents for whom "the information is relevant and important." Partly, this was attributed to the tendency for urban populations to obtain "more information from share groups and online sources" (Cynthia), which was noted as a condition impacting Extension's programming and relevancy.

The extent to which urban populations can be disconnected from Extension was highlighted in an anecdote shared by an agent: "A lot of the people we were talking to and coming into our classes just don't know what Extension is. I had somebody in a class at a library the other day. I mentioned Extension, but I didn't give the full elevator speech telling them exactly what it was in that particular case because I had a lot of material to cover. And she came up to me afterwards and said, 'I always hear of Extension, but I didn't know what it was and I thought it was some kind of secret society or clique or something like that'" (Bill).

As a result, that agent now always dedicates time to explaining Extension to new clientele as a strategy for combatting the urban disconnect. Ironically, other strategies designed to increase Extension's visibility in the Tampa Bay area were noted to further confuse urban clientele. Working with partnerships and teaching at off-site locations caused "the whole branding thing [to get] lost" (Mia). Mia felt, "People really just don't know and can't get a grasp on Extension."

Discussion

The primary purpose of this study was to explore metropolitan Extension agents' views of the concept of urban Extension. An important question inherent within that purpose was to establish whether agents even believed urban Extension was a unique concept within the broader spectrum of Extension. The majority of agents within the Tampa Bay area identified unique aspects they associated with the concept of urban Extension, supporting the importance of local, state, and national efforts to examine how best to carry out the Extension mission in metropolitan areas.

Concern has sometimes been expressed about differentiating Extension based on geographic location of programming and audiences. Even within this small-scale qualitative study, an agent questioned the appropriateness of an "urban versus rural" approach. Consideration of this concern should focus on the unique aspects identified by the agents, which were context, clientele needs, and agent expertise. None of the agents suggested the *mission* of Extension was—or should be—different in an urban area. There is only one mission for Extension, regardless of where Extension is working.

Acknowledging the viewpoints expressed by the interviewed agents as legitimate is critical—even those viewpoints which are in the minority. The agents in this study worked in counties that were all recognized as part of the Tampa Bay area, but Pinellas County is still different from Hillsborough and Pasco Counties. Pinellas is completely built out, and there is no section of the county which could be considered rural. In contrast, Pasco County is rapidly urbanizing but still retains a rural character on its eastern side. Hillsborough County is similar. As a result, it is possible agents in urbanizing counties experience different social pressures than their colleagues in completely urbanized counties. Further, addressing the challenge of delivering quality programming in two different contexts is likely to impact what an agent perceives as possible. Both of these factors are likely to influence attitudes toward urban Extension and related behaviors (Ajzen, 2012). Strong Extension leadership is needed to guide urbanizing counties in a manner that will provide crucial support to agents, facilitate open dialogue with traditional stakeholders, and lead to the development of new relationships with incoming residents.

Additionally, Extension leadership should carefully consider which behaviors are most likely to lead to the successful application of the Extension mission within urban areas and then work with agents to develop an organizational culture that values those behaviors. UF/IFAS Extension has made significant progress in this regard with the 2015 Strategic Plan for Extension in Metropolitan Areas. The strategic plan notes the need for professional development for "urban competencies." While the plan does not specifically identify which competencies qualify as "urban," both the plan and the data from this study emphasize the importance of partnerships and cooperating with other service providers to expand Extension's reach within the highly populated metropolitan areas. Developing and sustaining partnerships and other behaviors identified as desirable should be backstopped at the administrative level by linking their implementation to appraisal and rewards (Burke & Litwin, 1992) and proactively seeking applicants with experience building partnerships when screening for new hires within the Tampa Bay area.

A note of caution should be inserted when discussing the expansion of partnerships. Several agents addressed actively working with partners to deliver programming, which is certainly an effective strategy for reaching more and/or different audiences. Yet as identified in the findings, becoming a partner can come at the expense of establishing Extension's unique identity within the pluralistic Extension landscape of a major metropolitan area. Extension has had a persistent

problem branding itself (DeBord, 2007). Some insight into the nature of this problem is offered by this study; Extension has such incredible access to a wide variety of research-based knowledge that this study's agents tended to find ways to the fill the gaps rather than to claim an area of expertise and out-compete other service providers. Based on the authors' experience, agent turnover only exacerbates the problem as new agents usually do things differently than their predecessors. As a result, Extension ends up lacking any clear identity, and the majority of the urban population remains disconnected from the organization.

A 2004 case study of marketing UF/IFAS Extension conducted by Alberts, Wirth, Gilmore, Jones, and McWaters (2004) concluded

> The public's awareness of IFAS/Extension and their belief that the information found there is the best information they can obtain at the lowest cost is key to Extension's success in the future…The threat to IFAS/Extension comes in its inability to identify those programs that are key to its success and retaining the proper staff to promote those programs. IFAS/Extension also needs to be aware of those areas where the private sector or other organizations are duplicating their efforts. ("IFAS/Extension's Current Situation," para. 4)

It is striking how much of what Alberts et al. (2004) wrote remains relevant more than a decade later and accurately outlines the experiences shared by the agents in this study. The lack of awareness within the urban population, the cost to clientele in terms of a lack of convenient options for accessing information, and potential duplication of efforts were all identified as challenges for agents working within the Tampa Bay area, yet an argument can easily be made that overcoming a legacy as the *best kept secret* is a challenge for Extension nationwide. Alberts et al.'s (2004) suggestion to identify programs that are "key to its success" ("IFAS/Extension's Current Situation," para. 4) and to make staffing decisions accordingly bears repeating as it resonates as a viable and necessary approach for improving Extension's visibility; however, restricting agents' freedom to build their own programs is counter to what many Extension agents see as attractive about Extension careers (Arnold & Place, 2010). Extension organizations seeking to increase their visibility within urbanized areas could most practically implement Alberts et al.'s (2004) solution by aligning open positions with key programs (not simply broad program areas) rather than mandating existing agents to adopt state-promoted programs.

Although this study focused on one metropolitan area, the themes and subthemes identified add to the national conversation about urban Extension by providing a snapshot of the views of a cross-section of Extension agents. This cross-section included agents who were enthusiastic about urban Extension—several Tampa Bay agents served on the committee that developed the urban Extension strategic plan—as well as those who were more conservative in their views.

Most metropolitan areas are likely to be staffed with individuals who fall along similar spectrums; making a concerted effort to hear all voices will lead to better outcomes for agents and the organization. Other state Extension systems are encouraged to conduct similar studies with their metropolitan-area agents as they craft their own plans for moving urban Extension forward.

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Involving Extension in Urban Food Systems: An Example from California

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Nationwide, Extension is increasingly involved in local food system work. In cities, initiatives to improve the local food system often include urban agriculture, which has attracted the attention of diverse stakeholders for its many potential social, health, economic, and environmental impacts. This article illustrates how Extension in the San Francisco Bay Area is developing urban agriculture programming and engaging in food-system-related partnerships. It also shares lessons learned from these efforts. In this metropolitan region, Extension practice aligns well with research findings on Extension involvement in local food systems, particularly with the emphasis on providing educational opportunities and resources adapted to unique needs of city residents and working collaboratively with community and government partners to facilitate broader food system change. The results of this case study will be useful for Extension personnel in designing and implementing programs related to urban food systems.

Keywords: urban agriculture, partnerships, social capital, food justice

Introduction

Long taken for granted, urban food systems have become a focal point for city residents, municipal governments, and other stakeholders because of their contributions to the local economy, environmental conditions, public health, and the quality of city life (Pothukuchi & Kaufman, 1999). Alongside this interest in improving urban food systems, cities across the United States have experienced an increase in farmers' markets (Low et al., 2015); home, school, and community gardens (National Gardening Association, 2014); and urban farms (Rogus & Dimitri, 2015). Associated policy initiatives have sought to facilitate agriculture within urban boundaries and increase access to healthy foods for underserved city residents (Low et al., 2015).

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State and local Extension programs have responded to these opportunities by engaging urban residents through food and agriculture-based projects (Fox et al., 2015; Meadows, 2013; Ohri-Vachaspati, Masi, Taggart, Konen, & Kerrigan, 2009). Although Extension has a history of engagement with food production in the city through initiatives such as the Master Gardener Program and the Urban Gardening Program (Reynolds 2011), the current interest in urban food systems represents, for many, a new area of Extension programming and practice (Clark et al., 2016). In a nationwide survey of Extension personnel involved in urban agriculture, 44% of respondents reported they had begun working in this area within the last five years; only 5% reported urban agriculture was their primary responsibility (Diekmann et al., 2016). In addition to county-based Extension programs, regional and national networks devoted to these issues are also emerging. For instance, since 2013, eXtension—an online platform for Extension resource sharing—has had a Community of Practice dedicated to community, local, and regional food systems with more than 400 members, representing all 50 states.

The role Extension plays in urban agriculture depends, in part, on how urban agriculture is defined. As Reynolds (2011) has illustrated, which audiences are targeted and which services are offered depend on how Extension determines what constitutes urban agriculture. Hodgson (2011) offered a broad definition, writing that urban agriculture "entails the production of food for personal consumption, education, donation, or sale and includes associated physical and organizational infrastructure, policies, and programs within urban and suburban environments" (p. 1). Because this definition also incorporates the infrastructure, organizations, and policies that support urban agriculture, it is well suited to urban Extension, which often engages with this supportive structure as well as producers (Diekmann et al., 2016).

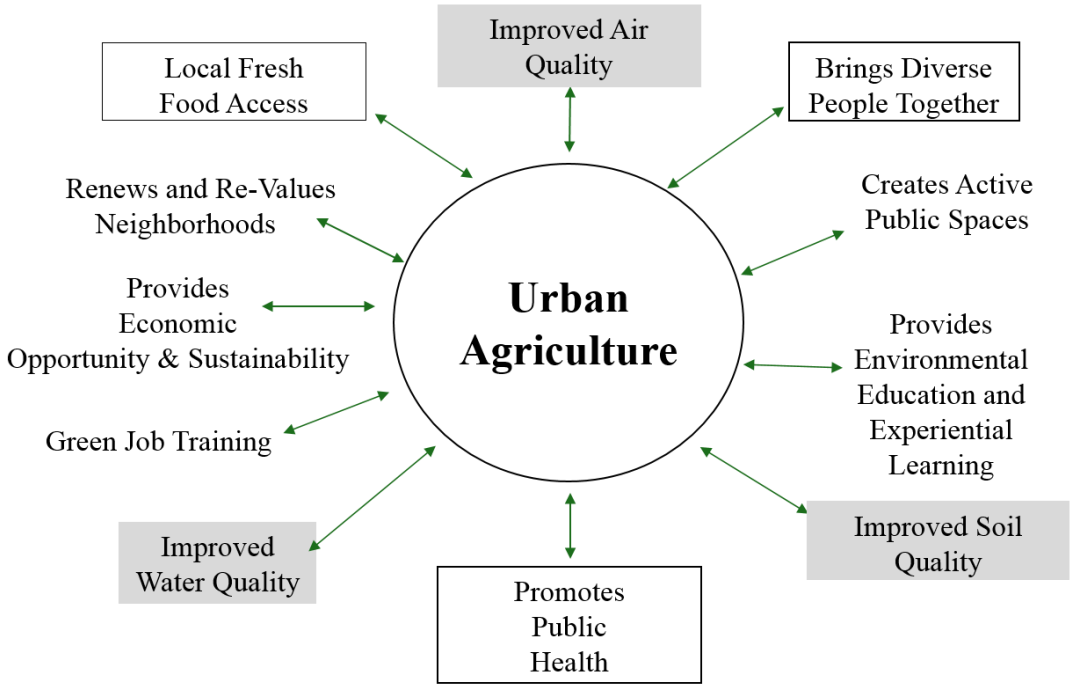
Urban agriculture has emerged as a promising way to address complex urban issues (Daftary-Steel, Herrera, & Porter, 2015), and along with other local food system work, it is a new and evolving area of Extension practice (Clark et al., 2016). This article identifies opportunities and challenges in Extension's urban food work and explores new programs and new roles for Extension through a case study of Extension urban agriculture programs in the San Francisco Bay Area.

Benefits and Challenges of Urban Agriculture

Much of the interest in projects intended to improve the urban food system stems from their multifaceted impacts, including community building, raising awareness of food and agriculture, and improving access to healthy foods (Fox et al., 2015; Lelekacs et al., 2016). Similarly, urban agriculture's popularity stems from its many potential benefits for the individual, community, and city as a whole (Daftary-Steel et al., 2015). Urban agriculture can contribute to physical activity and mental health (Armstrong, 2000), consumption of fresh produce (Algert, Diekmann, Gray, & Renvall, 2016), community building (Glover, Parry, & Shinew, 2005), civic

engagement (Saldivar-Tanaka & Krasny, 2004), urban green space (Lovell, 2010), urban environmental sustainability (Brown & Carter, 2003), and education and job training (Vitiello & Wolf-Powers, 2014) (see Figure 1). Although urban agriculture alone cannot solve all these problems, it is an important component of "building socially, economically and ecologically sustainable, healthy, and food secure" cities (Daftary-Steel et al., 2015, p. 27; McClintock, 2014).

Figure 1. Depiction of Urban Agriculture's Potential Environmental, Social, and Economic Impacts



(Source: Adapted from R. Bennaton)

Urban agriculture also faces various challenges that stem from its urban setting and the demands of meeting multiple social and educational goals. These challenges include difficulty accessing land, plots that are frequently small and fragmented, soil contamination, and insecure land tenure (Opitz, Berges, Piorr, & Krikser, 2016; Reynolds 2011). Zoning and other regulations often pose obstacles as many cities limited agriculture within their borders during the 20th century (Vitiello & Brinkley, 2014), and steps must be taken to ensure urban agriculture is seen as a compatible land use rather than a nuisance, especially for local animal husbandry. In addition, urban agriculture operators may lack access to capital and the necessary infrastructure for marketing and processing the food they produce (Rogus & Dimitri, 2015). As Daftary-Steel et al. (2015) have argued, urban agriculture also struggles with the expectation that it will be financially sustainable through the sale of agricultural products while also meeting ambitious social goals. Expanding Extension services and support for urban agriculture is one strategy for overcoming the challenges that urban agriculture faces (Brown & Carter, 2003; Reynolds, 2011).

Framing Extension's Involvement in Urban Food Systems

Recent literature on Extension's involvement in local food systems provides a framework for considering the opportunities and challenges for Extension as it embraces urban food systems and urban agriculture. Several authors have suggested that Extension is uniquely positioned to play an important role in local food systems because of its long-standing relationships with local communities, its programs that span the food system, and the research-based expertise and resources it provides (Clark et al., 2016; Colasanti, Wright, & Reau, 2009; Dunning et al., 2012). At the same time, growing interest in local food systems presents an opportunity for Extension to engage new and nontraditional audiences, creating new partnerships that expand Extension's organizational reach (Colasanti et al., 2009). Clark et al.'s (2016) assessment of Extension educators' roles in local food systems confirmed these assertions. They found educators were focused on the inclusion of marginalized producers and consumers, and their strategies for changing the food system centered on providing resources to build local infrastructure and capacity as well as facilitating connections between food system actors.

The literature on local food systems also challenges Extension to adapt or expand its work in four areas: research and Extension programs, the role of Extension, target audiences, and underlying theory of change.

Research and Extension programs. The Extension system already has the capacity to address many of the needs of urban food systems and urban agriculture clientele (Oberholtzer, Dimitri, & Pressman, 2014; Reynolds, 2011). Yet assessments of urban agriculture have revealed that urban agriculture actors have some unique informational needs that necessitate additional research and programming to address topics such as city zoning, urban soil quality, and the design of community urban agriculture projects (Brown & Carter, 2003; Oberholtzer et al., 2014; Reynolds, 2011; Surls et al., 2015). Often urban agriculture has social goals, so there is a growing need for social science research (Surls et al., 2015). In particular, applying a social justice lens to work with urban agriculture clients is important because so many urban agriculture groups aim to address social inequities manifested in the food system and the urban landscape (Reynolds, 2011; Surls et al., 2015). Participatory action research in which researchers and stakeholders collaborate throughout the research process generating information that can be the basis for taking action is a useful but underutilized tool in this setting (Bacon, Mendez, & Brown, 2005; Campbell, Carlisle-Cummins, & Feenstra, 2013; Surls et al., 2015).

The role of Extension. Raison (2010) and others (Colasanti et al., 2009; Dunning et al., 2012; Reynolds, 2011) have suggested that in local food systems work, Extension educators need to combine the traditional role of educator with that of facilitator. In this framing, educators deliver research-based information while facilitators engage in collaborative approaches to solving community-identified problems by acting as resource coordinators and network facilitators.

Target audiences. With growing interest in urban food systems, many nontraditional Extension stakeholders (Colasanti et al., 2009) may now be served by Extension. Research has shown urban agriculture operations are diverse in their participants, goals, and need for information and support (Drake & Lawson, 2015; Reynolds, 2011). Food justice and food access are important urban agricultural concerns and a reminder that Extension must prioritize working with stakeholders of all racial and ethnic backgrounds, income levels, and ages (Reynolds, 2011).

Underlying theory of change. Dunning et al. (2012) suggested that reshaping the local or regional food system requires a systems approach to problem solving. Adopting a systems approach has organizational implications for Extension. First, coordinating Extension personnel across programs necessitates adopting a more integrated approach to local food systems and urban agriculture (Lelekacs et al., 2016; Raison, 2010; Reynolds, 2011). Second, because existing measures of evaluation might not be appropriate for evaluating food systems change (Dunning et al., 2012), new methods for assessing Extension impact in this area are also needed.

As Extension personnel engage in efforts to strengthen local and regional food systems, the expectations for their work are expanding. As a result, Lelekacs et al. (2016) noted new training is needed "to provide educators with knowledge about food systems research, as well as tools and guidance about working across disciplinary lines, facilitating community engagement, and addressing social dimensions of local food systems" (p. 2). The National Urban Extension Leaders (NUEL, 2015) have made a similar set of observations. As Extension extends beyond its traditional expertise and programming, staff will need to expand their skill sets to include cultural competence, working in interdisciplinary teams, and convening stakeholder groups.

Extension's Approach to Urban Agriculture in California

In California, a key step toward developing county-level staff positions and programs devoted to urban agriculture has been coordinated attention given to the issue at the state level. Like other Extension systems that have identified healthy, local, or sustainable food systems as a priority (e.g., Lelekacs et al., 2016; Raison, 2010), the University of California Cooperative Extension (UCCE) has made sustainable food systems a strategic initiative (University of California Division of Agriculture and Natural Resources [UCANR], 2009). Research and Extension to support locally and regionally based food systems across the rural-urban continuum falls within this broad and cross-cutting initiative (SFS Advisory Panel, 2010). Concurrent with the growing interest in local food among urban residents, various forms of urban agriculture—such as farmers' markets, community gardens, and backyard chickens—have become increasingly popular in California's metropolitan areas from San Diego to Sacramento (Meadows, 2013; Surls et al., 2015). Although UCCE has generally adapted programming to meet the needs of urban and suburban as well as rural communities (Hayden-Smith & Surls, 2014), a study found services and resources for urban agriculture often fell between the cracks in the system (Reynolds, 2011).

Historically, the staffing structure and organization of UCCE has focused on two poles of the food production spectrum. On one pole, advisors and specialists, organized by crop or geographic region, conducted research and Extension targeted toward commercial agricultural operations. On the other, the Master Gardener Program handled noncommercial, small home, school, and community gardening education (UCANR, 2009). UCCE staff were still tapped for assistance by urban growers even though they did not constitute a "core clientele group" (Surls et al., 2015), but in-person support was often challenging because not all populous urban counties had farm advisors (Reynolds, 2011).

To better understand and meet the needs of urban agriculture clientele, the University of California Division of Agriculture and Natural Resources[1] (UCANR) formed a 15-member Urban Agriculture Team in 2012. In the first phase of its work, this team undertook a needs assessment to determine UCANR's existing urban agriculture activities, understand barriers to engaging UA clientele, and identify resource needs (Surls et al., 2015). Results indicated UCANR staff involvement in urban agriculture was high, and most survey respondents considered urban agriculture relevant to the UCANR mission, but they were hindered by lack of time, funds, and relevant research-based materials (Surls et al., 2015). Urban producers and policy makers reported a need for comprehensive, reliable online resources and identified key areas for support such as pest and water management, marketing opportunities for urban farmers, and best practices for urban agriculture policy. The assessment also revealed several subgroups among potential urban agriculture clientele, indicating that future content and programs should be sensitive to the diverse needs of beginning farmers, established farms, and policy makers. The study found, similar to traditional Extension practice, online materials needed to be supplemented by other outreach such as farm visits and workshops and that materials must be available in multiple languages. Because of the social aspects of many urban agriculture operations, Surls et al. (2015) recommended future Extension work with urban agriculture clientele embrace a social justice lens and engage in collaborative social science research.

