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Extension Administrators' Perspectives on Employee Competencies and Characteristics

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Cover Page Footnote

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Extension Administrators' Perspectives on Employee Competencies and Characteristics

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Abstract. Extension administrators discussed the competencies and characteristics of Extension professionals as they explored how Extension will need adapt to changing clientele, both in who they are and how they want to receive information. Extension education curriculum is not fully preparing future Extension employees in all required competencies, falling short on use of technology, diversity and pluralism, volunteer development, marketing, and public relations, risk management, and the community development process. Additionally, the Extension educator workforce development pipeline is not preparing a demographically representative population, leaving state administrators struggling to hire prepared professionals, especially those with in-culture competency (e.g., racial and ethnic minority and urban).

INTRODUCTION

Since its establishment in 1914 with the passing of the Smith-Lever Act, the Cooperative Extension System has needed to adapt continuously. Today, Extension is required to respond to pressure from significant environmental shifts (Elliott-Engel, 2018)—changing funding requirements; significant shifts in U.S. population demographics, including racial and ethnic minority changes and urbanization; and technology use patterns. To ensure successful adaptation, all Extension organizations will need to employ professionals with the requisite skills and experiences to ensure Extension is relevant to all citizens (Kutilek et al., 2002; Stone & Coppernoll, 2004). Extension administrators' perspective as supervisors should inform Extension preparation curriculum to ensure the best fit between who is being prepared for Extension education jobs, what they learn, and the Cooperative Extension System's employment needs.

WORKFORCE DEVELOPMENT SYSTEM

The labor market is a complex system informed by socioeconomic factors (Prastacos et al., 2002). The workforce development system is a theory of change for managing supply and demand within the labor market: Education organizations and communities contribute to the supply side; sectors, firms, and occupations contribute to demand (Jacobs, 2000). Supply and demand are influenced by intermediary activities that include recruitment, assessment,

training, placement, retention, and advancement (Workforce Innovation Networks, 2002).

The analogy of a pipeline is often used to describe the systems that work together to support career access for individuals and to support workforce development by businesses and nonprofits. The workforce development pipeline can effectively support optimal organizational outcomes when employee competencies are matched appropriately with desired outcomes for organizations from their workforce (Walker & Matarese, 2011).

EXTENSION WORKFORCE PREPARATION

Stone and Bieber (1997) introduced a competency-based understanding of Extension educator responsibilities to Extension. Ghimire and Martin (2011) introduced a developmental model for Extension educators with stages of competency development during undergraduate and graduate school training and during employment.

Four articles illuminate the competencies successful Extension professionals need to possess for successful employment, no matter those professionals' program areas. Liles and Mustian (2004) presented seven core competencies for Extension professionals in the North Carolina system. Scheer et al. (2006) reviewed the literature to create an entry-level Extension professional competency framework. Harder et al. (2010) and Berven et al. (2020) conducted Delphi studies—systematic expert consensus—to inform a competency framework. Table 1 combines all four studies'

Table 1. Extension Professional Competencies

Competency Category		Articles			
	Liles & Mustian, 2004	Scheer et al., 2006	Harder et al., 2010	Berven et al., 2020	Other articles supporting a specific competency
Knowledge of organization, professionalism, leadership, and management	Knowledge of the organization, professionalism, leadership	Extension knowledge, leadership, and management	Accountability, develop extramural funding, entrepreneurship development, fiscal management, knowledge of land-grant university and Extension system, organizational leadership development, personal leadership development, problem-solving skills, professionalism, self-management	Leadership skills, knowledge of organizational systems, partnership development skills, professionalism skills	Patterson, 1991 Ayers & Stone, 1999 Stone & Coppernoll, 2004 Ghimire & Martin, 2012 Lakai et al., 2014
Technology		Technology	Able to use technology for program delivery, IT skills		Ghimire & Martin, 2012
Communication, marketing, and public relations	Communications, human relations	Communications, marketing, and public relations	Communication skills including speaking and writing, interpersonal skills, relationship building	Communication skills	Patterson, 1991 Stone & Coppernoll, 2004 Caldwell, 2005 Lakai et al., 2014
Program planning, implementation, and evaluation	Ability to plan, design, implement, evaluate, and account for significant education programs	Program planning, implementation, and evaluation	Educational methodology; able to integrate Extension, research, and teaching; program implementation; program evaluation; program planning; teaching skills	Educational design skills	McLure et al., 2012 Diaz et al., 2020
Applied research		Applied research	Applied research skills		
Diversity and cultural sensitivity		Diversity and pluralism	Cultural sensitivity		Schauber & Castania, 2001 Fox & LaChenaye, 2015 McKee & Bruce, 2019
Volunteer development			Volunteer development	Volunteer management skills	Boyd, 2004
Theories of human development and learning (including diffusions of innovation)		Theories of human development and learning and diffusion [of innovation]			Patterson, 1991 Irani et al., 2003
Risk management		Risk management			
Community development process		Community development process			
Technical subject-matter expertise	Technical subject-matter expertise	Technical subject-matter expertise	Technical subject-matter expertise		

