Extension Education Trends and Research Needs: Views from Professionals and Faculty

Joseph L. Donaldson[1], Donna L. Graham[2], Shannon Arnold[3], Lisa K. Taylor[4], and K.S.U. Jayaratne[5]

Abstract

This study sought to understand Extension Education's trends and research needs as perceived by members of the American Association for Agricultural Education (AAAE) and Joint Council of Extension Professionals (JCEP) by comparing and contrasting findings from questionnaires using open-ended questions. Both groups identified changing technology and new audiences as key trends requiring Extension to adapt, and JCEP respondents noted makers and entrepreneurs as prominent new audiences. For Extension Education research needs, both groups prioritized research to heighten professional development among Extension professionals. JCEP respondents desire Agricultural and Extension Education (AEE) Departments to lead research in Extension administrative leadership. On the contrary, AAAE respondents prioritized Extension program evaluation research. Regarding Extension professional development, JCEP respondents identified program planning and evaluation, but AAAE respondents named research methods as prioritized needs. JCEP respondents prioritized practical experiences in Extension Education college courses, and AAAE members reported some internships, practicums, and experiential learning in their AEE curriculum. The results have implications for AEE Departments in planning professional development for Extension professionals and college instruction producing Extension-career-ready graduates. Recommendations emphasize the need to coordinate college curriculum and professional development and to prepare students for Extension careers.

Keywords: extension trends; research needs; extension education

[1] Joseph L. Donaldson is an Associate Professor and Extension Specialist in the Department of Agricultural and Human Sciences at the North Carolina State University, 202 Ricks Hall, Raleigh, NC 27695, joseph_donaldson@ncsu.edu

[2] Donna L. Graham is Director of the School of Human Environmental Sciences and University Professor in the Department of Agricultural Education, Communication, and Technology at the University of Arkansas, 205 Agriculture Building, Fayetteville, AR 72701, dgraham@uark.edu

[3] Shannon Arnold is Professor in the Department of Agricultural Education and Technology Education at Montana State University, 230 Linfield Hall, Bozeman, MT 59717, shannon.arnold@montana.edu

[4] Lisa K. Taylor is Assistant Professor and County Extension Educator at University of Nevada, Reno, 1664 Virginia St., Reno, NV 89557, lktaylor@unr.edu

[5] K.S.U. Jayaratne is Professor and Extension Evaluation State Leader in the Department of Agricultural and Human Sciences at the North Carolina State University, 200 Ricks Hall, Raleigh, NC 27695, ksjayara@ncsu.edu

Introduction/Literature Review

The Smith-Lever Act (1914), the enabling legislation for the Cooperative Extension System, provides a framework whereby land-grant universities have a federal mandate for extending their intellectual resources to people not enrolled in for-credit college courses. Extension Education has been described as the "largest problem-solving system in the world" (Rathore, 1999, p.7). The Extension System is unusual among public agencies. It is not limited to a single thrust but has built-in flexibility to adjust to changing needs and set new priorities (Warner & Christenson, 1984). Faculty in Departments of Agricultural and Extension Education (AEE) are vital to this mission. AEE faculty provide formal instruction in Extension as part of academic degree programs; research to improve Extension processes and practices; and ongoing professional development for Extension professionals working in the field.

To assist AEE faculty in addressing these varied roles, studies of trends and research needs have proven instructive. Cochran et al. (2012) studied Ohio Extension professionals' perceptions of societal trends and implications for Extension. This work identified the need for Extension professionals to "become proficient in technology use and application; life and work; relationships; and diversity" (p. 47) representing both technical and social complexities. Patton (2011) has described "complicated situations" that involve both technical and social complications (p. 87). These situations are characterized by the need to integrate expertise while engaging many stakeholders' needs and perspectives. Consider the complications surrounding technology: the rise of social media (Mirando et al., 2012); the interloping technologies of Siri, Google Assistant, and Alexa (King, 2018); and teleworking and remote work (Hill et al., 2020; Israel et al., 2020) inclusive of entrepreneurs and makers – those who produce digital designs, fabricate, and market, often online (Buxmann & Hinz, 2013). From the social standpoint, the predominant social movement of our time, #BlackLivesMatter (Patton & Njoku, 2019); consumer preference and drive for local food (Scheinberg, 2013); and the youth leadership dynamic in varied social movements (Webster, 2016) all present remarkable socio-cultural shifts.