Current Statewide Urban Agriculture Extension Framework

Currently California's urban agriculture Extension work occurs along two fronts: a statewide information portal and county-level positions focused on various aspects of the urban food system. Following the completion of the statewide urban agriculture needs assessment, UCANR developed a website (http://ucanr.edu/sites/UrbanAg) "to provide practical, science-based information for urban agriculture" (Kan-Rice, 2014, para. 1). The website is designed to help urban farmers achieve both their production and policy goals, with a focus on beginning farmers and land access.

[1] UCCE is part of the University of California Division of Agriculture and Natural Resources, which is responsible for agricultural and environmental research and education.

As of early 2017, UCCE had five full-time personnel with some portion of their FTE dedicated to supporting urban agriculture; most have been hired within the last four years. There are three Extension advisors: one urban agriculture advisor covering the Bay Area, one food systems advisor covering the North Bay, and one sustainable food systems advisor for Los Angeles. Santa Clara County has an urban agriculture program manager. In addition, an assistant Extension specialist in metropolitan agriculture and food systems has a statewide scope and provides assistance to urban agriculture projects, particularly in stakeholder engagement and participatory research approaches.

Instead of acting as a regional expert in one particular subject, urban agriculture Extension staff are thematically focused and connect farmers to university experts in various fields depending on the need. Currently, urban agriculture efforts within UCCE attempt to integrate multiple statewide Extension programs within a unified framework. The diverse goals and impacts of many urban gardens and farms (Reynolds, 2011; Surls et al., 2015) present an opportunity for UCCE programs that focus on technical support for horticultural production, post-harvest handling, and natural resource management (e.g., Master Gardener, Master Food Preserver, Integrated Pest Management, and Small Farm Programs) to collaborate with programs focused on nutrition, leadership, and youth and community development (e.g., EFNEP, CalFresh, and 4-H Youth Development Programs). Modes of collaboration include sharing human resources between programs for joint workshops and classes; assistance with outreach to target populations; and finding opportunities for partnership on project design, research, and funding requests.

The current statewide distribution of urban agriculture staff results from several interacting factors: (a) centers of major population; (b) municipalities that are close to implementing Urban Agriculture Incentive Zones, a recent state policy intended to increase access to urban land for agricultural purposes; and (c) regions able to arrange shared funding partnerships with local counties. For example, in Santa Clara County, adoption of Urban Agriculture Incentive Zones has intensified interest in urban agriculture and crystallized county funding for a UCCE urban agriculture program manager position. The Extension staffing support structure for urban agriculture has developed from the bottom up, as local conditions propel UCCE offices in various counties to propose new Extension positions to support urban agriculture.

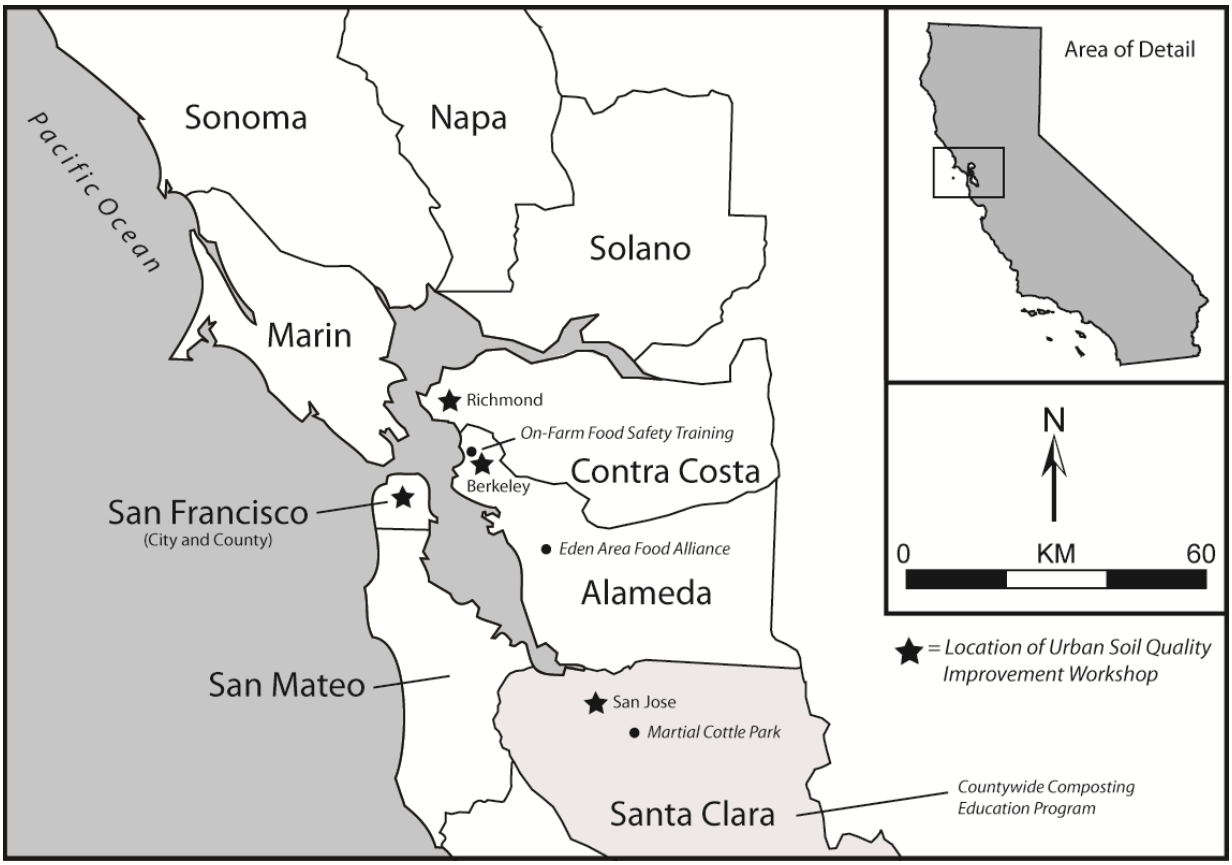
Case Study: Urban Agriculture in the San Francisco Bay Area

Study Context

The nine-county San Francisco Bay Area covers 7,000 square miles and includes more than 100 cities (see Figure 2). It is the fourth most populous metropolitan area in the United States with 7.6 million residents (Metropolitan Transportation Commission [MTC], 2016). Nearly one-third

of the region's inhabitants reside in its three largest cities–San Jose, Oakland, and San Francisco. As one of the nation's most diverse metropolitan regions (PolicyLink & PERE, 2015), the Bay Area has a population in which people of color make up the majority. International immigrants make up 30% of the population, and 40% of Bay Area residents speak a language other than English at home (California Immigrant Policy Center, 2014). The Bay Area is a region with many assets: a diverse population, a robust and innovative economy, and a history of environmental protection. It has also been at the forefront of the movement for fresh, local, and organic foods for decades.

Figure 2. Map of the San Francisco Bay Area Showing the Location of Extension Programs and Partnerships Described in the Article



Note: Not represented on the map are the Master Gardener and 4-H Programs which are present in each of the nine Bay Area counties.

High land values present a challenge for the region's producers and consumers of food. For low-income households, the high cost of housing can leave fewer resources to spend on food and other goods (Taylor, 2015). Despite the strength of the regional economy, 10% of adults are food insecure, and 6% receive food stamps (Zigas & Becker, 2015). While the Bay Area retains a rich agricultural resource base, much of the region's agricultural land has already been lost to development; more is at risk of being converted for development during the next 30 years. The

high value of land at the urban edge makes it difficult for beginning farmers to find land and places significant development pressure on existing farmers (Zigas & Dominguez, 2013). Despite such challenges, agriculture in the Bay Area stands to benefit from its proximity to urban customers and the regional demand for local, sustainable food (Unger & Lyddan, 2011).

Recent city, county, and state policies intended to strengthen urban agriculture have been an added impetus for UCCE work in this region. At the city level, San Francisco, Oakland, and San Jose have adopted ordinances to facilitate urban agriculture. At the state level, legislators have taken steps to increase access to land by passing the Urban Agriculture Incentive Zone Act, which provides a tax incentive to landowners who commit vacant land to urban agriculture for at least five years. Cities and counties may choose to participate in this program but are not required to do so. To date, the city and county of San Francisco, the city and county of Sacramento, Santa Clara County, the city of San Jose, the city of San Diego, and Los Angeles County have established Urban Agriculture Incentive Zones. In 2014, Santa Clara County voters passed a bond measure that established a regional funding source for urban agriculture and other environmental priorities. The first round of funding, awarded in November 2016, totaled just over $1.5 million, roughly half of which went to urban agriculture-related projects.

Methods

This article employs a qualitative case study approach to describe Extension urban agriculture programs in the Bay Area. The study draws on the experience of three of the co-authors in developing and implementing urban agriculture programing. These co-authors serve as an urban agriculture advisor, an urban agriculture program manager, and an Extension educator. The case study is bounded by the five Bay Area counties—Alameda, Contra Costa, Santa Clara, San Mateo, and San Francisco—the mentioned positions cover and excludes counties in the North Bay. The description of these efforts focused on two themes: expanding programs and research and the important role of partnerships.

Urban Agriculture Extension and Research

Programmatically, Bay Area UCCE personnel support and lead traditional Extension programs that touch on different aspects of the food system and are tailored to the urban context. They are also developing new programs that address urban-agriculture-specific needs, such as urban produce gleaning and urban soil quality. Through these programs and the outreach provided by program volunteers, UCCE in the Bay Area reaches an increasingly large and diverse urban audience. A few such programs are described below.

Tailoring Existing Agricultural and Volunteer Programs

On-farm food safety. On-farm food safety is a concern for both rural and urban growers and is an area where existing materials for rural growers can be adapted to urban settings. Heavy-metal-safe food growing (discussed below) is a uniquely urban food safety concern. In the Bay Area, the UCCE metropolitan agriculture specialist and the urban agriculture advisor offer on-farm food safety training to urban growers and plan to work with Master Gardeners to offer food safety workshops to noncommercial growers. Covering Good Agricultural Practices, key food safety risks, and the development of food safety plans, these workshops teach small and urban farmers to assess and minimize food safety risks on their farms. Follow-up technical assistance to support development of on-farm food safety plans is available upon request.

Volunteer programs. The Master Gardener Program is a critical component of the UCCE approach to urban agriculture Extension. Master Gardener volunteers are at the "front lines" of providing technical horticultural information to home gardeners, schools, community gardens, and community organizations. In the 2015-16 program year, approximately 300 Master Gardener volunteers in Santa Clara County provided more than 30,000 hours of no- or low-cost educational outreach and support for projects to improve home gardening. Master Gardener volunteers engage in multiple forms of extension and outreach, including demonstration gardens; workshops, classes, and seminars; peer-to-peer mentoring; gardening hotlines; events; websites; Facebook; and a YouTube channel. Master Gardeners often partner with schools and community organizations that focus on improving food access in low-income communities. In Santa Clara County, the Master Gardener Program's mentoring partnership with food justice program, La Mesa Verde, has provided bilingual gardening training to more than 500 food-insecure families.

Running the Master Gardener Program requires a significant commitment of staff and volunteer time. In Santa Clara County, four UCCE staff devote a portion of their time to training, managing, and recruiting Master Gardeners. They are supported by 12 to 24 temporary instructors, frequently UCCE farm advisors or specialists, who provide technical training to continuing and prospective Master Gardeners periodically throughout the year. Master Gardener volunteers are also actively involved in these functions; it is estimated that they spent more than 500 hours recruiting the 2017 Master Gardener training class.

Well known in rural areas, the 4-H program is increasingly embraced by families in urban areas as a means for city youth to participate in the food system as producers rather than consumers (Wallace, 2011). Through 4-H, urban youth are connected to curriculum and volunteer mentors to set up and maintain diversified vegetable gardens, high density orchards, backyard poultry, and animal husbandry projects (Clark, 2015; UCANR, n.d.). Support from UCCE staff and new partnership models are helping adapt the 4-H model to an urban context.

Creating New Programs

Urban soil quality improvement series for urban growers. One aspect of urban farming that differs from rural farming is concern over soil contamination. In urban settings, lead and other heavy metals from industry, dumping, and adjacent residences, and air-borne contaminants pose health risks (Surls, Borel, & Biscaro, 2016). To address these issues, the Bay Area Urban Agriculture Advisor offers a three-part workshop series on soil quality. The advisor is also beginning to work with East Bay Master Gardeners to train instructors to offer these workshops for community members. Workshops provide attendees with the tools to assess urban growing soils and manage risk in backyard, community, and school gardens and urban farms. The first workshop focuses on physical, chemical, and biological indicators of soil quality. Participants learn to field-assess their soils and improve soil quality. In the second workshop, participants increase their understanding of sampling soils, mapping samples, and interpreting sample results to prevent exposure and manage risk. The final workshop integrates assessments of soil quality with strategies for improving soil quality over the long term with minimal chemical inputs.

Research and Resources

Adapting Extension research for urban agriculture involves incorporating the needs of culturally diverse constituencies (Brown & Carter, 2003), collaborating with community partners (Reynolds, 2011; Surls et al., 2015), and employing social science approaches (Surls et al., 2015). In the Bay Area, Extension personnel developed a method for measuring garden productivity (Algert, Baameur, & Renvall, 2014) and used this method in partnership with community organizations to assess the impacts of home and community gardens in the South Bay on food supply, affordability, and nutrition (Algert, Baameur, Diekmann, Gray, & Ortiz, 2016; Algert, Diekmann, et al., 2016). This research has been a valuable tool for community building work and policy advocacy. Many individuals and organizations outside Extension are involved in urban agriculture activities or in developing policies, programs, and infrastructure to support urban agriculture, but they may not have time or resources to conduct research. Extension personnel can design comparative studies across organizations and localities to identify common challenges and successful strategies for urban agriculture (Campbell et al., 2013).

In addition to the statewide urban agriculture resources offered on the UCANR website, UCCE personnel in the Bay Area have provided locally-tailored urban agriculture tools. As a member of the Oakland Food Policy Council, the Bay Area Urban Agriculture Advisor was a lead author of *Cultivating Resistance: An Urban Agriculture Toolkit to Support Oakland's Independent Food System* (Pallana, Dekovic, & Bennaton, 2015)—a practical guide for Oakland residents interested in growing or selling raw agricultural products that outlines relevant municipal, county, state, and federal regulations; provides suggestions for accessing land; and identifies resources for starting a small food business.

Partnerships and Networks

Developing partnerships is an important aspect of the role that Extension personnel play as facilitators and network coordinators (Raison, 2010). Partnerships help Extension extend its reach in the community and amplify its impact, particularly in a time of shrinking budgets. Building and maintaining social networks is valuable for Extension because these networks play an important role in the diffusion of innovations, the development of social capital, and cultural change (Lubell & Fulton, 2008). In the Bay Area, Extension urban agriculture personnel are involved in several key partnerships and participate in multi-stakeholder groups aimed at strengthening the food system and addressing food insecurity.

Composting Education Program

Santa Clara County's Composting Education Program is a unique Extension program because of its partnership with the County Board of Supervisor's Recycling and Waste Reduction Commission. Unlike other urban Extension programs, the Composting Education Program receives programmatic directives from the voting members of the Commission's Technical Advisory Committee. Through workshops, events, and school visits, the Composting Education Program targets clientele that align with the mission of the Recycling and Waste Reduction Commission. Combining home composting methods with municipal scale curbside collection information, the Composting Education Program serves as a comprehensive resource for recycling organic waste. As recycling trends shift toward diversion of organics and new statewide initiatives take hold, the Composting Education Program brings attention to state mandated soil health and waste reduction initiatives.

The UCANR partnership with the County Recycling and Waste Reduction Commission provides a new model for how Extension programs are provided to urban communities. Through direct engagement with municipal decision making processes, the Composting Education Program has the ability to respond dynamically to the changing needs of urban clientele. The responsiveness of the Composting Education Program is particularly significant given the continually shifting demographics and economic status of urban residents. The Composting Education Program also acts as a direct connection between city recycling programs and other urban agriculture Extension programs.

Martial Cottle Park, Santa Clara County

The flagship urban agriculture partnership for Extension in Santa Clara County takes place at Martial Cottle Park. This park is a 287-acre tract of land located in a mixed residential and commercial neighborhood in south San Jose. A working ranch for 150 years, the land for the park was transferred to the County of Santa Clara by the last living owner, Walter Cottle Lester,

with instructions that the space be dedicated "exclusively as a public historical park that informs and educates the public about the agricultural heritage of the Santa Clara Valley" (Regents of the University of California & Santa Clara County, 2015, p. 1).

The county of Santa Clara has begun implementing this vision of the park as a bridge between the agricultural past and present for city residents through strategic partnerships with UCCE and others. The public/private partnership model employed by the county engages government agencies, for-profit commercial enterprises, and nonprofit organizations in stewardship of various sections of the parcel. The largest section of the park is leased to a commercial farm that produces organic vegetables for sale in grocery stores and at an on-site farm stand. The City of San Jose and the county of Santa Clara are working to establish a community garden onsite; UCCE and an urban forestry nonprofit will provide technical support and training to the gardeners.

In 2015, the role of UCCE at Martial Cottle Park was formalized through a Memorandum of Understanding between the Regents of the University of California on behalf of Santa Clara County Cooperative Extension and the County of Santa Clara (Regents of the University of California & Santa Clara County, 2015). UCCE received stewardship of 16 acres. The park's agricultural education mission fit well with UCCE programs, and the co-location of several UCCE programs also offered new opportunities for shared programming and outreach.

All UCCE programs at Martial Cottle Park engage in or have planned several types of Extension: demonstration sites with planned bilingual interpretive signage; multilingual training, classes, and workshops; and one-on-one mentoring. The location of UCCE near paths and adjacent neighborhoods provides access to urban audiences and offers great potential for experiential learning. Currently, all planned projects include a demonstration site where hands-on trainings are or will be held.

- Master Gardeners provide short classes and workshops on home gardening; seedling production; adaptability of vegetable cultivars for Santa Clara Valley home gardens; and drought-tolerant landscapes, habitat gardens, and California native plantings. Recent funding from the Santa Clara County Open Space Authority will finance the construction of a teaching pavilion that will enable the Master Gardener Program to expand community classes and its partnership with La Mesa Verde to mentor low-income San Jose residents in growing their own food. The program is also poised to collaborate with the UCCE nutrition education programs on garden-based learning in low-income schools in San Jose.
- The Composting Education Program provides training and demonstration to farmers and gardeners in the establishment, maintenance, and use of a compost site for livestock bedding and waste, residential waste, and agricultural waste at small and medium scales.

- The 4-H Youth Development Program maintains a small acreage livestock farm adjacent to a park path that garners significant public attention. The project trains and mentors youth to raise small ruminants while educating the public through interpretive signage about sustainable livestock management and ranching practices.
- The Small Farms Program is planning a beginning farmer training at the park that will offer courses on the cultivation, harvest, and marketing of specialty crops. Four acres of vegetable crops will also be tended by participating farmers. Courses will engage diverse community members with socioeconomically and culturally appropriate outreach and content. Although not designed exclusively for urban farmers, by the nature of the location, lessons will be adaptable for urban growers.

Food System Networks

Food policy councils and food system alliances bring together diverse food system stakeholders to address issues of local concern. Typically, they make recommendations on food policy to city, county, and state governments; raise residents' awareness of the food system; encourage connections and communication among various food system actors; and undertake food system projects and research (Clancy, Hammer, & Lippoldt, 2007). For Extension and others, participating in networks helps to build connections between people and produces results at a greater scale than a single individual or organization could alone (Wenger, McDermott, & Synder, 2002). In the Bay Area, UCCE urban agriculture personnel participate in several city and county networks aimed at changing food policy, preserving local agriculture, and improving healthy food access.