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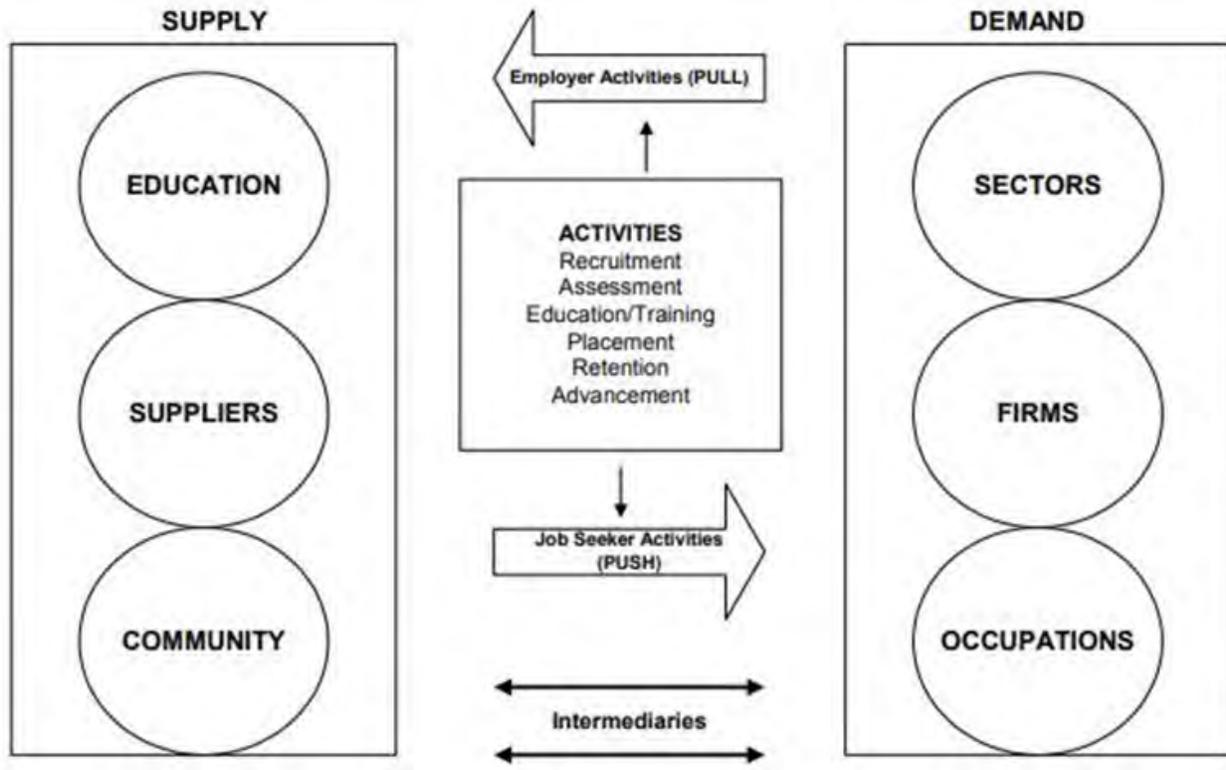


Figure 1. Characteristics of the labor market.

competency recommendations for Extension professionals for easier comparison. Numerous articles supported the need for professionals to be competent in a specific area, and those studies are listed in the far-right column.

Considerable congruence exists between the four proposed competency frameworks. Skills in leadership, program development, and implementation are consistent competencies across all frameworks. Nevertheless, inconsistencies remain between all frameworks. For example, only Scheer et al. (2006) identified theories of human development, risk management, and community development processes. Competencies of technology and diversity and cultural competency are introduced by Scheer et al. (2006) and remain in Harder et al. (2010), reflecting the growing emphasis on using technology and shifting community demographics. Yet, Berven et al. (2020) did not find technology or marketing a core competency.