Likewise, changes and trends in the Cooperative Extension System and its funders are notable. The eXtension Foundation began as a resource for expediently delivering information to the public, and state Extension directors have now focused eXtension Foundation's work on innovations and professional development (Geith et al., 2018). In some states, Extension has shifted its staffing model from county-based to regional (Schmitt & Bartholomay, 2009; White & Teuteberg, 2015). Adding to these changes, the rise of competitive federal funding for national strategic interests, such as animal agriculture, influences Extension to refocus program priorities (Mirando et al., 2012).

All these developments precipitate the demand for current information about trends and research needs with a national lens of Extension Education. Specifically, how can AEE faculty plan academic, research, and Extension programs that are sensitive to current perceptions of trends and research needs? We, faculty in AEE Departments, are obligated to ensure our curricula, research, and engagement programs meet the needs of current and future Extension professionals and the society in which they serve – this is the impetus for this study of trends and research needs.

Theoretical Framework

The theoretical framework guiding this study were the trends and drivers for change influencing the worldwide Extension reform identified in a recent United Nations Food and Agriculture Organization report (Blum et al., 2020). The global trends included Extension systems with "enhanced horizontal collaboration and multidisciplinary teams" as opposed to traditional, hierarchical organizations (p. 2). Additionally, Extension organizations around the world are transitioning from a focus on agricultural production and technology development to a greater emphasis on rural development and client responsiveness.

Agricultural developments and the need to manage innovations, among other factors, are driving these changes. In the agricultural sector, tremendous technological advancements are occurring in the face of monumental challenges including climate change and vulnerable rural and limited resource populations (Swanson, 2011). Innovation management describes a broad range of tasks required of Extension professionals such as communicating research needs, organizing clients into groups, facilitating community access to technology, and advocacy for policy and regulatory changes (Blum, et al., 2020). However, traditionally, Extension professionals disseminated research-based information and resources to clients. To complement these global perspectives, we need a national perspective on trends affecting Extension and research needs that would contribute to Extension programming for the Cooperative Extension System in the United States.

Purpose/Objectives

The present study's overall purpose was to understand trends and needs for Extension Education as perceived by members of the American Association for Agricultural Education (AAAE) and Joint Council of Extension Professionals (JCEP). The purpose of this study aligns with AAAE National Research Priority six (Vibrant, Resilient Communities), which highlights the need to understand how Extension programs impact local communities (Graham et al., 2016) and AAAE National Research Priority three to advance the Extension and agricultural workforce (Stripling & Ricketts, 2016). The research questions were:
1. What trends will impact the Cooperative Extension System in the future?
2. What research needs would contribute to Extension programming?

Methods

This was a qualitative study of members of two professional groups using two similar questionnaires. Questionnaires are appropriate for qualitative research when perspectives are needed from groups. The North Carolina State University Institutional Review Board approved the studies of AAAE members (Number 20537) and JCEP board members (Number 21111).

Participants

Participants were members of the AAAE and the JCEP. AAAE is composed of AEE college faculty and others focused on teacher education, Extension Education, leadership, and communications in agriculture. The JCEP is an advocacy group consisting of the past president, president, and president-elect of the seven Extension professional associations. The JCEP associations are Association of Natural Resource Extension Professionals; Epsilon Sigma Phi; National Association of County Agricultural Agents; National Association of Community Development Extension Professionals; National Association of Extension 4-H Agents; National Association of Extension Program and Staff Development Professionals; and National Extension Association of Family and Consumer Sciences. The JCEP members' years of Extension experience and service in their individual organizations provide them with considerable expertise and insight into Extension.