The Eden Area Food Alliance is one such network. It serves Ashland and Cherryland, two unincorporated urban communities in Alameda County, and has focused on land access for urban agriculture and healthy food access (McKnight, 2015). Resident-driven, the Alliance responds to community members' needs and interests as well as new policy opportunities. In response to the passage of the state Urban Agriculture Incentive Zone Act, the Eden Area Food Alliance surveyed vacant land in the community to determine its potential for urban agriculture and possible inclusion under the new law. Current initiatives are focused on food recovery, with participating Extension personnel able to make connections between the Food Alliance and UCANR resources. Currently, a sister organization, WE Run Food, is in the early stages of coordinating with the local Public Health Department and a statewide Extension specialist on developing county-specific food safety protocols for food recovery and gleaning groups. Both groups are also involved in a collaboration with UCANR and the Geospatial Innovation Facility at UC Berkeley to map front yards that have underutilized fruit trees for future gleaning efforts.

Lessons Learned

Bay Area Extension personnel have learned a number of lessons through their urban agriculture-related work; these takeaways can be potential considerations for other Extension urban agriculture programs.

Adopt a Context-Specific Approach to Urban Agriculture

The needs and goals of urban agriculture operations are very diverse, even within a single metropolitan region. It is important to begin urban agriculture work by determining what future clientele are trying to achieve and what resources they need and then tailoring Extension support accordingly. In one Bay Area county, Reynolds (2011) identified four distinct models of urban agriculture, each with its own purpose, challenges, and needs for information and assistance. Drake and Lawson (2015) reminded Extension that community gardens are "as diverse as their locations," (para. 22) with different goals and organizational structures that will affect how advice and best practices are received and implemented.

Partnerships Are Key for Magnifying Impact and Maximizing Limited Resources

In Santa Clara County in particular, partnerships with the county have been essential for developing urban agriculture programming. Similarly, partnerships have been an important piece of Extension's work in urban food systems elsewhere (e.g., Fox et al., 2015). By working in partnership with nonprofit organizations, local government, and others, Extension can magnify the impact of existing programs and leverage available resources. Involvement might also deepen relationships with multiple stakeholders and offer new opportunities to learn about key issues within various communities in the region.

Do Not Underestimate the Importance of Extension's Role as a Network Coordinator

In addition to providing technical content, an important contribution of Extension urban agriculture work is helping urban farmers build a social network. Urban farmers often have little formal farming experience and may lack a network on which to rely for advice (Oberholtzer et al., 2014). Social capital can be critical to the success of urban agriculture (Glover et al., 2005), but it develops slowly over time through repeated interactions (Lubell & Fulton, 2008). Drawing on their strategic position in the local community, with connections to people and organizations that span the food system (Dunning et al., 2012), Extension staff can help newcomers to urban agriculture build a social network, which may be integral to their success.

More Institutional Support for Integrated Programming Is Needed

Although urban agriculture personnel are tasked with connecting Extension programs that span the food systems, this can be difficult, and receptiveness varies from county to county. Despite similar goals, existing programs often remain compartmentalized (Clark et al., 2016). More administrative guidance could assist with the coordination of existing Extension programs to jointly address urban food system or urban agriculture issues. In addition, Extension personnel's urban agriculture efforts may be fragmented because of their other responsibilities. More staff time or more positions devoted to urban agriculture are still needed and can help to fully realize the potential of this area of work.

Elevate Social Science and Social Justice Research

Urban agriculture is closely associated with social outcomes (Surls et al., 2015), and many urban agriculture organizations in the Bay Area and elsewhere apply a social equity lens to their work. In this context, research that is action-oriented and responsive to community priorities is a key part of the relationship between Extension and urban communities. To effectively engage with many urban agriculture organizations, it is important for Extension to prioritize collaborations that can address participants' concerns with community building and social justice (Reynolds, 2011; Surls et al., 2015). Extension has an opportunity to expand its role in advancing the just sustainability (Alkon & Agyeman, 2011) of urban communities through action-oriented partnerships.

Summary

In the Bay Area, UCCE's urban agriculture program has arisen organically through a combination of factors, such as increasing interest from residents and the availability of new funding partnerships to support urban agriculture-related positions. These new county-based UCCE urban agriculture staff positions are also supported at the state level by UCANR's Urban Agriculture Team, which includes an Extension Specialist in metropolitan agriculture, and UCANR's urban agriculture website. As suggested by Raison (2010), UCCE personnel working in urban food systems are taking on dual roles: as educators who offer an expanding set of programs and as facilitators who participate in partnerships and networks.

Both in theory and in practice, Extension urban food system work aligns with the National Urban Extension Leaders' vision for urban Extension (NUEL, 2015). Through educational programs, research, partnerships, and networks, Extension personnel in the Bay Area strive to develop inclusive, interdisciplinary partnerships and collaborate with local partners on community-based initiatives.

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Community-Based Green Infrastructure, A Rutgers Cooperative Extension Urban Extension Initiative

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A successful urban Cooperative Extension (Extension) program has been developed by the Rutgers Cooperative Extension Water Resources Program around green infrastructure in New Jersey. The program has gained the trust of the regulators at the New Jersey Department of Environmental Protection, the U.S. Environmental Protection Agency, the nonprofit community, state groups, elected officials, and consultants. This paper discusses the development process of an urban Extension program to work with communities to address their combined sewer overflow issues, including educational programs, partnerships, and funding. Additionally, the paper discusses the implementation of the program in Camden City, New Jersey, and the impacts associated with the program's implementation. Finally, the paper provides a vision for regional collaboration among Land-Grant Universities around green infrastructure.

Keywords: combined sewer overflow (CSO), municipal action team, stormwater runoff, community engagement, partnership development

Introduction

New Jersey is the most densely populated state in the nation with 1,196 persons per square mile (U.S. Census Bureau, 2010). New Jersey is 8,723 square miles in size, and of that, 7,354 square miles are land, and 1,369 square miles are water. According to Nowak and Greenfield (2012), 12.1% of the land in New Jersey is covered with impervious surfaces, which is 1,055 square miles of impervious cover or 675,200 acres. These impervious surfaces prevent rainfall from infiltrating into the ground to replenish the state's aquifers. During a one-inch rainfall event, 18.3 billion gallons of stormwater drains from these surfaces, which is enough water to fill up the New York Giants' stadium 38 times. Limited infiltration of rainwater results in reduced base flow to the local streams that rely on groundwater during the dry summer months. Many of these impervious surfaces are directly connected to our local waterways, meaning that every drop of rain that lands on these surfaces drains directly to a stream, river, lake, or bay. Pollutants accumulate on these impervious surfaces and are washed directly into New Jersey's waterways during storm events. There are 19,704.5 miles of rivers and streams in New Jersey. Of the 96.3% of river and stream miles assessed in New Jersey (18,974.2 miles), 90% are impaired. A total of 5,198.3 miles of rivers and streams are impaired by fecal coliform bacteria, 4,808.7 miles

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by polychlorinated biphenyls (PCBs), and 4,782.3 miles by total phosphorus. Urban-related runoff or stormwater is listed as the probable source of impairment for the 13,690.6 miles of threatened or impaired rivers and streams in New Jersey (U.S. Environmental Protection Agency [USEPA], 2012).

For the 21 communities in New Jersey that rely on combined sewers for stormwater and wastewater management, the picture is much grimmer. These are the very urban centers of the state and have an average impervious cover of 55%. When it rains in these communities, the aged infrastructure of the combined sewer systems often cannot handle the runoff volumes. This results in combined sewer overflows (CSOs) of a slurry of human sewerage and stormwater to local waterways, streets, and basements of the community which creates environmental problems and human health issues for the residents of these CSO communities.

Green infrastructure is one solution to help remediate these problems and issues. Green infrastructure can be used to disconnect some of these impervious surfaces and reduce the impacts of urban-related runoff to water resources. It is an approach to stormwater management that is cost-effective, sustainable, and environmentally friendly (USEPA, 2016). Green infrastructure projects capture, filter, absorb, and reuse stormwater to help restore the natural hydrologic cycle. Major cities across the country have been forced to embrace green infrastructure to comply with USEPA requirements. The USEPA is responsible for enforcing the Clean Water Act to address CSO issues throughout the country.

Communities with CSO systems struggle to better manage the systems, reduce overflows, and upgrade failing infrastructure. The financial investment needed for these "gray infrastructure" upgrades is tremendous. New and larger systems of pipes, catch basins, and treatment facilities are extremely costly. By including green infrastructure in a combined green/gray infrastructure approach, significant cost savings can be achieved. Cohen, Field, Tafuri, and Ports (2012) found the potential cost savings could reach $35 million by using a green/gray combined alternative over a gray-only option in the Turkey Creek Basin of Kansas City, Missouri. Implementation of these strategies has been shown to be just as, if not more, effective at reducing CSO events as gray infrastructure while remaining cost effective. A study of the CSO system in Toledo, Ohio, used a lifecycle assessment to confirm the lower costs of green infrastructure when implementing rainwater harvesting systems (Tavakol-Davani, Burian, Devkota, & Apul, 2016). Green infrastructure was found to be both functional and cost effective. Additional benefits noted were aesthetic value in the case of rain gardens and the use of nonpotable water for watering gardens and flushing toilets in the case of rainwater harvesting.

Green infrastructure is not just applicable in CSO communities, but it can also be applied in municipal separate storm sewer system (MS4) communities to reduce localized flooding. Many green infrastructure practices such as porous pavement and permeable pavers have been shown

to be effective at both capturing runoff and reducing the concentration of pollutants in any runoff they produce (Gilbert & Clausen, 2006). Green infrastructure strategies can also be implemented to capture runoff in brownfields. Brownfields are sites that are abandoned or underutilized and have the potential to be converted into green spaces to provide recreational services, habitat, and climate change mitigation (Mathey, Rößler, Banse, Lehmann, & Bräuer, 2015).

The adoption of green infrastructure can be driven by environmental nonprofit groups (Azadi, Ho, Hafni, Zarafshani, & Witlox, 2011). By involving the public in the incorporation of community green infrastructure, the green infrastructure can provide more than stormwater management and serve as open green space that can benefit residents. Public involvement early in the process also gives the community a sense of ownership that will help sustain the green space that is created (Erickson, 2006). The most successful green infrastructure elements are those where there has been an effort to engage the community (Forest Research, 2010). Many of the green infrastructure programs throughout the nation not only provide funding to improve neighborhood environmental conditions but also provide opportunities to specifically empower disadvantaged communities (Heckert & Rosan, 2016). The long-term success of green infrastructure requires meaningful local buy-in (Lovell & Taylor, 2013; Mittman, Gilliland, Rossman, & Newport, 2014).

This article will discuss the development process of an urban Extension program to work with communities to address their CSO issues, including educational programs, partnerships, and funding. Additionally, the article discusses the implementation of the program in Camden City, New Jersey, and the impacts associated with the program's implementation. The article provides a vision for regional collaboration among Land-Grant Universities around green infrastructure.

Program Development

Based upon work across the nation, it was apparent the green infrastructure movement was in full force everywhere except New Jersey. In both Philadelphia and New York City, an estimated $2.4 billion was being spent on green infrastructure (Philadelphia Water Department, 2011; New York State Department of Environmental Conservation, 2012). The cities where green infrastructure was becoming popular had one thing in common: they were required under an administrative consent order with the USEPA to address their CSO issues in part with green infrastructure. In New Jersey, none of the 21 cities with CSOs had an administrative consent order from the USEPA; all efforts to reduce CSOs were voluntary. If a green infrastructure movement was to begin in New Jersey, it would have to be community-driven and community-based.

Three components were needed to develop a community-based green infrastructure initiative. The initiative would require a strong educational component. While raw sewage overflowing

into local waterways, streets, and basements seems like a basic concept to understand, most of the urban residents did not know that the water they were wading through in the streets was a slurry of human waste and stormwater runoff. The first hurdle was increasing awareness within the community about CSOs and the health concerns associated with CSOs.

The second issue was involving the community in meaningful engagement to begin working collectively to eliminate the health risks associated with CSOs. This required converting a high level of concern to activism with community groups advocating for the elimination of CSOs through the implementation of green infrastructure. Community leaders from across the urban landscape would need to clearly recognize the importance of eliminating CSOs and be willing to dedicate their social and political capital to advocate for green infrastructure and a healthier city.

Demonstrating concern about the problem and advocating for its solution falls short of accomplishing the goal of eliminating CSOs and their health impacts. The community needed technical support on which to base their advocacy. The ability to reference reliable, trusted sources of information strengthens the ability of advocates to sway the naysayers and encourage the believers to move more quickly. Technical support is also needed to help communities implement green infrastructure demonstration projects that can serve as examples of what can be achieved in the highly urbanized environment.

While engaging the community was believed to be crucially important, other groups had to be convinced that green infrastructure was a viable option for managing stormwater runoff in CSO communities. Municipal officials, environmental commissioners, and public works directors needed to be educated. The final group in need of education was the municipal engineers. Many of the engineers were set in their ways and had always looked to gray infrastructure as a solution to stormwater and sewage problems.

Municipal Action Teams

In 2009, the Rutgers Cooperative Extension (RCE) Water Resources Program secured funding from the New Jersey Department of Environmental Protection to implement a stormwater education program in Newark that focused on promoting source controls to reduce stormwater runoff from entering the city's combined sewer system. This project laid the foundation for obtaining a grant from the Camden County Municipal Utilities Authority (CCMUA) to begin a green infrastructure initiative in Camden City. While the RCE Water Resources Program had some success in Newark working with several of the local community organizations, it became clear that a larger city-wide partnership would need to be formed if real progress was going to be made in New Jersey's CSO communities.

The CCMUA's Executive Director clearly understood the importance of addressing the CSO issue and the role green infrastructure could play, but the local community groups were still

unaware of the significance of the problem. The Executive Director arranged several meetings of community leaders and local residents where the RCE Water Resources Program personnel discussed green infrastructure opportunities in the community. These meetings created a level of openness among RCE, the CCMUA, and local community groups, leading to the beginning of trusting relationships needed to move a green infrastructure initiative forward in Camden City.

These meetings brought about the formation of a municipal action team established to bring together local government, utility authorities, and community organizations. This team was designed to foster community engagement and serve as an advocate for green infrastructure in the community. Together, the team members worked to set an agenda for a community-based green infrastructure initiative. The goal of the action team was to foster collaboration and collective action to help the municipality speak with a common voice to achieve a common goal. Members of the municipal action team worked together to define the need and opportunities for green infrastructure, educate residents and community leaders, and leverage funding to design and implement demonstration projects. With a variety of organizations, a range of funding opportunities could be pursued by multiple team members to increase the community's sense of ownership and move a municipality collectively toward adopting a green infrastructure program. This work would help communities protect water quality and improve residents' quality of life.

Camden SMART (Stormwater Management and Resource Training) was the first municipal action team formed in New Jersey. It consisted of six partners: CCMUA, Coopers Ferry Partnership (a local nonprofit organization), New Jersey Tree Foundation (a statewide, nonprofit organization committed to planting trees in Camden City), the City of Camden, the New Jersey Department of Environmental Protection Office of Brownfield Reuse, and the RCE Water Resources Program. Other local community groups were engaged in the Camden SMART initiative as needed for specific projects or events. While Camden SMART met monthly to strategize how to advocate for green infrastructure in Camden City, the RCE Water Resources Program developed a green infrastructure feasibility study for the city that identified 40 sites where green infrastructure could be applied throughout the 20 neighborhoods in Camden City. As the feasibility study was being completed, demonstration projects were constructed throughout the city. The installation of demonstration projects, such as rain gardens and cisterns, helped gain community support and strengthened relationships among Camden SMART partners and the community.

Educational Programs

The municipal action teams not only gave the community an avenue for meaningful engagement but also provided a platform to conduct educational programs. During the development of the feasibility study for Camden City, five community meetings were held throughout the city to obtain input from residents and community leaders. These meetings provided the RCE Water

Resources Program with an opportunity to educate the local community on the issues associated with CSOs and how green infrastructure can be used to not only address CSO issues but also add neighborhood green space. The residents and local community leaders provided firsthand accounts of where flooding occurs and where green infrastructure could be placed.

Build-a-Rain Barrel workshops were also held early in the process to encourage residents to install rain barrels. The Center for Environmental Transformation, a local nonprofit group in Camden City, partnered on many of these workshops. Camden SMART documented the number of barrels distributed and installed. Other educational programs included green infrastructure maintenance training for local organizations that were later hired by the CCMUA to help maintain the rain gardens that were installed throughout Camden City. Green infrastructure design and planning workshops were offered for design professionals like landscape architects and engineers. An annual Camden SMART forum provided an opportunity for the city to celebrate their successes and share their green infrastructure efforts with the rest of New Jersey.

Technical Support for Green Infrastructure Planning, Design, and Implementation

Professional staff of the RCE Water Resources Program provided technical support to Camden SMART. The design professionals of the RCE Water Resources Program identify potential sites for green infrastructure. Engineers and landscape architects work closely together to design green infrastructure practices that can be used to retrofit existing development to capture, treat, and infiltrate stormwater runoff before it enters the combined sewer system. The design process has three components. The first is to develop a concept plan of the green infrastructure practice that shows the location of the proposed practice and often includes an artistic rendering of the practice. The rendering is typically used to entice the landowner to allow the practice to be installed on their property. The next component is to complete a preliminary design based on engineering calculations. The last component is the final construction plan that includes the design details for building the practice.

The RCE Water Resources Program completed the green infrastructure designs and helped oversee the construction of the designs. To construct the designs, the RCE Water Resources Program helped identify a contractor and worked with local project partners, such as the municipality's department of public works, to build the project. Undergraduate students from Rutgers University were involved in the process, from identifying potential sites for green infrastructure to designing practices to working with local volunteers to build the projects. Each project that was constructed showcased green infrastructure and encouraged others to build similar projects. These demonstration projects were used by city officials as examples for new construction or redevelopment projects and served as examples to other CSO communities.

Partnerships

As seen in initial efforts in Newark, New Jersey, effective partnerships are the key to success for implementing green infrastructure. In Newark, the projects that moved from concept plans to construction were those that had a local champion who worked with the RCE Water Resources Program to implement the project. The RCE Water Resources Program provided the technical support while other partners contributed in a different fashion. Since the project partners are embedded in the community, their local contacts were instrumental in gaining access to potential project sites, and their trust among the community helped encourage early adopters to move forward with green infrastructure projects. Other project partners provided direct funding, such as the CCMUA and New Jersey Department of Environmental Protection. The nonprofit project partners tended to have access to sources of funding (e.g., private foundation funding) that is not typically available to Rutgers Cooperative Extension, CCMUA, or New Jersey Department of Environmental Protection. Together, the partners leveraged their resources to achieve the collective goal of green infrastructure implementation for the elimination of CSOs.

Funding

In 2010, the first year of a six-year annual contract, the CCMUA provided the RCE Water Resources Program funding to begin the green infrastructure effort in Camden City. In all, the CCMUA has provided more than $430,000 to the RCE Water Resources Program with some of this funding being passed through to Camden SMART partners for their green infrastructure efforts in Camden City. Two years after the start of the Camden City green infrastructure initiative, the New Jersey Department of Environmental Protection awarded the RCE Water Resources Program $300,000 to implement green infrastructure practices in Camden City. A year later, they awarded an additional $40,000 to RCE to develop a community-based green infrastructure maintenance program.

The success of the green infrastructure work in Camden City allowed the CCMUA to apply for low interest loans from the New Jersey Environmental Infrastructure Trust. To encourage the implementation of green infrastructure projects in CSO communities, the state offered 50% principal forgiveness on New Jersey Environmental Infrastructure Trust loans for green infrastructure projects. Camden City has taken advantage of this program for each of the last three years, and the RCE Water Resources Program prepared the green infrastructure designs for the New Jersey Environmental Infrastructure Trust applications. The success of the green infrastructure program has also attracted the attention of private foundations. The Surdna Foundation has provided the RCE Water Resources Program with $770,000 to expand the program beyond Camden City into other CSO communities throughout New Jersey. These private foundation funds allow for flexibility in programming typically not provided with state and federal funds and provide additional opportunities for leveraging funding resources. Table 1

illustrates the funding that has been secured for the Community-Based Green Infrastructure Program. In addition to these funds, the RCE Water Resources Program helped four CSO communities apply for more than $7.4 million in New Jersey Environmental Infrastructure Trust loans that have 50% principal forgiveness.