No universal agreement was established on the competencies required of Extension professionals. Moreover, each of these competency frameworks focused on the supply side of the Extension workforce development system. Perspectives in the current literature were solicited from the development of the requisite competencies from the perspective of the Extension employees and those charged with educating future Extension employees. None of these frameworks sought insight from supervisors to explore the Extension workforce development system's demand side.

EXTENSION EDUCATION PROGRAMS' PREPARATION OF PROFESSIONALS

In a review of U.S. higher education institutions, Sands and Retallick (2018) found 17 offered Extension education graduate degree programs through agricultural and Extension education (AEE) departments. They were unable to take a census of undergraduate Extension education programs and courses. At the graduate level, courses offered by AEE departments were universal. Course topics include foundations of agriculture and Extension education; research including methods, statistics, and analysis; program planning; program evaluation; instructional methods; leadership/administration; communication/public relations/public policy; and practicum. Several key competencies for Extension professionals that are not identified in these course topics include technology, technical subject-matter expertise, diversity and pluralism, volunteer development, management, community development, and diffusion of innovation. In a delphi study focused on identifying doctoral Extension specialization an emphasis was placed on the competencies in understanding theory including diffusion of innovation, but, again here the need for technology, technical subject-matter expertise, diversity and pluralism, and management (including volunteers) was not emphasized (Harder et al., 2021). There is a misalignment between Extension education programs and the required competencies of Extension professionals.

WHO IS BEING PREPARED TO BE AN EXTENSION EDUCATOR?

In addition to ensuring that Extension educators' competencies match the field's needs, it is also vital to ensure that Extension educators are diverse and reflective of society. Published demographics of the Extension workforce are scant. Ewert and Rice (1994) encouraged diversification of the Extension workforce and provided systemic and organization-specific recommendations. However, no research articles analyzing Extension's workforce demographics have been published in the last quarter-century as far as we discovered.

Grogan and Eshelman (1998) discussed the need to attract and retain a diverse workforce. They shared three approaches: a) employers should review the job description for characteristics that would either attract or deter diverse candidates (Arnold & Place, 2010); b) employers should identify and personally encourage diverse candidates to apply; and c) individuals with hiring authority must identify pathways for diverse candidates to gain the credentials and experience needed for positions within their organizations (e.g., by creating internships for candidates to gain experience, and then promoting successful candidates into permanent openings). Angima and Carroll (2019) contributed to the recruitment conversation by emphasizing the need to deploy a systematic approach to ensure prospective candidates are supplied with accurate, appropriate, and comprehensive information prior to entering Extension organizations.

PURPOSE AND OBJECTIVES

This research aims to share 1862 land grant university (LGU) administrators' perspectives on the competencies Extension professionals need in order to be effective. Data from 1862 LGU Extension directors and state 4-H program leaders were analyzed to identify competencies they emphasized during conversations about Extension's need to adapt (Elliott-Engel, 2018). Additionally, in this study we researched what environmental factors Extension administrators perceive as challenges for their Extension organization and the 4-H program. Data were collected in Spring and Summer 2018.

METHODOLOGY

Twenty Extension administrators (state Extension directors [n=7], state 4-H program leaders [n=13]) were interviewed. These two populations were selected to provide two organizational vantage points. State Extension directors were selected for their holistic administrative vantage point. To ensure a second uniform perspective from across the country, administrators of 4-H programs were interviewed because 4-H programs are universal to all states. Complete demographics of those surveyed from these populations are relayed in Table 2.

Study participants represented 15 states and all four Association of Public and Land-Grant Universities administrative regions. The 15 states included in the study represented cross-sections of small to large, heavily urban to primarily rural, economically thriving to economically struggling, and politically liberal to conservative.

Participants completed a Strengths, Weaknesses, Opportunities, and Threat (SWOT) analysis for both Extension and the 4-H program for the state they work in. A SWOT analysis is a management assessment tool (Pickton & Wright, 1998). Participants were asked to complete the analysis as a mental exercise before the semi-standardized interviews were conducted for data collection purposes.

Data were transcribed verbatim. Through the data sensitization process of open coding and memoing (Charmaz, 2014), we realized that Extension administrators talked about their employees' competencies and characteristics as they were grappling with environmental factors requiring adaptation. As a result, administrator perspectives on employee competencies and characteristics emerged as a critical theme. To further refine and clarify this theme, a second qualitative data analysis was conducted once we were familiarized with the literature on Extension educator competencies. Data were coded using a coding book established using the competencies relayed in Table 1. We also allowed coding for additional competencies as they emerged in the coding process; no additional competencies were mentioned.