Procedures

The researchers developed the questionnaires used for both audiences with open-ended questions regarding trends affecting Extension and research needs for Extension Education. All questions were opened-ended, and the researchers examined the questions carefully to ensure clarity and face validity, reduce any perceived biases, and created the most appropriate sequence (Marshall & Rossman, 2006). Researchers used Qualtrics Research Suite for formatting and deploying the questionnaires. AAAE members were contacted via an organizational list serve, and email addresses of all JCEP board members

were obtained from their website. A sample question was: "What trends will impact the Cooperative Extension System in the future?"

For the AAAE members, the questionnaire was composed of eight open-ended questions. The online questionnaire was conducted from December 2019 to February 2020, and one initial contact and three reminders were sent via email consistent with the Total Design Method (Dillman et al., 2006). The AAAE has 848 total members consisting of student, faculty, life, and affiliate member. At the time of the study, there were 154 active members. Of the 154 active members, 32 completed the questionnaire resulting in a 20.7% response rate. The majority (22 or 68.7%) being tenure-track faculty, and other roles represented were graduate students, non-tenure track faculty, state Extension specialists, County Extension Director and County Extension Agent.

For the JCEP board members, six open-ended questions were used. One researcher reviewed the instrument with two Extension agents consistent with Singleton and Straits' (2012) instructions about having a focused discussion about an instrument with a small group. Based on the Extension agents' feedback, researchers amended the instructions to advise respondents that AEE Departments in practice have multiple names, as follows: "AEE is being used to refer to departments with varied official names including Departments of: Agricultural Education, Technology & Innovation; Agricultural Education, Communications, and Technology; Agricultural and Human Sciences; and Agricultural Leadership, Education, and Communications."

The JCEP online questionnaire was conducted over a four-week period in September 2020; one initial contact and three reminders were sent via email to the JCEP board members (see Total Design Method by Dillman et al., 2006). The population consisted of 21 members of the 2020 JCEP board, and of the 21 members, 10 completed the questionnaire, yielding a 47.6% response rate.

Researchers analyzed the data from both questionnaires via an open coding approach whereby themes emerge from the data (Creswell, 1998). We used microanalysis to complement our coding by reading and discussing each other's codes and themes. Microanalyses help build validity and reduce the possibility of making broad conclusions too quickly, which is a threat when using only general analysis (Corbin & Strauss, 2008). We read and re-read responses to each question and coded line-by-line. In vivo codes were used, that is, codes that used the same wording as the respondents. The codes were organized into like groups, or themes. In terms of reflexivity, all of the researchers are AAAE members, and the researchers did not respond to the questionnaire. Of the five researchers, four are AEE faculty members and one is a county Extension faculty member. In analyzing the data and presenting the findings, we used frequencies to demonstrate the incidence of responses. This helped to ensure that our own voice and Extension experiences did not avert the voices of the participants.

Findings

In this findings section, direct quotations from research participants are used. The applicable respondent number is included with each quotation using the convention of organization and participant number, as in "JCEP 2" meaning participant number 2 of the JCEP group. Not all participants responded to every question as noted below. Frequencies and percentages are described to highlight the incidence of repeated responses.

Research Question 1: What trends will impact the Cooperative Extension System in the future?

AAAE and JCEP participants identified increasing technology and decreasing funding as top trends that will influence Cooperative Extension's future. Both groups identified technology; decreased funding;

changes in the working conditions of the employees; and changing audience demographics such as makers and entrepreneurs (see Buxmann & Hinz, 2013) as new audiences.