Table 1. RCE Water Resources Program Funding for the Community-Based Green Infrastructure Program, July 2009–December 2016

Date	Funder (CSO City)	Amount
7/09-6/13	NJDEP (Newark)[a]	$200,000
7/10-present	CCMUA (Camden)	$430,898
3/12-2/15	NJDEP (Camden)	$340,000
7/12-6/16	NJDEP (Newark)	$320,000
3/13-present	Passaic Valley Sewerage Authority[b]	$508,908
4/14-present	Surdna Foundation[c]	$770,000
5/15-present	NJDEP (Perth Amboy)	$489,156
1/16-present	NJDEP (Paterson)	$500,000
	TOTAL	**$3,558,962**

Note: (a) NJDEP is the acronym for New Jersey Department of Environmental Protection; (b) Passaic Valley Sewerage Commission has 48 municipalities in its sewer service area, eight of which are CSO communities; funds were to complete green infrastructure feasibility studies for all the 48 communities, both CSO and MS4 municipalities; (c) Surdna Foundation funding was provided to expand CSO efforts into all 21 CSO municipalities in New Jersey.

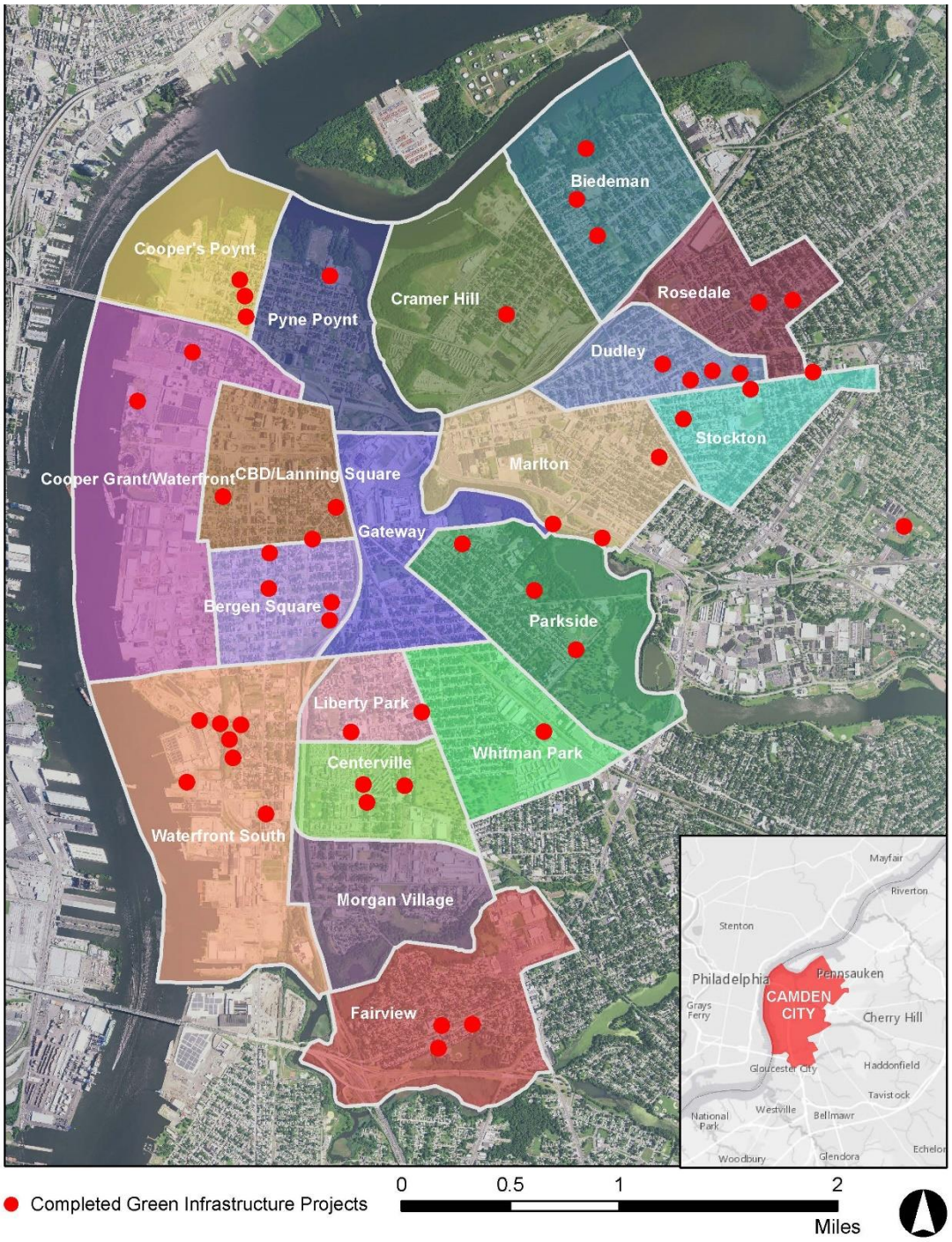
Impacts

Since 2010 in Camden City, 49 green infrastructure projects have been completed (see Figure 1), 1,458 trees planted, 223 rain barrels distributed, 4,000 residents engaged, more than 40 partnerships created, and more than 61 million gallons of stormwater captured (Camden SMART Initiative, 2017). More than $5 million were invested in Camden City from 2011 to 2016. Similar green infrastructure initiatives have been launched in Newark, Perth Amboy, Paterson, Jersey City, Trenton, and Gloucester City. Municipal action teams have been formed, and the impacts in these cities are beginning to be realized as well.

While there is potential for other impacts (e.g., economic, health, and social), these impacts have yet to be quantified. By reducing the occurrence of overflows into basements, streets, and parks of the neighborhoods, the health risks from exposure to pathogens are expected to decrease. Additionally, most of the green infrastructure systems incorporate vegetation which can help improve air quality as well as sequester carbon to help combat climate change. Green infrastructure construction in Camden City has also resulted in the creation of pocket parks, social spaces that reconnect neighbors (Cassidy, Newell, & Wolch, 2008; Newell et al., 2013).

Local workers are also hired to maintain the green infrastructure systems, and at times, to help build the practices, which can be viewed as job training and job creation. Additional research will be needed to document these impacts.

Figure 1. Completed Projects in Camden City as Part of the Community-Based Green Infrastructure Program



Regional Collaboration

Land-Grant Universities, working in collaboration, can help urban communities in the Northeast address stormwater issues. Rutgers, Penn State, University of New Hampshire, University of Rhode Island, University of Vermont, and University of Connecticut are all engaged with many local communities in their states to provide education on green infrastructure strategies for stormwater management. These universities also provide various levels of technical support to the communities. Furthermore, these universities are conducting research on the effectiveness of green infrastructure practices and their impacts on a watershed scale. Working collaboratively and sharing program ideas and research knowledge across state lines enables communities in the Northeast to enhance their ability to deal with stormwater management issues. A critical obstacle to overcome with green infrastructure is not the technology and the maintenance issues themselves but the human dimension involved with community decision making. A survey conducted in New Jersey indicated that, while many communities are not averse to installing green infrastructure, these communities had not taken advantage of grant programs to help them move forward with installation (Rowe, Rector, & Bakacs, 2016). Often, new technologies, such as green infrastructure, can take years to implement as the adoption of new technologies lags behind their actual development. Land-Grant Universities can play a key role in establishing the relationships needed to maximize all benefits associated with green infrastructure, and through research, provide sound science to decision makers considering green infrastructure applications.

Conclusions

The RCE Water Resources Program identified the health and water quality impacts of CSOs as an emerging issue in New Jersey. A community-based green infrastructure program was developed to address this issue. The ability of RCE to engage the local community and build robust partnerships has helped this program become a great success. The program has measurable impacts and has received funding from local and state sources. Additionally, private foundations have seen value in the program and have provided financial support. This community-based green infrastructure initiative is an example of a successful urban Extension program that can serve as a model for the rest of the country.

While much of the CSO elimination efforts throughout the nation are being driven by administrative consent orders with the USEPA, this program has demonstrated that a community-based program can be effective at implementing green infrastructure practices that can keep stormwater out of the combined sewer system. While Camden City was the example presented in this paper, the same program is being successfully implemented in other cities throughout New Jersey. The Extension model of community engagement that has worked so well through the years with agricultural producers and rural communities has proven equally beneficial in these urban areas and has been shown in this program to have the capacity to generate substantial funding to create and maintain an impactful program for more than seven years.

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Creating Inclusive Youth Programs for LGBTQ+ Communities

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It is vital for youth to experience inclusive programming that is welcoming. Extension has a responsibility and an obligation to provide youth with programs and spaces that are inclusive of all sexes, gender identities, gender expressions, and sexual orientations. This article provides an overview of appropriate terminology, as well as steps for creating inclusive Extension spaces and programs for youth who identify as members of lesbian, gay, bisexual, transgender, or queer/questioning (LGBTQ+) communities. With a focus on urban Extension audiences, this article uses accessible language, self-reflective prompts, and supporting visual aids to share lessons learned from ongoing inclusivity trainings with Extension personnel across the nation, as well as from research activities and inclusive programming.

Keywords: positive youth development, sex, gender identity, gender expression, sexual orientation, 4-H

Introduction

With a particular focus on the needs of youth in urban areas, the purpose of this article is to educate Extension personnel on the basic concepts of gender identity, gender expression, biological sex, and sexual orientation; the meaning of inclusive spaces; and best practices and practical steps for creating inclusive environments. While individuals of all gender identities, gender expressions, sexual orientations, and sexes live in both rural and urban communities, youth who identify as members of LGBTQ+ communities living in urban areas face unique challenges, including high rates of homelessness and hunger (cf. Cunningham et al., 2014), reliance on survival sex and/or other high risk sexual behaviors (cf. Abramovich, 2012; Cunningham et al., 2014), and intersecting cultural identities (cf. Bridges, 2007; Fox & Ore, 201). To promote positive youth development for urban youth of all gender identities, gender expressions, sexes, and sexual orientations, this article combines lessons learned from working with Extension personnel and programs, academic references, and resources used in emerging practices to frame and support these discussions while offering readers an opportunity to compare discussions on these topics that range in detail and complexity.

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Why Should Extension Personnel Read This Article?

One reason why it is important for Extension to create inclusive programs is simply because it is a requirement of our relationships with the federal government. Since Extension programs are recipients of federal funds, Extension personnel and programs are obligated to be inclusive of all protected classes in programming, hiring practices, and work environments. In particular, the U.S. Department of Agriculture (USDA) expects Extension programs to be inclusive for clientele of all sexes, gender expressions, gender identities, and sexual orientations (USDA, 2015).

Beyond the obligation to provide inclusive, nondiscriminatory programs, there is a significant need. It is vital for urban youth who are developing the hard and soft skills necessary for successful transitions to adulthood to experience inclusive programming that is welcoming of all forms of diversity, and Extension has a responsibility to meet this need (Duke, 2014; Johnson, Midkiff, Serrano, & Farris, 2016; Misyak, Ledlie Soder, 2009; USDA, 2015). Many urban youth who identify as members of LGBTQ+ communities are verbally and physically harassed, physically assaulted, and sexually assaulted in schools where they should be safe to learn and develop (GLSEN, 2016b; Gordon, Conron, Calzo, Reisner, & Austin, 2016; Ybarra, Mitchell, Kosciw, & Korchmaros, 2015). Urban youth who identify as members of LGBTQ+ communities are significantly more likely to experience homelessness due to rejection from their families and experience higher rates of depression, anxiety, and stress (Cunningham, Pergamit, Astone, & Luna, 2014; GLSEN, 2016b; Poirier, Fischer, Hunt, & Bearse, 2013). Youth who identify as members of LGBTQ+ communities are the population that is most likely to attempt and die by suicide (Centers for Disease Control and Prevention [CDC], 2014). Given Extension's role in operating 4-H and working with urban youth and families through nutrition and other educational efforts across the country, Extension personnel have the capacity to positively impact the experiences of millions of urban youth, families, personnel, and educators by creating inclusive programming. For 4-H professionals, these efforts are directly related to the foundations of positive youth development, particularly to youth's sense of belonging, caring connections, and physical or emotional safety.

Despite the identified need for inclusive Extension programming, historically, Extension efforts to increase inclusivity for individuals who identify as members of LGBTQ+ communities has been limited (Ingram, 2005; Soder, 2009). Without a basic understanding of the needs and context of these protected classes, Extension personnel are likely to engage inadvertently in practices that have been identified as discriminatory. Prior research has identified the lack of existing Extension resources for personnel seeking to increase the inclusivity of their Extension programs (Soder, 2009) for clientele of diverse sexes, gender expressions, gender identities, and sexual orientations. Although focused on urban youth, this article seeks to help fill the identified gap in Extension resources by providing an accessible and introductory discussion that can benefit all in their efforts to provide inclusive Extension programming.

Understanding the Basic Concepts

In the United States, it is common for people to grow up thinking of gender as a single concept. Most commonly, people think of gender/sex as referring to all people being either a man or a woman. This concept of gender/sex is referred to as the gender binary (cf. Garcia & Slesaransky-Poe, 2010). Additionally, people commonly believe that to whom one is attracted is determined by gender, meaning that women are attracted to men and men are attracted to women. However, in human sciences (in fields ranging from gender studies to sexuality to medicine to psychology), it is commonly accepted that there are four separate components to all people's gender and attraction: (a) gender expression, (b) sex, (c) gender identity, and (d) attraction. As noted above, these are also protected classes, which means the Federal government also recognizes all people have these four separate components. For youth growing up in urban areas, these concepts are becoming increasingly more common, with youth culture leading discussions and advocacy for acceptance of all gender expressions, sexes, gender identities, and sexual orientations.

LGBTQ+

First, it may be useful to some readers to explain the LGBTQ+ acronym. "LGBT" refers to individuals who identify as Lesbian, Gay, Bisexual, and Transgender. "Q" often refers to individuals who identify as Queer or Questioning:

- *Queer* is a reclaimed word that was once used predominately as an extremely offensive slur; however, the term is now used by many urban youth who identify as members of LGBTQ+ communities (cf. Jagose, 1996; Rand, 2013). Queer is often used in urban communities as an umbrella term to refer to the entire LGBTQ+ spectrum (cf. Killermann, 2013). Like all labels, it is never appropriate to use the term queer to describe another person unless someone specifically indicates a preference to be described as queer.
- *Questioning* refers to people who are exploring their gender identities, gender expressions, sexual orientations, beliefs, and/or values (cf. Killermann, 2013).

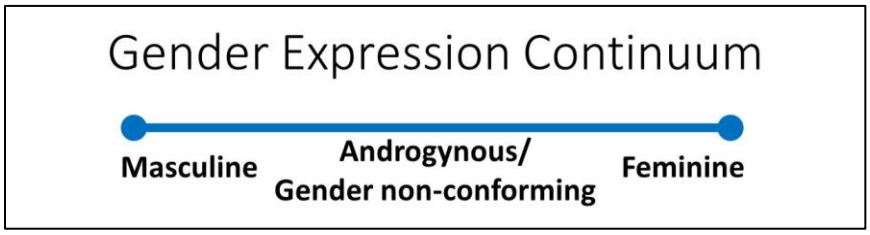
The "+" refers to all other individuals who identify as members of communities that challenge the assumption that all individuals are heterosexual and identify with the male or female sex they were assigned at birth (cf. Killermann, 2013).

Gender Expression

This concept refers to people's presentation of their gender to others, including their dress, grooming, speech, mannerisms, and other factors. Gender expression is often thought of as a

binary in the United States, with a person identified as either masculine or feminine (cf. Dozier, 2005; Garcia & Slesaransky-Poe, 2010; Killermann, 2013); however, thinking of gender expression as a continuum can be a helpful way to consider gender expression as more than two options (see Figure 1).

Figure 1. Gender Expression Continuum



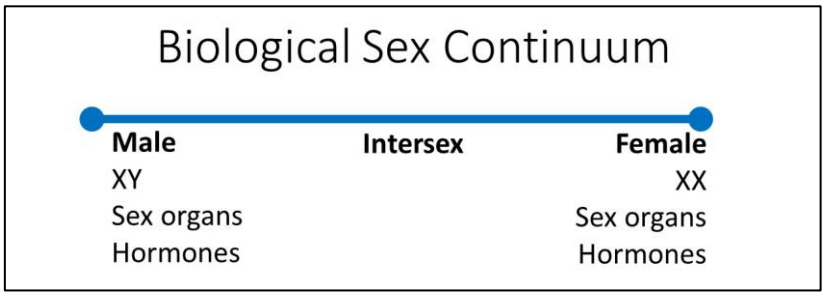
Note: From Soule (2016)

Figure 1 is an example of what the Gender Expression Continuum might look like. On one side is masculine gender expression, and on the other side is feminine gender expression. It is common to consider wearing make-up, high heels, and a dress as expressing femininity, while wearing a suit, loafers, and crew cut as expressing masculinity. Other examples include pink signifying feminine and blue indicating masculine. In the middle, gender non-conforming and androgynous suggest two potential alternatives to the binary (there are many other alternatives as well). Gender non-conforming often refers to expressing both masculine and feminine genders in ways that do not align with societal ideals of what it means to be masculine or feminine. Wearing eye shadow, lipstick, and nail polish, as well as having a full beard, might be an example of gender non-conforming. Androgynous might be thought of as expressing gender ambiguity. Most people move across this continuum, to some extent, on a regular basis. For example, an individual may express more feminine when going out for a nice dinner and may express more masculine when engaging in activities in the outdoors. Gender expression often changes based on one's daily activities and is not the same as one's sex or gender identity.

Sex

Sex, or biological sex, refers to a combination of physiological attributes, including chromosomes, gonads, hormones, sex and reproductive organs, as well as secondary sex characteristics (cf. Carlson, 2016; Killermann, 2013). Most commonly, individuals are assigned to be either male or female at birth. Like gender expression, it can be helpful to reconsider biological sex as a continuum in order to explore biological sex beyond the binary of male and female (see Figure 2).

Figure 2. Biological Sex Continuum



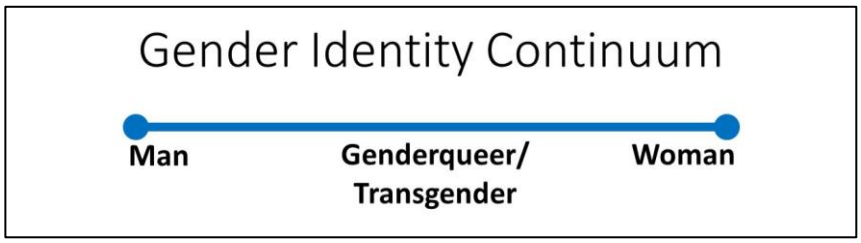
Note: From Soule (2016)

In Figure 2, the biological sex described as male with XY chromosomes, male sex and reproductive organs, and male hormones is on one side of the continuum, and the biological sex described as female with XX chromosomes, female sex and reproductive organs, and female hormones is on the opposite side. People who are *intersex* are born with physiological attributes that include a combination of male and female anatomy, which might include chromosomes, gonads, hormones, or sex and reproductive organs (cf. Balen, Creighton, Davies, MacDougall, & Stanhope, 2004; Vilain, 2016). There are countless ways physiological attributes might vary. For example, an intersex individual might have male-typical anatomy externally while having mostly female-typical anatomy internally.

Gender Identity

Gender identity refers to a person's internal sense of gender. People's gender identities may be different from or the same as the sex they were assigned at birth. There are many ways people identify their gender (see Figure 3).

Figure 3. Gender Identity Continuum



Note: From Soule (2016)

In Figure 3, people who identify as men are on one side of the continuum, and people who identify as women are on the other. Before defining other gender identities, it is helpful to understand the meaning of sex assigned at birth. Sex assigned at birth refers to the sex designation indicated on a newborn's birth certificate, which is generally determined by a medical professional or parent considering only the child's external sex organs.

On the continuum, there are a range of gender identities besides man and woman. Urban youth culture is constantly evolving; however, common gender identities include agender, cisgender, transgender, and gender transition.

- Agender refers to people who identify as genderless (cf. Killermann, 2013).
- Cisgender refers to people whose gender identities are the same as their sex assigned at birth (cf. Killermann, 2013).
- Transgender refers to people whose gender identities are is different than their sex assigned at birth (cf. Killermann, 2013).
    - A transgender male is a person who identifies as male but whose sex assigned at birth was female.
    - A transgender female is a person who identifies as female but whose sex assigned at birth was male.