Member checking was conducted to support transparency (Creswell & Poth, 2017). Transcripts were sent to participants to review before data analysis commenced, and quotes were shared when the interview subjects' meaning needed to be confirmed. Collecting data from two separate populations to give perspective on the same phenomena supports triangulation (Corbin & Strauss, 2008).

RESULTS

Table 3 connects the competencies in the literature and the administrator's support of each respective competency category. Some competency categories are quite broad. For example, the first competency category covered leadership, management, and organizational knowledge. For such broad categories, more quotes have been included to support attention to the competency components' breadth. Administrators did not always speak in specific terms of a competency. Instead, administrators often referred to the issues Extension educators would need to address using specific competencies. Participants were assigned pseudonyms to protect their anonymity.

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Table 2. Participant Demographics

Category	Options ^a	State Extension director	State 4-H program leader	Total
Gender	Male	5	6	11
	Female	2	7	9
Age	18–29	0	0	0
	30–49	0	5	5
	50–64	5	7	12
	65+	2	1	3
Race/Ethnicity	White and non-Hispanic	7	12	19
	Hispanic	0	0	0
	Black	0	1	1
Years of Extension employment	0–10	1	2	3
	11–20	2	7	9
	21–30	2	3	5
	31+	2	2	4
Highest degree level earned	Bachelor's	0	0	0
	Master's	0	1	1
	Doctorate	7	12	19
University title level ^b	Director	2	11	13
	Department head	0	1	1
	Dean	4	1	5
	Chancellor	1	0	1

^aThe demographic survey questions were open-ended. The options relayed in this table represent the coded qualitative responses.

^bDemographic survey results were coded into these respective categories. Assistant, associate, or vice prefixes were all coded into the broad categories of the role's title.

PERSPECTIVES ON WHO IS IN THE WORKFORCE

In addition to the skills of Extension employees, administrators discussed employee demographics at length. Administrators recognized Extension educator populations are not representative of the state population demographics. “Rhonda” shared a ubiquitous perspective when she stated, “We have . . . a predominantly Caucasian staff.” Only one administrator, “Callie,” talked positively about the diversity of their staff, and that was not about racial diversity, saying, “We have a lot of LGBTQ+ individuals in our staff.”

Administrators identified a need for their Extension staff demographics to reflect their states' demographics. Administrators expressed similar sentiments as “Alfred” when he shared:

I think we could do a better job of diversifying the pool of people we hire so that our workers more closely match the demographics of the state. Sometimes that's easier said than done. We need to

find better ways to diversify our workforce to match the demographics of the population of our state.

The imperative to have a diversified workforce was underlined by one state director, “Brian,” who shared, “There are some parts of this state where a white person is not welcome,” and “[Extension has] to have the staff to serve those areas, too.” The importance of having a diverse, representative workforce and the imperative for Extension administrators to facilitate this was connected to being able to serve every sector of society.

Administrators recognized that the lack of racial and ethnic diversity among their current employees is a barrier to the participation by people of color in Extension programming. “Carolyn” shared:

We talk about underserved communities, but what are we doing to establish our presence within an underserved community? Typically [our staff