Technology will have the most significant impact on Extension in the future, according to all ten JCEP respondents. Changes in technology will influence (a) Extension audiences, (b) trust in Extension as a source of research-based information, and (c) organizational conditions for Extension employees. Technology would allow for the delivery of programs to non-traditional audiences (70%; 7 of 10). "New collaborations will develop because client access can be anywhere and at their convenience" (JCEP 1). Using virtual learning platforms will provide for "opportunities to reach more non-traditional audiences and be more convenient for our traditional audiences" (JCEP 2). It will allow "for rapid transmission of research solutions to complex problems to communities across the country" (JCEP 6). Yet, the increased use of technology could have a negative impact by "less demand for our service" (JCEP 1) or "lack of visibility through a physical presence" in the community (JCEP 6). It could result in clientele "using the internet or social media sources for information" (JCEP 7), and a "distrust of media might bleed" into programs and information provided by Extension professionals (JCEP 10). "People can access so much information on the internet, will Extension's information be considered research-based?" (JCEP 6). JCEP 2 expressed concerns that rural broadband and other emerging technologies will "divide many of the smaller, rural communities," so that both these communities and Extension's primary clientele base will be diminished.

Technology will impact the organizational conditions of the future Extension professionals (40%; 4 of 10). Extension professionals "will spend less time traveling and more time on programming" (JCEP 1). Options for telecommuting will allow for flexible hours, positively optimizing work-life balance. Teleworking will also allow for non-place-based employees (JCEP 2), which may increase the talent pool for hires. Telecommuting will produce "a happier and healthier workforce" (JCEP 2) as agents will be "allowed to be creative and innovative with their programs" (JCEP 3). The use of technology will demand increased training and skills for employees for effective delivery and programming for virtual audiences. AAAE respondents (17%; 5 of 29) felt technology would continue to alter the programming offered to Extension audiences through online training and outreach.

AAAE respondents mentioned the changing demographics and the shift from rural to urban would result in diversified clientele, with 17% (5 of 29) naming growth in urban-focused programs, urban audiences, or urbanization specifically. This diversity will create a "need to address urbanization balanced with the need to connect to traditional agriculture" (AAAE 15). These changes will create greater demands and stress on the Extension workforce. AAAE 2 feels programming efforts will change because there will be "a breaking down of silos related to program areas to focus more on issues." Similarly, AAAE 7 shared "program area groups will serve the state with program coordinators hired rather than county agents." One-half (50%; 5 of 10) JCEP respondents named new audiences for Extension programming with entrepreneurs and makers as prominent examples.

Another major trend identified was decreased funding, specifically dwindling state and federal resources (40%; 4 of 10) that will negatively impact Extension in the future according to the JCEP respondents. The lack of funds will lead to fewer positions and salary compression. "Higher salaries to hire qualified youth professionals" (JCEP 9) will increase the "gap of frontline staff and campus employees" (JCEP8) and retention of agents (JCEP 3). Similarly, AAAE respondents (24%; 7 of 29) felt a reduction in funding would lead to the closing of county offices, centralized offices, shared faculty across counties, multi-county hires, and workload management that impact programming. AAAE 28 stated that "less financial support will result in fewer faculty and staff that are required to do more."

The lack of Extension agent preparation in technology usage, working with urban audiences or new programming initiatives will create a need for more training and development. Programming efforts will focus on integrated problem-based issues such as climate change where agents work across program areas

(40%; 4 of 10) and increased efforts to larger community problems (30%; 3 of 10) according to JCEP respondents. Other programming changes provided include the use of more on-farm research, big data, and a focus for family and consumer sciences programming on family health.

It was projected that Extension professionals will not be prepared to work with urban audiences, have less pre-service development, and suffer from stress from working multi-counties. Additional stress will occur due to the evaluation requirements, publishing in peer-reviewed journals, and tenure. All these changes will create employees that "are being stretched too thin" (AAAE 24). Table 1 delineates the major themes that emerged for AAAE and JCEP respondents; percentages for the most frequent responses; and representative comments illustrating themes.