The concept of gender transition can encompass changes across all three of the continua discussed:

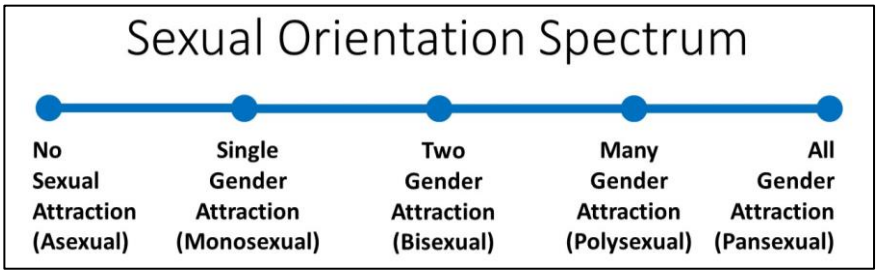
> Gender transition refers to the process in which transgender individuals begin asserting the sex that corresponds to their gender identity instead of the sex they were assigned at birth. During gender transition, individuals begin to live and identify as the sex consistent with their gender identity and may dress differently, adopt a new name, and use pronouns consistent with their gender identity. Transgender individuals may undergo gender transition at any stage of their lives, and gender transition can happen swiftly or over an extended duration of time. (U.S. Department of Justice and U.S. Department of Education, 2016, p. 2)

A gender transition may or may not include changes in one's gender expression, gender identity, and sex.

Sexual Orientation

Sexual orientation refers to whom an individual is attracted, which is generally based on gender identities (cf. Killermann, 2013). To describe the range of possible sexual orientations, a spectrum can be a useful visual tool when considering the multiplicity of sexual orientations (cf. Savin-Williams, 2014). Often, people assume individuals can have one of two sexual orientations, namely being attracted to people of the opposite gender or being attracted to people of the same gender; however, the Sexual Orientation Spectrum shows a range of other possibilities (see Figure 4).

Figure 4. Sexual Orientation Spectrum



Note: From Soule (2016)

The following terms may help explain these possible categories for sexual attraction. A person who is asexual generally identifies as someone who does not experience sexual attraction. Sexual orientation can be broken down into additional concepts, such as sexual attraction and romantic attraction. There are many ways people who identify as asexual can experience romantic attraction (cf. Killermann, 2010).

Here are some commonly accepted explanations for the remainder of these possible sexual orientations:

- Monosexual refers to people who are attracted to others of a single gender, including people who are heterosexual, lesbian, and gay (cf. Brown, Montgomery, & Hammer, 2017).
- A person who is bisexual is a person who is attracted to two genders (most commonly men and women).
- A person who is polysexual is a person who is attracted to a variety of genders (cf. Oswalt, Evans, & Drott, 2016). For example, someone who is attracted to men, women, and transgender women may identify as polysexual.
- A person who is pansexual is a person who is attracted to others regardless of sex, gender identity, gender expression, or sexual orientation (cf. Oswalt et al., 2016).

This section has provided an introductory examination of biological sex, gender identity, gender expression, and sexual orientation as four components of gender and attraction that are separate yet interrelated. All people, whether they identify as members of LGBTQ+ communities or not, have each of these components. Understanding how the concept of gender is more complex than one often realizes provides Extension professionals with a foundation to ensure Extension programs are inclusive for all individuals, regardless of their sex, gender identity, gender expression, or sexual orientation.

Inclusive Extension Programs

The need to create inclusivity for LGBTQ+ communities has been documented in a wide range of fields, from medical environments (cf. Chelvakumar, 2016) to agricultural environments (cf. Blazejewski, 2012), from physical spaces (cf. Gorman-Murray & Jean Nash, 2014) to virtual spaces (cf. Downing, 2013) in a variety of Extension programs (Duke, 2014; Graham, Phelps, & Parsons, 2004; Maurer, 2013; McGuire & Catalpa, 2016; Misyak et al., 2016; Soder, 2009; Soule, 2016). Inclusive programming refers to the necessity for professionals and volunteers to be aware of specific needs of LGBTQ+ communities and to implement best practices to increase the comfort of individuals who identify as members of LGBTQ+ communities. Within the context of urban Extension programs, inclusive programming refers to much more than allowing all individuals to participate. Inclusive programming is consciously designed to

- remove barriers to participation,
- value diversity where individuals benefit from alternative perspectives and experiences,
- allow all clientele and colleagues to actively learn and contribute while feeling free to be themselves, and
- create an atmosphere of respect.

The following section will outline six steps to create inclusive space; however, it might be useful to first consider what inclusive urban Extension programs look like in greater detail. The remainder of this section considers how youth-based Extension programs can promote inclusivity.

Here is an example of what one aspect of an inclusive Extension program looks like. Duke (2014) discussed the need for Extension professionals to consciously and proactively address clientele comments that are prejudicial, stereotyping, discriminatory, or scapegoating in order to prevent "demeaning and marginaliz[ing] our most vulnerable participants" (para. 16). Following this example, in an inclusive urban Extension program that provides nutrition education in classrooms, one might see the following exchange. An Extension educator is teaching high school youth about the relationships between nutrition and financial literacy using the *Hunger Attack!* curriculum (Peterson et al., 2011). During a lesson on eating out, one student explains to the Extension educator: "The amount of money they charge for popcorn at a movie theater is crazy. Seriously, it is so gay. I'd rather use my money to see two movies. Plus it does not even taste good." The educator responds to the student and the class by saying, "It is fine to use the word gay when you are talking about a person who identifies as gay. But is it not acceptable to use the word gay to describe something that you don't like. Thanks for pointing out that popcorn at the movie theater is an expensive snack. Can you tell us what you do eat when you go to the movies?"

Consider another inclusive urban Extension program example. In this scenario, there is a 4-H volunteer leading a Junk Drawer Robotics program (National 4-H Council, 2011) with a team of teen leaders. In a meeting to prepare for the lessons, the presentation team is discussing how to divide the youth into smaller groups. One teen leader suggests splitting the group by asking boys to go to one side of the room and girls to go to the other. The 4-H volunteer leader responds by saying, "You know, there are some youth in our project that may not identify as a boy or a girl. Is there another way we can split the group without leaving some people out?" For more suggestions on ways to respond to marginalizing comments (like the one above) or for lesson plans on addressing marginalizing comments with teens, see GLSEN (2008) in the Resource section.

In both scenarios, the examples of the inclusive urban Extension program involve using language appropriately and addressing marginalizing statements. These examples align with the foundation of the 8 Essential Elements of 4-H Programming (USDA, 2011) framework, which focuses on youth's social, emotional, and physical well-being.

Practical Steps for Inclusion

Activities like inclusivity trainings, policy recommendations, and research demonstrate that individuals involved in Extension programming across the country are looking for practical ways to increase inclusivity for individuals of all sexes, gender identities, gender expressions, and sexual orientations. Many of these individuals are beginning their personal journeys to create welcoming environments, while others have been involved in these efforts for a long time. Most are working at the direct programming level and do not have the authority to establish policies and procedures. Across a range of Extension roles and responsibilities, many are looking for ways to help youth, families, and colleagues feel welcome, safe, and accepted. The following sections outline six practical steps Extension professionals can use in their own programs and work environments. For creating inclusive Extension programs, be open minded, understand current research, know the power of language, focus on behaviors (not identities), advocate for inclusive spaces, and continue to learn. These steps reflect proven and emerging best practices from the Centers for Disease and Prevention Control (CDC, 2014), Georgia Safe Schools Coalition (2017), California Safe Schools Coalition (2017), and GLSEN (2017a), as well as others. While some of their resources are framed for in school use, these best practices are effectively used in many fields and environments (e.g., medical, faith-based, and corporate work).

Step One: Be Open Minded

Being open minded is an essential step in creating inclusive environments that welcome diversity. As an individual are exposed to new ideas and ways of living, it is frequent to find

oneself evaluating new information through one's own value system. Once people notice that they are evaluating information through their own value systems, ways of understanding the world, and biases; it is a great opportunity to suspend one's own understandings and expectations to try to learn something new. Here is a self-assessment to consider awareness of biases. Readers may wish to consider their level of agreement with each of the following statements:

- When I create a presentation or a document with visuals, I consider how different forms of diversity are represented in my work.
- I notice ways my work environment can be more inclusive and advocate for changes.
- I appreciate it when others let me know if I am speaking or behaving in ways that are biased.
- I respectfully let others know when they are speaking or behaving in ways that are biased.
- I make a point of seeking out input from others who I know think differently than I do.

Individuals who feel neutral towards or disagree with most of these questions are likely at the beginning of their journey toward self-awareness of bias. Individuals who agree with most of these statements are already engaged in the practice of observing and reflecting on their own bias. Readers who found this activity useful may want to explore a more in-depth personal assessment, like Project Implicit (2011) or Anti-Defamation League (2007) listed in the resources section.

Wherever one is today, being aware of the need to be open minded and willing to explore one's own biases is the first step in creating inclusive Extension spaces and programs. Being open minded is particularly important when working with urban youth who identify as members of LGBTQ+ communities. It is common for these youth to explore their own identities in detail and to have unique ways of identifying themselves that are unfamiliar to urban adult populations. Likewise, there is often variation in urban youth culture and language by city. In these cases, being open to youth's voices and experiences can build bridges between Extension professionals and the urban youth populations they seek to serve.

Step Two: Understand Current Research

Current research that explores the lives and experiences of youth who identify as members of LGBTQ+ communities paints a stark picture of the challenges many youth face in their daily lives. The Centers for Disease Control and Prevention reported that "LGBTQ youth are at increased risk for suicidal thoughts and behaviors, suicide attempts, and suicide" (CDC, 2014, para. 4). In their examination of more than 5,500 teenagers in four school districts, Gordon et al., (2016) found that students who express gender non-conforming are more likely to be targeted

for bullying and violence. Through an analysis of survey findings from the Teen Health and Technology data set of nearly 6,000 teenaged youth from across the United States, Ybarra et al. (2015) found that suicidal thoughts are "elevated for youth victims of bullying as well as those who are victims of peer harassment. Within sexual identity, the relations between bullying and [suicidal thoughts] is particularly strong for gay, lesbian, and queer youth" (Ybarra et al., 2015, p. 459). The researchers indicate their findings "suggest the importance of a universal prevention strategy in schools that explicitly and actively promotes inclusive cultures and are intolerant of bias-based bullying" (Ybarra et al., 2015, p. 459).

To increase understanding of the experiences of youth who identify as members of LGBTQ+ communities, GLSEN—the Gay, Lesbian, and Straight Educators Network (GLSEN, 2016b)—annually conducts the most comprehensive research on experiences of students who identify as members of LGBTQ+ communities in the country. In their 2015 national survey, GLSEN (2016b) surveyed 10,528 students between the ages of 13–21 who live in all 50 states and the District of Columbia. GLSEN connected with youth serving organizations around the country to obtain a representative national sample of youth who identify as members of LGBTQ+ communities. GLSEN (2016b) determined that "schools nationwide are hostile environments for a distressing number of LGBTQ students, the overwhelming majority of whom routinely hear anti-LGBT language and experienced victimization and discrimination at school" (p. 4).

When comparing experiences of students who identify as members of LGBTQ+ communities, GLSEN found differences in outcomes between students who experienced lower levels of victimization, and students who experience higher levels of victimization who

- are 3x more likely to miss school,
- have higher levels of depression and lower self-esteem,
- have lower grade point averages, and
- are 2x "as likely to report that they did not plan to pursue any post-secondary education" (GLSEN, 2016b, p. 6).

The findings also examine aspects of school environments that can lead to increased sense of safety, school attendance, reduced victimization, and an increased sense of community. These include the presence of a gay–straight alliance, inclusive curriculum that discusses LGBTQ+ history and people in affirming ways, supportive educators, and comprehensive bullying/harassment policies (GLSEN, 2016b).

Understanding current research can help Extension professionals recognize the crucial need for inclusive programming, as well as to be prepared to help youth navigate these challenges. This research shows a compelling need to provide inclusive, nondiscriminatory Extension programs, such as the 4-H Youth Development program, Jr. Master Gardener program, and nutrition

education programs. These programs provide safe, welcoming environments for all youth, including those who identify as members of LGBTQ+ communities because these students may be more likely to lack other opportunities to develop youth-adult partnerships at their schools, with their families, and in their communities. This is true whether youth live in rural or urban communities.

At the same time, the following are considerations specific to urban communities:

- Youth living in urban communities often have access to more LGBTQ+ resources and support. This also means that youth in urban communities are more likely to be having discussions about sex, gender identity, gender expression, and sexual orientation, so adults working with these youth should be informed and prepared to discuss these concepts.
- Many youth who identify as members of LGBTQ+ communities and who grow up in rural communities will move (or run away) to urban areas. Many of these youth—as well as youth who grew up in urban communities—end up homeless. In fact, it is estimated that youth who identify as members of LGBTQ+ communities comprise up to 40% of the homeless youth population (Cunningham et al., 2014).
- Youth who identify as members of LGBTQ+ communities are more likely to engage in survival sex, sex trade, and substance abuse (cf. Abramovich, 2012; Cunningham et al., 2014).
- Youth who identify as members of LGBTQ+ communities are more likely to have romantic relationships than their cisgender and heterosexual peers. Youth who identify as member of LGBTQ+ communities and live in urban communities are more likely to initiate these romantic relationships in person (as opposed to online) than their rural peers.
- Members of LGBTQ+ communities often have unique nutrition needs, ranging from obesity to body dissatisfaction to eating disorders to the impacts of hormone replacement therapy on nutritional health (cf. Bilyk, Wellington, & Kapica, 2013). Additionally, homeless youth living in urban communities are likely to be at higher risk of food poverty.
- Since there tends to be more racial and ethnic diversity in urban communities, it is important to be aware of the cultural differences in social stigmas toward individuals who identify as members of LGBTQ+ communities. While social stigmas are hard for all youth, some cultures are more accepting than others. For more information, see Bridges (2007) and Fox and Ore (2010) in the resources section.

It is vital that youth serving organizations, such as Extension programs, provide inclusive environments that enable youth to obtain the skills and assets necessary to successfully transition to adulthood. Understanding the challenges that youth who identify as members of LGBTQ+

communities face in urban environments can help Extension professionals provide competent programming that meets the needs of these youth.

Step Three: Know the Power of Language

This section provides a simple, introductory exploration of how heterosexism, homophobia, and cisgender privilege power in our society is expressed through language. There are many university courses and academic sources dedicated to exploring the impact and power of language, such as critical discourse analysis or Foucauldian discourse analysis (cf. McHoul & Grace, 2015; Rogers, 2011).

Humans use language to both describe and shape the world. This means humans use language to describe what gender looks like in their particular cultures, and these descriptions of gender then become the social norms and expectations that shape how people dress, behave, and express their genders. Consider an example. In trainings, the author guides participants through an activity from GLSEN's toolkit for educators called "What Are Little Boys and Girls Made Of?" (GLSEN, 2016a). In this activity, participants work together in small groups to explore the following questions: What do we learn growing up about what it means to be a boy? What do we learn growing up about what it means to be a girl? Frequently, participants create lists that look something like Figure 5.

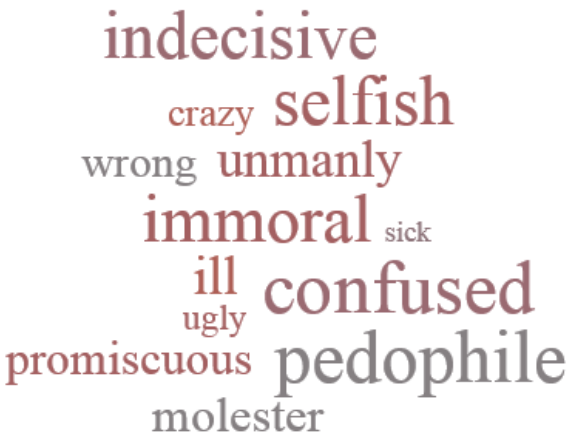
Figure 5. What We Learn About As We Grow Up

Note: From Soule (2016)

Readers are encouraged to consider what other words they would include in these lists. This exercise is not a reflection on what each participant individually believes; rather, the exercise helps participants to consider what youth learn about the ways they are supposed to "perform" their assigned gender by the language around them as they grow up.

Similar to the ways youth learn how to be girls or boys growing up, people also absorb language about individual's whose sex, gender identity, gender expression, and sexual orientation do not align with society's normative expectations. When the author asks training participants, "What does society teaches us about what it means to be gay, lesbian, bisexual, transgender, or intersex?" the lists contain mostly derogatory, hurtful words (see Figure 6).

Figure 6. What We Learn about What it Means to be LGBTQ



Note: From Soule (2016)

Figure 6 highlights the social stigma that society places on individuals who identify as members of LGBTQ+ communities. For youth (and adults) who identify as members of LGBTQ+ communities, hearing and absorbing these words often has negative psychological effect. These psychological impacts may range from increased stress and anxiety to an ongoing sense of threat to one's psychological and/or physical well-being to increased depression. For youth who internalize these social messages, they are likely to experience self-loathing, a sense of isolation from their family, peers, and community, as well as despair (cf. Cunningham et al., 2014; Maurer, 2013). Understanding the impacts of hearing and absorbing such hurtful language can help others understand why youth who identify as members of LGBTQ+ communities are more likely to feel unsafe, to drop out of school, to be homeless, to abuse substances, and to attempt suicide (cf. CDC, 2014; Maurer, 2013). Language (both as a descriptor and a shaper of the social norms) has a significant impact on peoples' psychological and physical well-being, particularly youth who are often still developing their confidence and self-knowing. Understanding the impact of language and using language appropriately is a key factor in creating inclusive programs.

The following are suggestions for how Extension professionals can use language to shape and create inclusive Extension programs:

- Use gender-neutral words and pronouns. For example, instead of saying "boys and girls," say "youth." Instead of using "he" or "she," use "they." Use gender neutral words and pronouns in both speech and written communications.
- Develop inclusive programming and presentation materials. For visuals, be sure to represent a variety of family structures, gender expressions, and races/ethnicities. In stories, examples, and scenarios, include people of all sexes, gender identities, and sexual orientations.
- When talking about interpersonal relationships, use words like "parents," "guardians," "siblings," and "partners" rather than gendered alternatives.
- Always be respectful of the way someone self-identifies. Never label another person or use a label someone does not use to self-identify. This means it is inappropriate to call someone gay unless he has specifically identified as gay.
- Never disclose someone's sex, gender identity, or sexual orientation with others.
- Learn about and use the (appropriate) terms and concepts local youth are using to describe LGBTQ+ identities. Particularly in youth communities, terms change and take on localized meanings, so do not just rely on this article or other resources.
- Do not assume someone is heterosexual or cisgender.
- Remember the differences between sex, gender identity, gender expression, and sexual orientation. Do not make assumptions about someone's sexual orientation based on their sex or gender identity.
- Always put people first. Do not just refer to people by one aspect of their identity. For example, the author writes about "students who identify as members of LGBTQ+ communities" rather than LGBTQ+ students.
- When mistakes happen, apologize, use inclusive language, and try to not make the same mistake in the future.

Step Four: Focus on Behaviors (Not Identities)

As recipients of Federal funds, many Extension programs are already governed by comprehensive nondiscrimination policies that identify sex, gender identity, gender expression, and sexual orientation as protected classes. Comprehensive nondiscrimination policies let youth members, partnering organizations, industries, clientele, and colleagues know that Extension programs welcome all individuals. These policies establish that Extension professionals will respond to all inappropriate and discriminatory behaviors and identify the consequences for engaging in behavior that is discriminatory. It is important to note that comprehensive nondiscrimination focuses on inappropriate behaviors (e.g., teen sex) and/or discriminatory behavior (e.g., segregating a youth member who identifies as intersex) rather than focusing on

people's identities. The role of Extension personnel is to respond to behaviors, rather than to respond to fears about others' identities (e.g., parents concerned about their children interacting with a peer who is bisexual). While these policies are often already in existence, there is significant variation in the way these policies are implemented and enforced around the country. Nonetheless, all Extension personnel can advocate for policies that clearly articulate nondiscrimination for all members of LGBTQ+ communities, particularly in youth-serving programs.

The U.S. Department of Justice and U.S. Department of Education (2016) indicated that, "As is consistently recognized in civil rights cases, the desire to accommodate others' discomfort cannot justify a policy that singles out and disadvantages a particular class of students" (p. 2). Extension programming should provide equal access for people of all sexes, gender identities, gender expressions, and sexual orientations, even if staff, faculty, youth members, adult volunteers, families, other community members, and/or a youth members' own guardians raise objections or concerns. Extension professionals should create and follow inclusive policies and procedures that hold all individuals to the same standards. For example, if there is a policy that personal displays of affection are not permissible, Extension professionals should respond to behaviors that violate these policies and procedures with appropriate corrective actions. In other words, whether a same sex couple or a heterosexual couple is observed kissing, the same corrective action should be taken. If parents are uncomfortable with their child going to camp with a teen leader who has shared a transgender identity, then those parents can choose to limit their own child's participation. However, Extension professionals should not limit the teen leader's participation. If a parent behaves or speaks in ways that violate Extension's nondiscrimination and/or harassment policies as a result of the teen leader's continued participation, then Extension professionals should engage the parent in the appropriate corrective action.