Table 3. Administrators' Perspectives on Extension Professional Competencies

Literature competency	State administrators' perspectives on the competencies
Knowledge of organization, professionalism, leadership, and management	<p>Our agents represent the organization in our communities and must be a pillar of the community. —“Alfred”</p> <p>Extension and engagement work [are] really about helping people address the most fundamental needs in their lives and that is a great responsibility that must be treated with professionalism. —“Joseph”</p> <p>Extension is about leadership; it's all about partnerships, collaborations, and . . . networks. Creating partnerships with the networks [we work in is] really important on how we develop [programming] and funds. —“William”</p> <p>We [must be] constantly looking at our return on investment, whether we're doing a good job and whether we're meeting the needs of the customers. —“Timothy”</p>
Technology	<p>We integrate technology and Extension and make sure both remain relevant and . . . effective. —“Ryan”</p> <p>I think Extension has a public opportunity—and public responsibility—to make sure clients and populations stay abreast of the latest technology and use [it] in our educational programming. . . . I believe that we have an obligation to try new treatments out there and engage people. Technology is always changing. —“Elizabeth”</p>
Communication, marketing, and public relations	<p>The other threat is about . . . [not having] positive marketing and communication about the impacts, true impacts of the 4-H program, and [being unable] to communicate well. —“Curt”</p> <p>A lot of times [the crisis] is around communication. Not communicat[ing] is what causes a lot of the issues [I deal with at the county level]. —“Brian”</p> <p>I'm sure [the public] wouldn't know unless we shared our marketing materials. —“Susan”</p> <p>Marketing is a huge opportunity for us [especially social media]. —“Robert”</p>
Program planning, implementation, and evaluation	<p>Organizational things do . . . need to go through a program planning process . . . to figure out how you get funding [and] put together larger constituency groups to talk about issues to build a strategic effort. —“Elizabeth”</p> <p>[Ensuring high-quality evaluation is] an ongoing process, we're always talking about needs assessment and evaluations. Sometimes it is hard to step up need assessment based on our [staff's skills.] —“Karen”</p>
Applied research	<p>[We must know the] impacts of our Extension programs. . . . I think that's going to be important so that the general public can appreciate and understand what we have to offer. We are moving toward . . . a more rigorous evaluation system [that will help contribute to the youth development literature]. —“James”</p> <p>Our [employees] have expectations to conduct research. I love having [this] quality of a researcher . . . developing research and translating research, [and] disseminating it to new programs. I think it allows for us to be strong and innovative at the county level. —“Susan”</p>
Diversity and cultural sensitivity	<p>The people who [understand how to serve underserved populations] are doing a great job with it. But they're a small minority, so we are making advances in reaching new audiences; but it is not enough, and it is not fast enough. . . . We started an En Espanol tab on our website because we don't have enough bilingual staff. —“Rhonda”</p> <p>We don't have enough bilingual staff to serve the 20% of our community that speaks Spanish. —“Brian”</p> <p>In our [large urban centers] we hire folks that were 4-H members in rural counties, and they just are not successful in our urban centers, they don't know the culture, we need to figure out how to attract a different type of employee that understands the urban landscape. —“Nancy”</p> <p>We do not have a diverse staff at all. We only have two people of color . . . out of all our 80 plus educators. —“Ryan”</p>
Volunteer development	<p>It's a huge investment of resources . . . managing our volunteers. —“Susan”</p> <p>We've got about 11,000 volunteers . . . with our population density that's not too bad, but we need to see that increase. So, that's one of our weaknesses. We need to see an increase in our volunteer base, which [we] must work on. —“Sam”</p> <p>We have so few positions we [must] implement our work through volunteers, thus we need to support and steward those individuals. —“Callie”</p>
Theories of human development and learning (including diffusions of innovation)	<p>[Employees are] helping move people from one place to a different place, whether that means they're growing, learning, rethinking, [or] having more opportunities for life changes. —“Sarah”</p> <p>[Employees are using] ages and stages [of youth development to inform] classroom management, experiential learning and increase learning. [It is important] to make sure [employees] continue to use those strategies. —“Susan”</p>

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Table 3. (continued)

Risk management	Stewardship . . . means that we're going to deal with the difficult stuff [money, youth safety] because of the whole purpose above our own comfort level. —“Elizabeth” The things that keep me up at night are the headlines . . . when things go bad, whether that is youth safety risk, or someone steals money. I spend a lot of time thinking about [how to help] our Agents [who are] are working with volunteers so we don't have those headlines. —“Timothy”
Community development process	They must organize people to get the job done. —“Alfred” [Our employees] must first know our community before [they] can help those who are in it. We have to facilitate learning at town halls, and [sometimes through] legislative processes. —“Joseph”
Technical subject-matter expertise	I study harder today than I ever have because every single day I'm confronted with the problem that oftentimes I know absolutely nothing about, you know, so in order for me to figure out what we need to do to address the white fly issue in [state], I got to figure out first what are white flies? —“Carolyn”

experience] a language barrier or a racial barrier, especially with our Latino communities [which] are a close-knit community. If you don't speak the language, if you don't look a certain way, then they're not going to really embrace you and allow you to come into their community to do a program. But I think that's an excuse. I think we need to overcome that and figure out ways to be more culturally competent and relevant, and we can do that by training our current people or we can hire employees who reflect [the community].

Administrators valued technical diversity and cultural sensitivity skills (e.g., Spanish-language skills, cultural competency) as appropriate for all employees. They also recognized that individuals from different lived experiences brought cultural capital to the organization.

Benefits associated with diversifying the workforce varied from improving gatekeeper status to being able to draw on employees' bilingual skills and cultural competency to creating the potential for individuals to associate and bond with individuals who share similar characteristics (McPherson et al., 2001).