Extension professionals have a responsibility to ensure youth are welcomed into inclusive programs and offer positive and supportive environments that provide physical, mental, and emotional safety. Extension professionals should ensure that all instances of discrimination are addressed, including taking appropriate corrective actions. Additionally, all reports of discrimination against a person's sex, gender identity, gender expression, or sexual orientation should be treated seriously and resolved in the same manner as reports of other forms of discrimination.

Step Five: Advocate for Inclusive Spaces

This step discusses ways Extension professionals can create or advocate for Extension spaces, documents, and environments that are inclusive of individuals who identify as members of LGBTQ+ communities. The following are examples of inclusiveness:

- Request all single stall restrooms in Extension buildings be gender inclusive. Making gender inclusive restrooms is as simple as replacing existing gendered restroom signs with signs that just say "Restroom." There are a variety of other options for inclusive signs as well. See Occupational Health and Safety Administration (OSHA; 2015) in the resources section for more information on best practices.
- Lead a peer-to-peer training about the USDA (2015) "And Justice For All" poster, to let the general public and clientele know about their Civil Rights. This poster is required to be on display in Extension offices and programming sites.
- Hang a safe space sticker or poster in a visible place. Wolowic, Heston, Saewyc, Porta, and Eisenberg (2016) examined youth perceptions of safe space stickers and found that "most [youth] recognized and navigated towards these symbols. However, these displays should be backed up by the presence of knowledgeable, supportive persons sensitive to the needs of LGBTQ youth" (p. S1).
- Have lists of local and online resources available for youth, family members, and volunteers. See the resource section for ideas to begin developing resource lists. Also, contact local universities and community health centers to develop a list of local resources.
- Arrange an inclusivity training for others involved in Extension programs. Be sure to advertise these opportunities widely. See HRC Foundation (2017) in the resources section for a source of online trainings that can be shared with colleagues and volunteers.
- Promote youth safety and privacy by requesting all enrollment and registration forms remove questions requesting unnecessary personal information, and ensure language is inclusive. For example, the author recommends asking gender as an open-ended, fill-in the blank whenever possible. If multiple choice is required, consider the following options: Male, Female, Gender Identity Not Listed Above, and Prefer Not to State. For more information on developing inclusive forms, see Killermann (2017) in the resources section.
- Ensure program materials represent a wide-range of people, cultures, and communities. For Extension professionals involved in curriculum development, be sure that curriculum is inclusive. See GLSEN (2017b) in the resources section for research on inclusive curriculum and how to develop inclusive curriculum.
- Share opportunities to engage with LGBTQ+ activities and inclusion through social media. GLSEN and HRC are good organizations to connect with on social media.
- Create opportunities for people to discuss how inequity and inclusion is addressed in Extension programs. Be sensitive to people's differing needs and preferences. Ask for suggestions for improvement, and follow through by implementing these suggestions.

Increasing inclusivity for youth members also allows Extension to create more welcoming environments for adults who are engaged in the program, including volunteers, paid personnel, and other community members. Inclusive environments result not only in better outcomes for youth who identify as members of LGBTQ+ communities but can benefit all involved (cf. Meyer & Bayer, 2013; Teaching Tolerance, 2013).

Step Six: Continue to Learn

Understandings of and terminology for sex, gender identity, gender expression, and sexual orientation evolve over time and can often be specific to geographical areas and to specific youth communities. In this sixth step, Extension professionals are encouraged to keep learning, as well as to circle back around to the first step of keeping an open mind.

In addition to continuing to engage in one's own education, consider ways to help others learn. Like many professionals, "few youth development professionals received any formal education…[and] youth professionals consistently report that they would like research-based information to help them better understand and support LGBT youth" (Russell, 2006, p. 1). Soder (2009) found that "there is a significant opportunity to decrease homophobia among 4-H state leaders through training" (p. 122). Extension professionals who are supervisors of paid employees or volunteers, can create opportunities for others to participate in trainings.

Going forward, there are many ways to continue to participate in learning, particularly for Extension professionals working in urban areas that often have numerous resource centers in their communities. One suggestion is to contact local resource centers, universities, and community organizations to find a list of upcoming trainings or to schedule an on-site training.

There are also many conferences that focus on diversity, including events centered on inclusion of people of all sexes, gender identities, gender expressions, and sexual orientations. For people involved in Extension, the Cultivating Change Summit may be of interest. This summit brings together allies and members of LGBTQ+ communities from around the country who are working in agriculture, government/public service, and agricultural education. Wherever one is on a personal journey toward inclusion, there is always more to learn and share with others.

Summary/Conclusion

Extension professionals can meet the needs of urban youth who identify as members of LGBTQ+ communities by providing opportunities for participation in positive development in environments that promote emotional and physical safety. Urban Extension professionals should consider offering programming to address some of the specific challenges of urban youth who identify as members of LGBTQ+ communities, such as LGBTQ+ specific health and wellness

education programs. In order to provide inclusive programming, urban Extension professionals need an understanding of the basic concepts of sex/gender, gender identity, gender expression, and sexual orientation that is equal to the understanding of the youth cultures that they serve. At the same time, language is complex and changes quickly, so Extension professionals should talk with the urban youth in their communities to find out how to relate to their specific youth populations. Likewise, trends for LGBTQ+ communities are continuously emerging, so Extension professionals are encouraged to seek up-to-date resources. Additionally, Extension programs should implement research-based and emergent best practices and practical steps for creating inclusive environments for urban youth. At the same time, information that has been published may use terminology and best practices that are out of date. While this article is a much needed step in the path to inclusive Extension programs of urban youth, much work is still needed in Extension. There is a need for systemwide policies that outline inclusive practices and provide program guidance. Efforts are needed to develop comprehensive and ongoing trainings on inclusivity for Extension administrators, academics, educators, and volunteers. Extension efforts may be enhanced by examining others' efforts to improve inclusivity for a variety of urban youth populations who experience discrimination. Future research should focus on measuring the knowledge gained by participating in inclusivity training for Extension professionals, as well as changes in attitudes, perceptions, and preferences in participants' understanding of LGBTQ+ communities in urban areas. Research is needed that examines the experiences of urban youth who identify as members of LGBTQ+ communities in Extension programming. As Extension professionals create more inclusive programs for urban youth, formative and summative evaluation of youth participants' experiences is needed to determine the efficacy of these efforts.

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Urban Extension: Aligning with the Needs of Urban Audiences Through Subject-Matter Centers

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The educational program model is the principle approach Extension uses to deliver on its mission of "taking knowledge to the people." However, with county-based faculty fully engaged in long-term program delivery, they may have little or no capacity to address emerging issues faced by urban communities. Urban governments often seek the research capacity of a university in addition to, or instead of, the traditional Extension programming model but sometimes turn first to other urban-serving universities. Washington State University Extension has addressed these challenges by establishing subject-matter centers. This article examines how subject-matter centers can add capacity to traditional Extension offices in order to be responsive to emerging local needs, suggesting models that other university Extension programs may use or adapt to their local communities. These models also foster more community engagement and articulate greater public value for the institution as a whole.

Keywords: metropolitan, public policy, short-term projects, building capacity, responsiveness, programming, public value

Introduction

Since its inception over a century ago, Extension has fulfilled its mission of "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.) through nonformal education and learning activities–often referred to as programs (Peterson, 2015). While variation exists across the Extension network, Extension programs are comprised of the key attributes of planning, design, implementation, evaluation and stakeholder involvement (Franz, Garst, & Gagnon, 2015).

Franz et al. (2015) provided a comprehensive review of approaches to and the evolution of Extension programs, including Boone, Saftrit, and Jones' (2002) assessment that program development is complex and technical. Franz et al. (2015) noted that most Extension professionals directly or indirectly utilize the program development model articulated by Seevers and Graham (2012) comprised of planning, design and implementation, and evaluation.

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However, Franz et al. (2015) presented additional program development models with more steps—one with 15 steps (Boyle, 1981) and an interactive, nonlinear model with 10 concepts (Caffarella & Ratcliff Daffron, 2013); as well as models from differing foci—a systems approach for organizational improvement (Boone et al., 2002), lifelong learning (Boyle, 1981), people-centered (Cervero & Wilson, 2006), and adult education (Caffarella & Ratcliff Daffron, 2013).

The development, delivery, and implementation of a program are not enough; it must "create positive change" in order for Extension to deliver on its mission (Kalambokidis, 2014). Historically, Extension professionals have worked to provide value to the lives of rural stakeholders and community members by developing programs that fit the specific needs of the communities they serve. This direct impact on the lives of program participants is a private value of Extension's work. Historically, articulation of these direct benefits has been sufficient for Extension and its traditional audiences (Kalambokidis, 2014). In tracing the evolution of needs assessments (an integral piece of traditional program development), Garst and McCawley (2015) reinforced that the U.S. Congress created Extension primarily to help meet the needs of rural communities and assist farmers in providing the amount of food needed throughout the country as populations continued to grow, linking the private value (assisting farmers) with the public value (ensuring an adequate food supply) of Extension. While implicitly articulated in Extension's past, it is only recently that Extension has begun to focus on articulating its public value (Franz, 2011; Franz et al., 2015; Kalambokidis, 2014), which is defined by Kalambokidis and Bipes (2007) as "the value of a program to those who do not directly benefit from the program" (p. 12).

As addressed later in this article, articulating Extension's public value may be even more important in urban or metropolitan communities. For this article, the terms urban, metropolitan, or city are used interchangeably to refer to central cities, metropolitan and suburban areas that surround these cities, and other highly populated counties. Metropolitan communities are often comprised of multijurisdictional networks of city, county, and regional governments and agencies along with numerous community- or faith-based organizations and nongovernmental organizations that often have overlapping missions with Extension. As metropolitan communities expand and grow, tensions are created around growth management and interjurisdictional cooperation. A high degree of ethnic and racial diversity both enriches and challenges metropolitan communities (Gaolach, McDaniel, & Aitken, 2015) with their own communication patterns and knowledge centers (Fehlis, 1992; Webster & Ingram, 2007).

Although populations and their needs have changed over time, Extension has evolved in many ways to be able to continue to meet those needs, yet collaborative development and delivery of customized programming to assist community members and other stakeholders remain foundationally the same. To adapt to a changing environment, Washington State University (WSU) Extension has developed subject-based applied research centers. These centers expand

the types of services offered through Extension, the method in which those services are delivered, and the choice of tools or resources accessed and developed by Extension professionals to better serve a shifting demographic.

Serving Urban Constituents–Is It as Easy as Putting "Urban" in the Title?

Extension's need, approach, and ability to serve urban constituents has been discussed in numerous venues and across decades (e.g., Argabright, McGuire, & King, 2012; Borich, 2001; Gould, Steel, & Woodrum, 2014; Krofta & Panshin, 1989; National Urban Extension Task Force, 1996; Webster & Ingram, 2007). The National Urban Extension Task Force (1996), while documenting the migration of residents to urban communities and examples of early urban programming, commented that Extension "followed the people" with programming. Both the language of this report and the examples provided show a marked propensity to take existing educational programs developed to serve rural communities and follow people to the cities with these programs. There are very few examples of developing programming with the urban constituent in mind from the beginning.

This penchant for adaptation over creating new programs was reinforced when the Western Extension Directors Association (WEDA) requested that the Western Regional Program Leadership Committee (WRPLC) examine how Extension was serving urban constituents and if new approaches were needed. After conducting a literature review and surveying the Western states, the WRPLC concluded that (a) most Extension programming in Western metropolitan areas is adapted from rural experiences and not from an urban perspective; (b) Extension nationally does not include an urban agenda; and (c) as a result, Extension programs of the past and even present offer few lessons for the development of a new urban model (WEDA, 2008).

While metropolitan and rural areas share common social issues such as poverty, homelessness, public safety, and health, addressing these issues in metropolitan areas requires approaches that recognize the multiple jurisdictions and the complex political environments. Uniquely, large metropolitan areas necessitate significant and complex infrastructure investments such as multimodal transportation systems, wastewater treatment facilities, and stormwater and pollutant management systems (Gaolach et al., 2015). These all raise unique challenges and prevent mere adaptation of existing programming.

In 2015, the National Urban Extension Leaders (NUEL) identified four common themes where urban communities represent unique challenges and opportunities for Extension: (a) positioning, (b) programs, (c) personnel, and (d) partnerships (NUEL, 2015). Other articles in this special *Journal of Human Sciences and Extension* issue examine positioning, personnel, and partnerships. Each of these themes intersects with how programming is developed and delivered, making it difficult to just append urban to successful, rural-influenced programming.

The Need for Greater Capacity and Responsiveness–Does This Call for a New Model?

As the front door of the university to our communities, it is essential that Extension is responsive to community needs. Yet the public's expectation for the rate at which Extension should respond appears to exceed Extension's own perception of the need (Extension Committee on Policy [ECOP], 2002). Often, once Extension offices perceive the need to respond to emerging issues, they lack the capacity to respond because they are fully engaged in subject-matter-based programming. Additionally, while the cost associated with developing and delivering traditionally-based programs has increased, revenue streams have continually decreased (Argabright et al., 2012) making it even more difficult to add capacity.

In its seminal report, *Extension in the Urban West* (WEDA, 2008), WEDA concluded that a new model for metropolitan Extension should emphasize

- applied research and engaged scholarship driven by the complex issues faced by urban communities,
- strategies to work with urban decision makers as a mechanism for increased impact,
- staffing approaches that emphasize flexibility and responsiveness while engaging in contractual applied research projects instead of longer-term educational programs, and
- enhanced access to degree programs and experiential learning.

Argabright et al. (2012) echoed the perspective of WEDA when they called for innovation over "fixing" problems of the past and gave examples of creative and innovative processes and activities Extension could pursue; several of which aligned with WEDA's report.

Subject-matter centers have long been used for applied, multidisciplinary research and practice at universities (e.g., Bozeman & Boardman, 2003; Ikenberry & Friedman, 1972; Stahler & Tash, 1994). For Extension, what do subject-matter centers allow that more traditional, county office-based approaches struggle to deliver?

- Subject-matter centers emphasize projects over programs. In this context, projects are time-bound with a defined start and end date, have defined project deliverables (e.g., reports, legislation, regulations, events, etc.) separate from academic scholarship, and are extramurally funded. In contrast, programs imply long-term duration with dedicated staffing and consistent programs or activities, such as Extension legacy programs 4-H and Master Gardeners.
- Centers emphasize the development of project-based teams; when the project ends, the team disbands. Teams are dynamically created among campus-based faculty with and without Extension appointments, engage graduate and undergraduate students in real-world learning, and are built around applied- or action-based research.

- Centers employ a relatively small, nimble staff that emphasize project management.
- Centers engage new stakeholders. Project-based, applied research centers can address the needs of government officials and decision makers to support policy, system, and environment changes, impacting more individuals by working upstream from the end-user of information (Extension's more traditional audience).

The next section provides a basic overview of three WSU Extension Centers; all work statewide (see Figure 1 for reference to specific office locations):

1) Division of Governmental Studies and Services (DGSS), operating for more than 50 years focusing on applied quantitative and qualitative social science research and evaluation (offices in Pullman and Olympia);
2) William D. Ruckelshaus Center (Ruckelshaus Center), 12 years old and focusing on collaborative public policy (offices in Seattle and Pullman); and
3) Metropolitan Center for Applied Research and Extension (Metro Center), newly created and focusing on metropolitan applied research (offices in Everett and Seattle).

A more detailed description of each center's operational logistics, in-reach to campus-based research faculty and students, and local capacity building follow.

Figure 1. State of Washington with WSU Main and Branch Campuses

Is Project-Based Extension the Answer? Experience and Reflections from Three Washington Centers

Division of Governmental Studies and Services (DGSS)

Founded in 1964, the Division of Governmental Studies and Services is jointly sponsored by WSU Extension and the College of Liberal Arts to apply social science approaches to issues of public policy in order to support good governance, improve citizen-government relationships, and enhance community resilience and quality of life in Washington and the Pacific Northwest. In 2001, the College of Liberal Arts and WSU Extension reached an agreement that combined two separate entities into a jointly-sponsored university outreach unit. Under this agreement, DGSS and the Program for Local Government Education (a program funded by the W. K. Kellogg Foundation and housed in WSU Extension) were merged and retained the title Division of Governmental Studies and Services, resulting in an expanded mission, a broadened scope of activities, and substantial growth in staff and applied social science research assets.

DGSS serves the people of Washington as the political science outreach arm of the University, linking academic campus resources to real-world initiatives to help address pressing issues and challenges. In this capacity, DGSS provides high-quality, applied research and training to tribal, federal, state, and local government agencies in the Pacific Northwest. Because of its co-sponsorship by the College of Arts and Sciences and WSU Extension and its strong connections to a number of academic units, DGSS has a long history of cross-disciplinary activities.

In addition to significant on-campus connections, DGSS has a broad array of client and partner relationships off campus that contribute to its success in extramural entrepreneurship; its reputation as a trusted source of expertise to bring data to bear on controversial issues; and its capacity to assist other WSU units with outreach, research, and innovative problem-solving. DGSS is affiliated with or has provided several training programs through the years to the Northwest Municipal Clerks Institute, the Western Regional Institute for Community Oriented Public Safety (WRICOPS) and the Natural Resources Leadership Academy (NRLA).

DGSS faculty and staff represent expertise in program evaluation and applied social science, policy-focused research, technology applications for community development and governance, facilitation, and conflict management. Because DGSS is based on the main WSU campus, personnel often work with other departments and units within the university, such as the Edward R. Murrow College of Communication; the Department of Criminal Justice and Criminology; the School of Politics, Philosophy, and Public Affairs; and the Department of Civil and Environmental Engineering. Collaborating with these units and others allows DGSS to link university expertise and capacity to communities throughout the Pacific Northwest. Joint sponsorship, diverse faculty and staff, and connections with various departments and agencies

regionally and nationally make DGSS a strong, interdisciplinary partner that lends considerable strength to competitive grants and contracts. In addition, DGSS engages students on a regular basis, providing research and internship opportunities for undergraduate and graduate students that not only supports their acquisition of strong applied research skills but also provides data for thesis and dissertation development.

As an applied research and outreach unit at Washington State University, DGSS has extensive experience in evaluation research methodology, analysis, facilitation, and training to enhance organizational capabilities. DGSS has worked on numerous cutting-edge projects with a strong publication record in topics such as biased policing, community sustainability, community policing, and social capital.

William D. Ruckelshaus Center[1]

The William D. Ruckelshaus Center (Ruckelshaus Center) is a joint effort of WSU and the University of Washington (UW) that fosters collaborative public policy in the State of Washington and Pacific Northwest. This unique partnership between Washington's two research universities was established in response to requests from prominent local, state, and regional leaders, many of whom now serve on its advisory board. It is hosted at UW by the Evans School of Public Policy and Governance and at WSU by Extension's Community and Economic Development unit, which also provides its administrative home. The Center was founded in 2004 and renamed in 2006 after William D. Ruckelshaus–the first and fifth administrator of the U.S. Environmental Protection Agency, a longtime public and private sector leader, and a 2015 recipient of the Presidential Medal of Freedom. Ruckelshaus is the Center's founder and advisory board chair.

Dedicated to assisting public, private, tribal, nonprofit, and other community leaders in their efforts to build consensus and resolve conflicts around difficult public policy issues, the Center's services include situation assessment, collaborative process design, facilitation and mediation of collaborative processes, development of collaborative capacity, and establishment of a common information base. Scholars and practitioners refer to this field as collaborative governance, collaborative public policy, or public policy conflict resolution, among other terms (e.g., Ansell & Gash, 2008; Dukes, 1996; Emerson, Nabatchi, & Balogh, 2012). The Center has helped resolve challenges and conflicts on large and small issues involving natural resource management, disaster response, healthcare, economic development, good governance, and other topics (Kern, 2013).

Funding for the Center is a mix of public and private sources, including modest core funding from the UW and WSU, fee-for-service contracts for specific projects, and private philanthropy.

[1] This section draws on material from Hall & Kern, 2017.

The Ruckelshaus Center seeks to establish project teams that involve its core faculty and staff, as well as faculty, staff, students, and practitioners affiliated with both of its universities. The Center's four-member core faculty have more than 75 years of collective experience in public policy conflict resolution and collaborative policy-making, as well as have advanced degrees in relevant fields such as public policy, marine affairs, law, and land use planning. Since 2010, the Center has engaged more than 60 WSU, UW, and other faculty and practitioners in projects. In some situations, private sector practitioners are also involved.

Because of its emphasis in "on the ground" and "in the community" application of academic expertise, WSU Extension attracts university-based experts from public policy, business, law, and many other disciplines. The Ruckelshaus Center's Collaborative Capacity Building and Training program helps develop conflict resolution expertise among Extension faculty and others. The Center's student internship program seeks to create collaborative competence among the next generation of policy leaders. Community-based Extension faculty and staff are also a good source of project opportunities, since they are integrated into the fabric of their communities and know what public policy challenges would benefit from the Center's services.

The Center's unique structure as a joint WSU/UW center led to the creation of a separate 501(c)3 Ruckelshaus Center Foundation to accept charitable gifts; neither university felt its foundation should solely represent the Center. The Center's advisory board guidelines established a development committee responsible for "establishing and executing a plan for Center resource development that results in a balanced portfolio of funding sources…that will be seen as neutral" (William D. Ruckelshaus Center, 2015, p. 5). In addition to core funding and fee-for-service, that portfolio includes Board giving, other major donors (including a Chairman's Circle of more than 70 individuals and organizations who give $1,000+ each year), foundation grants, events, small and medium donors, and expendables from an endowment. The committee raised over $310,000 from those sources in fiscal year 2015 and over $675,000 in fiscal year 2016. The Ruckelshaus Center Endowment for Excellence has grown from just more than $1 million in 2010 to more than $4 million by the end of 2016 (the largest endowment at WSU Extension) toward a $5 million goal.

Metropolitan Center for Applied Research and Extension

As early as the 1990s, Extension County Directors in Washington's metropolitan counties recognized the need for a fundamental shift in how Extension served their constituents beyond traditional Extension programming. Beginning in 2002, increasing demands on county general funds began to put funding at risk for local Extension offices. While ongoing funding for Extension became a critical issue, county officials still wanted to access the research capacity of universities to help address the complex, multijurisdictional, and multifaceted issues facing them. In Washington's largest county, home to the city of Seattle, other urban serving universities had

greater name recognition than WSU with its main campus located 300 miles away. For WSU Extension, the complex sociopolitical landscape of Washington's metropolitan counties, the unique character of their issues, the competition from other educational service providers, and the staffing limitations in current metropolitan county Extension offices required a new university engagement model in the metropolitan Puget Sound (Gaolach et al., 2015).

WSU Extension responded to these changing conditions by creating the Metropolitan Center for Applied Research and Extension (Metro Center), officially adopted by the WSU Regents in January 2016. The Metro Center was established to strengthen Puget Sound metropolitan communities through collaboration, innovation, action-oriented research, and outreach designed to contribute to the resiliency of local economies and strengthen the region's governmental and nonprofit sectors. In the tradition of Extension, the subject matter is community-driven, but the Metro Center breaks from tradition by being solely project-driven and working across a variety of subject matters within metropolitan communities.

The Metro Center makes a clear distinction between projects and programs. Extension's tradition is to build long-term, educational-based, community-delivered programs. Examples include 4-H community and school clubs, Master Gardener volunteer programs, SNAP-Ed community nutrition programs, and forestry education. The Metro Center only conducts projects defined as being time-bound (months to a few years) with a clear start and end date, having a defined set of deliverables, and being extramurally funded.

The Metro Center has a small core staff and assembles WSU faculty, staff, and students into short-term, project-based teams to address specific, externally-funded initiatives. This gives the Metro Center the necessary flexibility to respond quickly to new opportunities and emerging metropolitan issues. Currently, the Metro Center is comprised of a full-time director, one and one-half project specialists, and a half-time operations manager; all are 100% funded by the university. However, WSU expects the Metro Center to engage in projects that fully fund all expenses involved.

Once contacted by a client about a project, Metro Center staff (a) undertake initial project scoping, (b) develop the project team, (c) help secure necessary project funding, (d) develop and monitor project contracts and deliverables, (e) encourage scholarly work resulting from project activities, and (f) promote WSU as a leader in addressing metropolitan issues. The project specialist—who works more as a project manager than a practitioner—supports team members in delivering their specific, contract-defined roles in the project along with supporting campus-based faculty who may not accustomed to working *with* and *in* communities, thereby ensuring quality and timeliness of project work and deliverables.

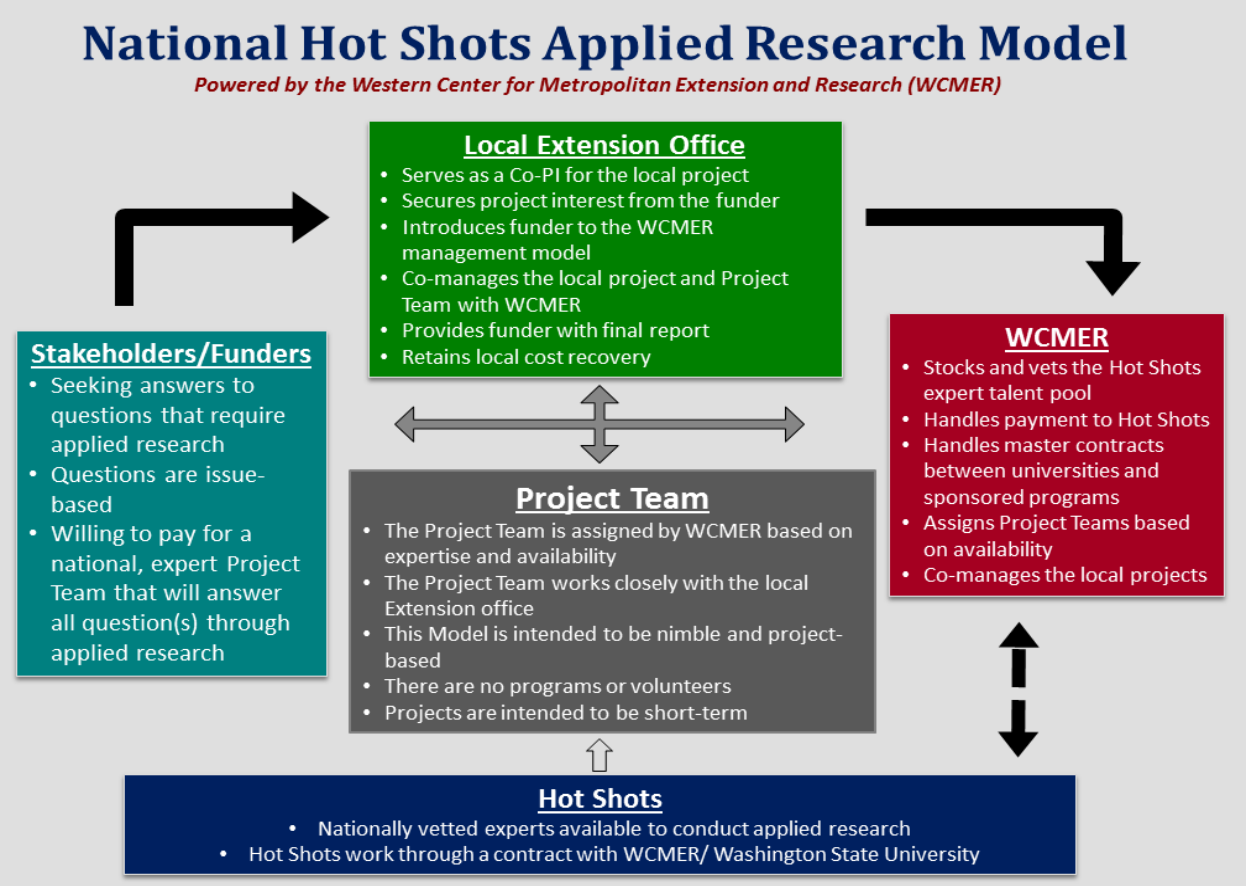
The Metro Center is not meant to replace county Extension offices; instead, it brings new capacity with a complimentary focus. There is great value in metropolitan communities for both traditional Extension activities and for accessing the research capacity of the University through project-oriented centers. While not a requirement, most Metro Center projects have both applied research and Extension outreach components. The Metro Center works closely with county Extension offices, WSU Research and Extension Centers, and academic departments to transfer projects with potential for long-term research or educational programming to these units. The Metro Center defines applied research within the broader designation of action-oriented research, which also includes classic action research, participatory research, and grounded action research (Toscano, n.d.). The Metro Center was designed to add that applied research capacity to the local University Extension mix into which metropolitan decision makers can tap.

Projects, Programs, County Offices, and Centers–New Models?

Projects, programs, county Extension offices, and centers are not mutually exclusive. They can and should be designed to function together as they provide complementary services to metropolitan communities while demonstrating the breadth of Land-Grant Universities. Combined, they bring the long-term educational programs that are a hallmark of Extension along with the applied, action-oriented research capacity of a university. How they are combined can and should vary across Land-Grant Universities as evidenced by programs such as Colorado State University's *CSU in the City* Extension program in Denver (http://metroextension.wsu.edu/csu-hotshots/), which straddles both city and county government.

The value of an applied research portfolio within urban Extension has gained regional and national interest. The Western Center for Metropolitan Extension and Research (WCMER) (http://metroextension.wsu.edu/), a collaboration of seven primarily western Land-Grant Universities with its administrative home in WSU's Metro Center, developed the Hot Shot model (see Figure 2) to provide a vehicle for an Extension contact to identify an applied research project team from across the country to add capacity to a locally-driven project. This ensures the local office, whether primarily engaged in more traditional long-term programs or active in project-based applied research, is positioned as the conduit to the expertise. This model is currently being deployed for two WCMER projects—one to secure national funding for a multistate urban project and one to secure foundation funding for a national project.

Figure 2. Schematic of the WCMER Host Shot Model as Applied at the National Level Through the National Urban Extension Leaders (NUEL) Network



For the majority of projects, WSU's three centers target local decision makers, especially those who make, adopt, or interpret policy. Working upstream at the policy, systems, and environment level has several benefits for urban Extension programs. It can overcome the numbers disadvantage urban Extension offices often face. With very low staff to population ratios, urban Extension offices have difficulty impacting the same proportion of residents as their more rural counterparts. In urban communities, working with policy makers magnifies the impact of an Extension office; influencing 100 policy makers ultimately impacts more residents than direct education of 100 residents. Working with decision makers also more directly articulates the public value of Extension by working at the population level instead of at the individual level. Applied research brings a distinguishing characteristic to the ubiquitous nonprofit educational organizations with which urban Extension offices often must compete for funding and value recognition.

What This Means for Extension Faculty–Opportunities for Collaboration, Service, and Scholarship

Subject-matter centers that engage in project-based, applied research activities help demonstrate the public value of Extension and Land-Grant Universities to external stakeholders. Internally, the value of this work needs to be documented through scholarly activities. Extension professionals have established outlets to communicate the results and impacts of their work. For example, several Extension professional organizations host annual conferences with scholarly presentations, and most Extension programs publish fact sheets, bulletins, and publications, some with double-blind peer review. As more Extension programs provide opportunities for promotion, tenure, or permanent status, a greater premium is placed on peer-reviewed publications targeting Extension professionals instead of the end user (e.g., the general public or business professional) of the information. The applied and time-bound nature of subject-matter centers provides opportunities for Extension professionals to be a co- or lead author on peer-reviewed publications.

The combination of subject-matter centers and local Extension offices are valuable assets to campus-based research faculty and institutions as public value, engaged scholarship, and integrated research are at a premium for funders and evaluation of institutions. Franz, Childers, and Sanderlin (2012) discovered that faculty wanting to demonstrate public value of their research are looking for assistance in engaging with communities and how to work effectively with communities. The faculty surveyed in this research reported interest in a campus center to help faculty engage with the community. The Carnegie Foundation recently announced an additional 240 U.S. college and university recipients for its Community Engagement Classification for 2015, joining 121 institutions recognized in 2010 (New England Resource Center for Higher Education, n.d.). This is a designation for which universities voluntarily apply, indicating the value and importance of this distinction. The Academy of Community Engagement Scholarship (2012) defines engaged scholarship as "active collaboration with participating community partners…has a positive impact on complex societal needs and issues." (p. 1). An Extension-based, subject-matter center working closely with local Extension offices supports campus-based faculty working in communities while increasing the value and impact of such research. By partnering with campus-based faculty, Extension professionals will have increased opportunities to add value to their communities, lead or co-author peer-reviewed journal articles, and lead related Extension-based scholarly products in collaboration with other team members.

Conclusions/Summary

While Extension has a long tradition in a program development model based on needs assessment, program design and implementation, and program evaluation (Franz et al., 2015),

opportunities and complexities in metropolitan communities suggest the need for a nimbler approach. In metropolitan communities, Extension offices are often faced with very small staff sizes relative to the large populations they are expected to serve; they operate amongst numerous agencies, nonprofit organizations, and nongovernmental organizations that provide similar services while competing for funding and visibility; and they face a very complex multijurisdictional set of governments who often look to Extension to bring the entirety of the university to help address the multidimensional issues of metropolitan communities. Existing program models alone are ill-prepared to handle these demands (see Table 1).

Table 1. Contrasting Elements of a More Traditional Program-Based Extension Model Compared to a Project-Based Extension Model

Program-Based Extension	**Project-Based Extension**
Staffed by county/area/regional agents who focus on program development (assessment, planning, design, implementation, and evaluation) and deliver a series of activities over the course of several years; they are local, subject-matter experts. They generally have a long tenure in a county; emphasizing long-term engagement and impact within the county through their programming.	Staffed by center-based faculty who emphasize project management; not necessarily subject-matter experts, but may be practitioners within subject matter. They work with numerous governmental and community organizations as dictated by specific projects. University faculty serve as project specific subject-matter experts and may work only a few times in any specific jurisdiction or with any given stakeholder.
Utilize volunteers to multiply impact.	Develop short-term teams comprised of experts and students to address specific, one-time projects.
Deliver programs and curriculum developed by faculty specialists and external stakeholders for statewide use.	Co-create project scope of work and deliverables amongst a project team and community stakeholders; designed uniquely for the specific project or situation.
Focuses primarily on end-user of information (individual-level impacts emphasized).	Focuses primarily on policy, systems, or environmental change by working with decision makers (community or population level impacts emphasized).
Values long-term funding relationships through a county contract or agreement to support a stable workforce in local office.	Seeks short-term funding relationships to provide project-based funding for subject-matter specialists and to support a small core staff.
Delivers a traditional blend of program offerings comprised of 4-H youth development; nutrition education, agricultural production, natural resource stewardship, horticulture, community vitality, etc.; derived primarily from expertise within a college of agriculture.	Focuses on aligning client needs with resources and expertise from across the university and Land-Grant system, reaching beyond the traditional college of agriculture for needed expertise.

(Adapted from Collins, 2016)

Subject-matter centers can provide Extension programs and local offices with additional resources and the nimble and flexible staff necessary to address emerging, time-sensitive issues that faculty fully engaged in long-term educational programming do not have the capacity to address. WSU Extension has successfully developed several such centers, three of which were reviewed here. In addition to providing capacity and flexibility, these centers also act as conduits between local Extension offices and campus-based resources, including deploying both graduate and undergraduate students on real-world issues; engaging campus-based faculty in off-campus, applied research opportunities; and generating additional resources for all parties through new funding sources. By deploying the university's resources on urban policy, systems, or environmental change projects, Extension increases the public value and community engagement metrics for the participating faculty and the institution as a whole.

Subject-matter centers are not without challenges in operating within the construct of a Land-Grant University that prioritizes research, teaching, and service. The three subject-matter centers featured in this article specialize in fee-for-service opportunities to conduct applied research and address community-based issues. While each center has an allocation of base funding, these resources primarily support basic infrastructure and gap financing for core staff when they are not covered by project-based billing. This creates a tension between practice (external projects) and research (publications). It is challenging to meet existing project responsibilities and keep new projects in the pipeline while also fulfilling peer-review publication expectations for faculty promotion. Similarly, it is important to evaluate past and current projects undertaken at subject-matter centers, but this is difficult to accomplish when evaluation takes time and money, and few funders are willing to invest to support such activity. Additionally, similar to more traditional approaches to Extension work, Extension based subject-matter centers struggle to gain attention, recognition, or support within their universities which often directly or indirectly structure reward systems to favor research and teaching performed by campus-based faculty.

The three subject-matter centers operate independently from local Extension offices but work cooperatively within the geographic boundaries of any given county Extension office. Therefore, it is critical for the centers and the county offices to coordinate so stakeholders see one Extension, similar to the importance of state specialists fitting within a single Extension perspective for stakeholders. Because all three of these WSU centers are administratively housed in WSU Extension's Community and Economic Development Unit (http://ced.cw.wsu.edu/), county-based faculty and center-based faculty interact on a regular basis, allowing for relationship building, easier integration and the sharing of outcomes and impacts with stakeholders. In addition, there is a natural interaction between centers focusing on short-term projects and county Extension focusing more on longer-term programs. Consider the following examples.

- A county-based program can be the impetus for a short-term project which county faculty do not have the capacity or expertise to address; they can reach out to the appropriate subject-matter center to respond to this issue. The center works through the county office (almost like a subcontractor to the local office) to conduct the work. To the stakeholder, it is the county office that brings this additional Extension resource as an additional value to the long-term relationship between the county and the county Extension office.
- While a subject-matter center is working on a time-bound project, a long-term educational program may be a logical outcome of the work. Such an opportunity can be "transferred" to the county Extension office as a natural progression from project to program, all within the same Extension organization.
- Project teams can and often do include county-based Extension faculty and staff.

It is possible that similar centers already exist in a given university, and county Extension offices only need to establish a working relationship with them by highlighting the opportunities of working together. If none exist, or even if they do, Extension leaders can establish their own centers, similar to WSU Extension's approach, which will require new funding or repurposing existing funding. While this can be difficult, WSU Extension was able to establish the new Metro Center through reallocation of existing funding to respond to the opportunities metropolitan communities offered while still supporting traditional-based county programs. The WSU Metro Center was established with a core staff of 2.5 employees, which is a minimal investment to serve a multiple-county geographic area which encompasses more than half of the state's population and nearly three-quarters of the state's legislative districts.

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Urban Extension–Reflections on the Past–A Look to the Future

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The Cooperative Extension Service (Extension) has built an outstanding reputation by serving clientele in rural areas. The organization's credibility in the past has rested solidly on those stakeholders who have advocated for Extension's continued existence due to its success in helping rural communities move beyond societal ills. With the rapid expansion of urban America, Extension's potential for growth is tremendous—if the organization can adapt to meet the needs of metropolitan communities. This article features highlights of the successes and barriers presented by previous studies and makes suggestions on what can be done to move the urban Extension agenda forward. The authors share results of a case study in Kentucky in hopes of offering current and future recommendations for the many Extension systems across the country challenged with being as relevant a resource to urban areas as the organization is to its rural counterparts.

Keywords: municipal, metropolitan, history, challenges, barriers, solutions

Introduction

A diverse group of Extension leadership from across the country has inspired renewed commitment and the repositioning of the organization's ability to address urban issues. While the need for relevant applied research and application to issues affecting urban population centers across the United States continues to exist, successful policy initiatives and addressing urban challenges on a practical level are expanding. For example, the Extension Committee on Organization and Policy (ECOP) recognized and approved National Extension Urban Leaders (NUEL) as a "voluntary, regionally representative, and Director/Administrator-approved group of Extension employees who cooperate in advancing the strategic importance and long-term value of urban Extension activities by being relevant locally, responsive statewide, and recognized nationally" (Willis, 2015, p. 1). ECOP also accepted the document, *A National Framework for Urban Extension: A Report from the National Urban Extension Leaders*, that explains national trends and the opportunities Extension has to positively impact local communities (ECOP, 2015; NUEL, 2015). As further support for urban Extension efforts, two NUEL liaisons were appointed from ECOP and the National Institute of Food and Agriculture (NIFA). Numerous other local and regional successes have been recognized at biannual National

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Urban Extension Conferences, forums, task force meetings, and evaluations. This article highlights one particular effort administered intentionally to gather information on the current status of Extension's goals and purpose in urban communities.

Voices from the Past: A Brief Review of the Literature

Acknowledgement of the challenges that exist for Extension educators in addressing the issues faced among urban population centers dates back to the 1960s. Brown (1965) compared and contrasted characteristics of urban and rural communities, noting that, instead of focusing on traditional agricultural production efficiencies, Extension could effectively serve urban communities by

- disseminating agricultural information;
- teaching home economics knowledge and skills;
- assisting in community development by helping people become more involved in making decisions about community improvement;
- consulting various government bodies and agencies; and
- developing an urban youth program, either by organizing clubs or by providing services to other youth-serving groups.