RESULTS IN REVIEW

Comprehensive support for all competencies illuminated in the literature was found in our analysis of the administrators' discussion of environmental factors driving the need for adaptation by their organizations (Table 1). Additionally, Extension administrators identified technology, organizational and volunteer management, and community development as essential skills, and Extension education graduate programs do not uniformly offer these courses (Sands & Retallick, 2018). A comprehensive list of competencies Extension administrators valued and expected in their professionals is relayed in Table 4.

The coursework used to prepare Extension educators in graduate-level AEE programs (Sands & Retallick, 2018) is mismatched with the necessary Extension educator competencies identified in the literature and our research. Thus, the current preparation curricula for Extension educators are out of line from competencies Extension administrators expect in their workforce. Furthermore, administrators at this point have not systematically been able to hire individuals with the competencies and lived-experience characteristics needed to implement the organizational mission. Therefore, the Extension labor workforce pipeline needs revision.

DISCUSSION

The mismatch between education and occupational requirements is problematic for the success of the employee and the organization. For the employee, the mismatch means there is stress in meeting the expectation for job performance. And, for the firm, there is potential dissatisfaction with their new employee. A mismatch between the workforce development pipeline and required competencies results in the Extension organization needing to invest resources in on-the-job training and remediation or human resource supervision. For both the employee and the organization, the mismatch results in a reduction in performance toward the organization's objectives.

Extension administrators also identified cultural competency as essential for employee success. Cultural competency was recognized as a learned skill (e.g., cultural competency or language skills) and a lived experience (e.g., race, ethnicity, urban residence). Extension education graduate programs do not include this training, and this lack of preparation is supported by Extension administrators who are identifying this gap in their employee pipeline. Additionally,

administrators are struggling to hire individuals with relevant lived experiences or those with cultural competencies to serve the populations that are being underserved in their communities with other requisite Extension education skills. The workforce development model highlights that education is supported by the community and suppliers, thus to change who is being educated, a recruitment strategy change is needed.

This study highlights the need for a wholesale assessment of the Extension workforce development pipeline. Even as the current literature is still vacillating on what competencies are necessary for Extension professionals to possess, gaps remain in the literature on other aspects of the Extension workforce development pipeline. These gaps pertain to the trajectory of non-Extension users into careers in Extension, the recruitment of individuals from diverse backgrounds into careers in Extension, and how post-secondary undergraduate and postgraduate programs can formally prepare Extension professionals for their career.

IMPLICATIONS

The workforce development pipeline for Extension education is not perfectly aligned with the competencies Extension administrators emphasized. To address this mismatch, Extension can approach solutions at different stages in the workforce development pipeline. Improvements can be made at pre-employment preparation (e.g., higher education training), recruitment (Silliman et al., 2020), or on-boarding (Angima & Carroll, 2019).

Pre-employment preparation can include several approaches. First, a revision of Extension education needs to focus on adapting the higher-education Extension curriculum to include more of a focus on cultural competency, technology and marketing skills, organizational and volunteer management, and community development.

Recruitment efforts also must include strategies that result in a more diverse population of candidates applying for and becoming successful in Extension positions. The Extension system could adopt a recruitment campaign, like agriculture education's "Teach Ag!" to attract more potential and diverse candidates to the field. Some recruitment efforts have already been implemented (e.g., college student internships [Grotta & McGrath, 2013; Johnson et al., 2019]).

In addition to changing the educational components of AEE departments' offerings, state Extension systems should develop recruitment and on-boarding professional training for new hires. The training focus should emphasize the competencies administrators recognize as valuable for their employees. Additionally, an internal training or professional advancement model (Seevers & Dormody, 2010) can bring individuals into the organization with the appropriate lived

experiences who may not have the requisite professional credentials or specific competencies.

LIMITATIONS AND NEXT RESEARCH STEPS

The results relayed in this study reflect an emergent theme in Extension today, as the authors sought to understand the environmental challenges 1862 LGU Extension administrators—directors of Extension and 4-H program leaders—were facing. Further research is needed to connect Extension education competencies to undergraduate Extension degree preparation efforts, to see how undergraduate degree programs recruit student populations, and to evaluate influences on student choices to enter an Extension education field. Insights and perspectives from all Extension program areas and 1890 and 1994 LGU institutions on employee competencies are needed to inform a complete picture of required competencies from the supply side. Using the labor market pipeline perspective, researchers should explore the value placed on specific competencies from the front-line employee, supervisor, and future employees' higher-education preparers.

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