Through a survey of state Extension state administrators, Paulson (1973) found 98% of survey participants fully or partially validated the effectiveness of the "Extension Model" and methodology in addressing urban issues. Paulson also identified existing barriers that limit Extension's ability to most effectively impact these issues. Those barriers are

- agents/educators are not trained to address urban issues,
- Extension seems unwillingness to adapt organizationally to meet urban needs,
- adjustments to Extension's delivery system are needed to reach urban audiences,
- the research base for building urban models is very fragmented,
- the populations of urban communities are increasingly heterogeneous,
- Extension's public image is largely that of exclusively serving agriculture, and
- the sheer volume of the urban audience can overwhelm traditional delivery methods.

An examination of urban communities and the previously noted seven points draws a dramatic contrast to the rural communities where Extension has demonstrated its ability to successfully address needs and issues.

Young and Vavrina (2014) conducted a review of past urban studies and initiatives. They reported that Miller (1973) expressed skepticism regarding the appropriateness of traditional Extension for urban communities. Miller noted two recurring questions: (1) how can the

resources of Land-Grant Universities be used to address broader social issues and (2) why cannot Extension's rural success be transfused into urban America (Miller, 1973).

Yep (1980) credited Extension's historic success with the implementation of the ECOP Extension Program Development Framework. This framework, which has been the basis of effective education programming, includes

- development of institutional framework,
- development of the organizational base,
- determining the Extension program,
- development of annual plan of work,
- program implementation, and
- program evaluation.

This framework of Extension success "appears to be significantly affected by historical, technological, economic, and environmental factors" (Yep, 1980, p. 19). Historically, because the Cooperative Extension Service (Extension) was known as the Agricultural Extension Service for many years, awareness by urban citizens was low, highlighting the need for effective marketing.

Yep (1980) also acknowledged the general lack of an urban research knowledge base similar to the reservoir of knowledge to which Extension educators have had access through the U.S. Department of Agriculture, Land-Grant Universities, and Experiment Stations. Another barrier relates to the lack of adequate financial resources in many urban communities. These economic challenges hurt Extension by limiting access to local matching funds. Another challenge to Extension's success relates to the complexity of the environment in urban communities where populations are more condensed and diverse (Yep, 1980). These larger and more complex populations magnify the social challenges often present.

Contrary to rural communities where Extension is one of only a few organizations available to address community priorities, urban communities might compete with many organizations for scarce resources. The existence of multiple power structures within a single county is indeed an obstacle that contrasts with traditional rural communities that have fewer potential competitors.

In April 1991, Texas Extension implemented an "Urban Initiative" for its largest counties. This initiative focused on "development of urban faculty, involving urban lay leaders in program development and education programs for urban audiences" (Fehlis, 1992, p. 1) and is similar to the metro model described by Miller (1973). Young and Vavrina (2014) noted the work of Franz and Cox (2012) involving "disruptive innovation." Disruptive innovation, as defined by the authors is used as a means to "exploring, implementing, or evaluating organizational innovations

and to enhance relevance and sustainability" (Franz & Cox, 2012, p. 1). The authors point out that decreases in traditional funding, office closures, and the need for alternative methods to communicate program impact have led to "disruptive" but innovative solutions.

In 2013, Kentucky Extension hosted an Urban Extension Forum. The purpose of the forum was to explore the "structural barriers and solutions that would allow Extension to more successfully function in urban communities" (Young & Vavrina, 2014, p. 4). The forum was attended by nearly 70 Extension professionals representing both of Kentucky's Land-Grant institutions (The University of Kentucky and Kentucky State University). Attendees were asked to provide "barrier and solution" feedback on five topic areas:

- adequate financial resources in urban communities,
- local priorities in urban communities,
- high levels of teamwork in urban communities,
- strong communication and interaction with urban government leaders, and
- visionary and creative leadership in urban communities.

A summary of all feedback was conducted at the conclusion of the forum, and the following top 10 recurring discussion themes were identified (see Table 1).

Table 1. 2013 Kentucky Urban Extension Forum Discussion Themes

Feedback Themes	***f***
Media Relations/Marketing	28
Communicating/Interacting with Local Government	19
Specialist Development of Urban Curriculum	18
Strengthening Advisory Councils	17
Structural Issues	16
Partnership	10
Cultural Awareness	9
Limited Resources	9
Work Life Issues	6
Work Location	5

Note: f refers to the frequency with which each theme was identified

Following completion of the Urban Extension Forum, a smaller group of agents, specialists, and administrators continued to meet and discuss the feedback received. This group, later labeled the "Urban Action Team," made the several recommendations to strengthen "urban Extension" in Kentucky and perhaps have application in other states as reported in Young and Vavrina (2014):

- County facilitators and directors are needed in Kentucky's largest counties (not a common practice in 2013).

- All "nonurban" counties would benefit by having a designated agent "primarily" responsible for educating, communicating, and building relationships with local, state, and federal elected officials.
- Key skill sets (meeting facilitation, community networking, collaboration, etc.) should be addressed early in the Extension agent's professional career through professional development.
- Agent responsibilities to supervise support staff and collaborate with elected officials should be clearly communicated in position descriptions.
- The Extension Advisory Council System should be examined in regard to its effectiveness in an ever changing world.
- A unified, consistent marketing message and theme should be developed. This would include tag lines and an updated online "look" for all counties.
- Campus specialists and researchers must become more familiar with the issues and challenges of urban communities.
- Opportunities should be planned in which specialists and agents purposefully collaborate to develop education to address urban issues and challenges.

Case Study: University of Kentucky Extension Service

In the fall of 2016, a follow-up evaluation of the 2013 Kentucky Urban Extension Forum was conducted to assess the experiences of Extension professionals working in urbanized Kentucky counties. These counties were targeted due to the significant growth in population and the rise of issues that are pertinent to urban communities. The state has made attempts to be proactive in meeting these needs while also aiming to communicate the public value of Extension to local- and state-level stakeholders. Given shifts in the political climate at the state level and knowing many urban lawmakers might not be aware of the Extension mission, it was imperative to identify barriers to urban Extension programming as well as solutions that can enhance programming.

An electronic survey was administered to determine if there were any major changes in experiences. A total of 56 Extension agents from 17 counties completed the electronic survey. Nearly 65% (36 total) of the respondents had more than 10 years of experience in Extension, followed by those with 5-10 years of experience (20%), 1-4 years (11%), and less than one year (4%). The large majority of the agents (69%, 39 total) had not worked in an urban county prior to working in Extension.

The county agents responded to questions on the survey that asked them to select, from a list, those barriers which can affect the progress of Extension programming in urban communities. Respondents were asked to "check all that apply." Those barriers are listed in Table 2, along with the frequency of responses.

Table 2. Barriers that Affect the Progress of Extension Programming in Urban Counties

Barriers	**%**	***f***
Prioritizing Local Programs	64%	35
Developing Visionary Leadership	52%	28
Financial Resources	43%	23
Communicating/Interacting with Local Government	28%	15
Teamwork	26%	14
Other	26%	14

Note: Percent of respondents is based on all individuals completing the survey; *f* refers to the frequency with which each barrier was identified.

In reference to barriers, the Extension professionals were able to select one or more of the five listed on the survey. A total of 35 (64%) noted that "prioritizing local programs" was an issue in urban counties. The second most frequent response was "developing visionary leadership" within the county, with 52% (n = 28) selecting this as a key barrier. This pertains to the leadership within Extension, albeit at the state/university or local level. Ranking third was "financial resources" as a barrier. These were followed by "communicating/interacting with local government" and "teamwork."

Respondents were also given an option to list "other" barriers that might exist. Among those mentioned included lack of effective marketing, need for higher visibility of Extension programs, intentional ways of rewarding top performance of Extension work in urban areas, wasted resources, poor conflict resolution (among larger staff/offices), and competition (i.e., Extension program being one choice among many).

When asked about solutions that can aid Extension in serving urban audiences (see Table 3), 73% (n = 40) of the respondents indicated that developing visionary leadership was a key factor, and 65% (n = 36) reported "teamwork" as being critical to Extension efforts. A close third was "financial resources," followed by "prioritizing local programs" and "communicating/interacting with local government."

Table 3. Solutions to Aid Extension's Efforts in Urban Counties

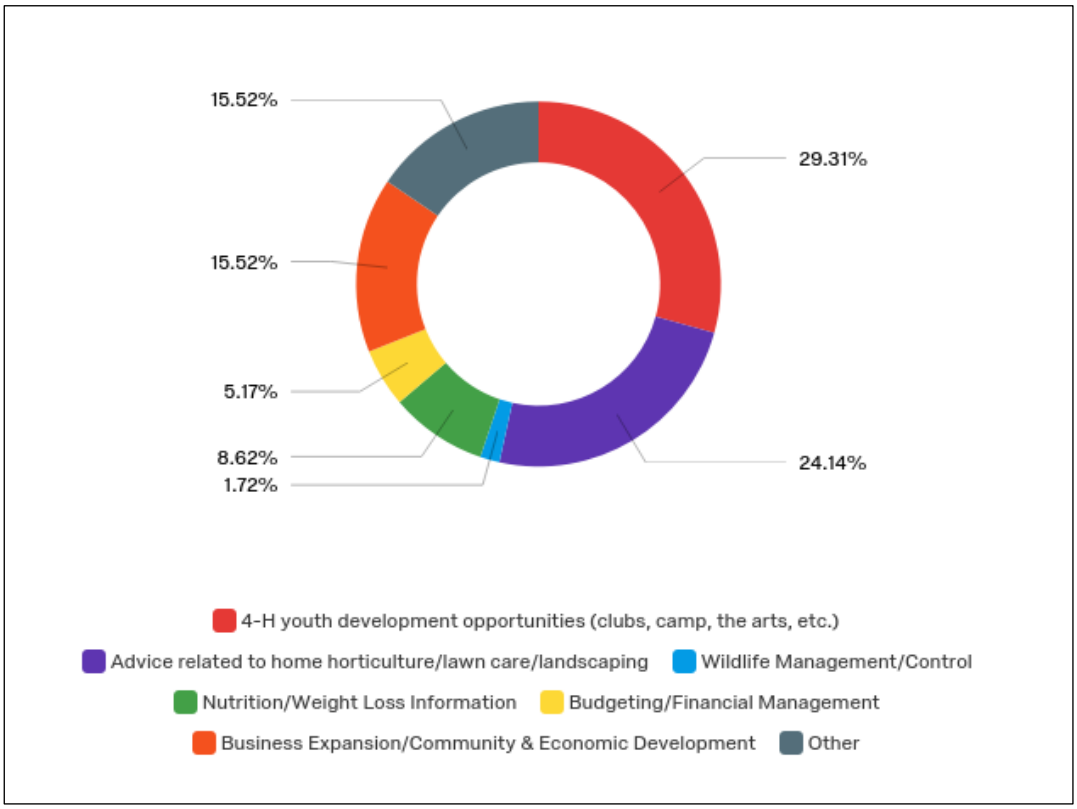
Solutions	**%**	***f***
Developing Visionary Leadership	73%	40
Teamwork	65%	36
Financial Resources	64%	35
Prioritizing Local Programs	60%	33
Communicating/Interacting with Local Government	56%	31
Other	16%	9

Note: Percent of respondents is based on all individuals completing the survey; *f* refers to the frequency with which each barrier was identified.

Agents offered "other" options that could serve as solutions. Several suggestions included marketing, visibility of Extension programs, having an expert (specialist) to specifically address urban programming, and use of technology to deliver programming (e.g., webinars).

Extension professionals who participated in the evaluation represented all program areas within the Kentucky Extension system. The evaluation did not conduct a comparative analysis across program areas (i.e., 4-H youth development, Agriculture and Natural Resources, Community & Economic Development, Family & Consumer Sciences). Agents were asked to identify topical areas that they perceived were of most interest to their clientele. Respondents selected from a list those topics that were identified as priorities during the 2013 assessment. Figure 1 provides the topics and the percentage of those indicating relevance to clientele (respondents were allowed to check only one topic/area). It is important to note that approximately 16% wrote in "other" topics of importance, including environment education for students, adults, cities, and businesses; wellness; city residents interested in "urban farming;" and beef cattle.

Figure 1. Topic Areas of Most Interest to Urban Clientele as Perceived by Kentucky County Agents



The evaluation also gathered feedback from agents about their perceptions of working as an Extension professional within an urbanized county. Several survey items have been compiled under six constructed themes: addressing local priorities, media relations and marketing,

interaction with elected officials and urban government, financial resources, teamwork and partnerships, and advisory councils.

Addressing local priorities involved Extension having specific goals in place to address urban issues. Media relations/marketing targeted the connections and support that local media affords Extension. Interactions with elected officials focused on whether there is a positive relationship between Extension and city government and whether elected officials are knowledgeable about Extension. Adequate financial resources allowed respondents to report whether they believed urban counties have access to ample funding and if Extension administration is aware of urban financial needs. Teamwork and partnerships focused on whether Extension has strong connections with other organizations, agencies, and underrepresented groups in urban counties. Lastly, advisory council items aimed to assess whether councils are aware of the needs of urban communities and if they represent the diversity within counties. Table 4 reveals respondents' perceptions. Mean scores reflect that most respondents were neutral towards the themes.

Table 4. Extension Professionals' Perceptions of Themes that Affect Efforts in Urban Areas

Themes	**Mean**	***SD***
Addressing Local Priorities	3.36	.67
Media Relations/Marketing	3.40	1.00
Interaction with Elected Officials/Urban Government	3.87	.78
Financial Resources	3.03	.86
Teamwork/Partnerships	3.46	.77
Advisory Councils	3.13	.96

Note: Mean is based on a scale of 1 (strongly disagree) to 5 (strongly agree).

Respondents were also asked to provide feedback on their skills in working within an urban county. Table 5 includes the individual items and the mean scores. The scores reveal that respondents were in agreement with most statements as related to their personal skill levels.

Table 5. Perceptions Toward Personal Skills as an Urban Extension Professional

Skills	**Mean**	***SD***
I am comfortable working in an urban county.	4.16	.80
I can identify resources for my county program.	4.09	.69
I have strengths that will help Extension accomplish our goals for urban audiences.	4.25	.61
I have access to training that helps me as an agent in an urban county.	3.45	1.04
I see working in an urban county as a major challenge.	3.29	1.20
I see working in an urban county as a major opportunity.	4.14	.64
I feel as if I am making a difference in my county.	4.21	.70
I believe people in my county value Extension as a local resource.	3.89	.96
I believe the people in my county take advantage of what Extension offers.	3.50	.99

Note: Mean is based on a scale of 1 (strongly disagree) to 5 (strongly agree).

Current Implications

As we reflect on past scholarship and the theme of urban Extension, similar challenges have been identified and similar solutions proposed. This evaluation revealed that in comparison, Extension professionals continue to recognize similar barriers and solutions to working in urban settings. Being able to prioritize programming pertinent to issues that matter to urban residents is critical to Extension being a key player. Developing visionary leadership is also an important solution but can be a barrier that limits Extension's potential. It is no surprise that financial resources can aid in the thriving of program impact, while limited funding can deter opportunities. Teamwork among staff and partners was another solution valued by Extension professionals. While these barriers and solutions were noted more so by respondents, this does not minimize the other topics that clearly have an impact on Extension's reach in urban areas.

When providing insight on the themes that are factors influencing Extension's efforts, most respondents had average to mediocre perceptions. When considering the way Extension addresses local priorities, it was apparent the organization could be more effective in meeting the unique needs of those in urban areas. Although agents were more positive toward "interactions with elected officials," "media relations" was perceived as less positive. Funding is obviously critical—enabling counties to serve populations adequately through the necessary programs. Internally, teamwork and advisory councils were not perceived highly, which could imply a lack in synergy that could negate efforts to help propel programming to new levels.

One agent cannot solve all of the problems in a large urban county. In order to achieve satisfactory results, the entire Extension office should be of one accord and strive toward a common goal to make an impact. Similarly, advisory councils are a crucial part of Extension's efforts and should not only have diverse backgrounds but also represent the cultural milieu of the county through diverse perspectives and ideas for programs that make a difference. Councils and volunteers, in general, are the heart of grassroots efforts and should be looked upon to help move from the traditional to more challenging questions. The following are questions to ask council members and other volunteers that could aid the urban Extension agenda:

Instead of…	**Strongly Consider…**
• What programs do you want us to implement?	• How can you help us improve what we are already doing?
• What are we doing right?	• How can we provide better programs for residents of _____?
• How did you feel about the program?	• How can you help us provide more access to programs in the _____ community?
• Are you willing to continue serving on the council?	• Who would be an asset to serve on the advisory council from _____ community(ies)?

Future Implications

A future trajectory for Extension should include deliberate strategic planning on ways to serve urban centers. Before additional steps are implemented, it is essential that talented individuals with the appropriate skills are recruited and retained in these counties. The results from this study revealed positive perceptions of those who work in urban areas. On average, they had strong affirming attitudes toward their comfort levels and ability to work in an urban county; however, their desire to have adequate training, while also acknowledging other challenges, were apparent. Extension has always recognized the needs of nontraditional audiences, but should now pay equal attention to the needs of its nontraditional employees. Gone are the days when new Extension professionals grew up in 4-H and came from families who are long-time volunteers, visiting the county office at least once a week. Many of our employees in general (and particularly those hired in urban offices) do not have this institutional knowledge.

While hiring those with urban programming acumen within counties is paramount, perhaps more emphasis should be placed on hiring state-level specialists with similar backgrounds who can provide resources to urban personnel. Extension administrators should also be forward-thinking to better approach urban issues through a visionary lens. University administrators, especially those who are new to Land-Grant institutions, should seek educational opportunities and advice on best practices that can aid Extension's growth among urban audiences. While Extension is better understood and still considered a prominent entity in rural counties, administrators and supervisors should appreciate the uniqueness required in implementing urban programs. Furthermore, they should be able to reward urban Extension professionals for their innovation in developing meaningful programs geared toward the needs of their clientele.

In addition, Extension must also take heed of what is most important to urban clientele. Given that 4-H is a recognized entity valued regardless of localities, there should be a push to capitalize on unique programming that meets the needs of urban youth. Programs and resources related to home horticulture are also a worthy contribution on behalf of Extension, as noted by the respondents of this evaluation. It is imperative that Extension continues to provide audiences with what is necessary to address their needs; however, Extension must be astute when determining ways to meet the demands of other clientele who are unfamiliar with the organization. In order to reach them, Extension must invest in solid marketing plans to publicize programs and services. While extra caution must be taken not to exaggerate Extension's capacity to address urban challenges, we can focus on delivering education resources that are relevant and within the organization's scope.

Summary

Despite past work to enhance the relevancy of Extension in urban communities, questions remain. Young and Vavrina (2014) asked, "Are Extension's efforts to adapt to an increasing

urban landscape attaining the desired impact?" They noted a 1988 survey by Clemson University Extension of the South Carolina legislature that found only 11% of legislators understood Extension to have an educational focus (Miller, 1988). A 1995 national survey of public perceptions of Extension also showed that while the awareness of Extension has remained high, those using the organization's services has declined (Warner, Christenson, Dillman, & Salant, 1996). This study also showed lower usage among those in the Northeast and West, those in urban communities, those of younger ages, and whose who had lower education and income levels. A more recent study by Ohio State University in 2010 found that only 20% of respondents were familiar with Extension programs and services, and awareness was lower among younger respondents, those with lower incomes, and those in more urban areas (Loibl, Diekmann, & Batte, 2010).

Based on previous research, it can be observed that Extension's organizational history tends to lend itself to help define and comprehend its future trajectory. It is clear that a cookie-cutter approach to what has been sufficient in rural communities will not suffice in urban counties. There are simply more people who need to be served, and their needs call for more complex programs and strategies than what have been used during Extension's first century of existence. Moreover, there is a need for urban audiences to see Extension as an asset, just as an individual (but very influential) farmer in a rural county does. Extension has been working in rural communities since its inception, but it must be acknowledged that this legacy is not as salient in urban communities. As a solid, positive reputation has been established in rural society, Extension must be held accountable to build the same or similar image throughout larger towns and cities.

Each city, county, state, and region with their unique contexts deserves the opportunities and resources that Extension can offer. Now is the time to embrace the challenges faced by urban communities to demonstrate the fact that Extension can serve as a relevant organization equipped to address urban issues. This focus, in turn, does not take away from Extension's rural audiences that have been served since the organization's inception but promotes innovation among a rural–urban interface that inherently aligns with Extension's mission.

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