Table 1

Trends Impacting Cooperative Extension in the Future

Major Themes (Percentage of Responses)	Representative Comments
AAAE Key Themes (N=29)	
1. New audiences, specifically urban (31%)	1. "Population shifts from rural to urban" (AAAE 19)
2. Increasing technology (17%)	2. "Online delivery of programs" (AAAE 14)
3. Decreasing funding (17%)	3. "Less financial support will result in fewer faculty and staff that are required to do more" (AAAE 28)
JCEP Key Themes (N=10)	
1. Increasing technology (100%)	1. "Rapid transmission of research solutions to complex problems to communities across the country" (JCEP 6)
2. New audiences – makers, homesteaders, and entrepreneurs (50%)	2. "Trends of makers…entrepreneurship are…positive areas for Extension to plug in" (JCEP 10)
3. Decreasing funding (40%)	3. "Dwindling resources; budget cuts/shortfalls at state and local levels" (JCEP 4)

Note. Percentages represent the most frequent responses and will not equal 100% as one participant may have shared multiple responses, and not all respondents answered every question.

Research Question 2: What research needs would contribute to Extension programming?

Both questionnaires asked respondents to provide their opinions on research needs for Extension Education. It is notable that the question specifically asked about research needs, but both JCEP and AAAE participants described this priority in the vein of professional development research needs. Of the 29 AAAE responses, the most frequent were: (a) Extension agents and their professional development needs; (b) Extension program evaluation; and (c) healthy and productive people and communities. Ten of the 29 respondents (34%) described Extension professionals and their professional development needs as research needs. These needs ranged from "onboarding, retention, and employee well-being" (AAAE 24) to "what competencies are required of Extension agents" (AAAE 22). Respondents desire research in "management skills needed for County [Extension] Directors" (AAAE 1). AAAE members acknowledged research on Extension competencies should include soft skills needed to be a successful Extension professional.

Nearly one in four AAAE respondents (24%; 7 of 29) named Extension program evaluation as a research priority. Respondents want Extension-specific research to address accountability, program impact, evaluation practices, and to collect "data about common elements of the Extension discipline throughout

higher education…" (AAAE 29). Additionally, nearly one in four AAAE respondents (24%; 7 of 29) named healthy and productive people and communities as research needs. The research needs named included "Extension focused in indigenous populations" (AAAE 1), "mental health" (AAAE 4), and "how to promote resilient, responsive rural communities" (AAAE 19). Other research needs named were Extension needs assessment and programming. Respondents noted that needs assessment research should solicit input from Extension's current clients and stakeholders and be inclusive of rural and urban audiences. In terms of Extension programming, respondents recognized diverse research needs including "technology integration into programs" (AAAE 11) to "supporting entrepreneurs" (AAAE 12).

For JCEP members, major themes that emerged were: (a) translating research and providing professional development useful to local Extension programming; and (b) understanding Extension administrative leadership. Seven of the 10 JCEP respondents described the need to translate research and provide professional development applicable to Extension's frontlines including research to "determine what makes a great County Extension Center, and separately, what makes a great Extension educator" (JCEP 7). Likewise, JCEP 3 shared that "the immediate priority would be to assess each professionals' individual needs" with follow-up professional development to strengthen the Extension professionals' programming.

Five of the 10 participants mentioned administrative leadership as a need for research. JCEP members desired research to understand effective state and county Extension administrators. They are interested in "Extension professionals' perceptions of Extension leadership at the administrative level" (JCEP 1) and the implications of this administrative leadership on employee and volunteer retention, morale, and motivation. Respondents mentioned the need to determine key characteristics of successful Extension leaders to create teams that are more effective and to understand "long term and short term" consequences of administrative decisions (JCEP 6).

Other research needs mentioned were Extension volunteerism, technology for program delivery, and stakeholders. "On campus faculty would probably be more helpful if they focused on creating training materials, factsheets, and videos that help county faculty with program delivery, stakeholder relations, and technology" (JCEP 2). JCEP members are looking to AEE Departments to conduct research in volunteerism, specifically to address "how to recruit today's volunteers" for Extension programs (JCEP 9). JCEP board members perceive that AEE faculty should lead research in technology as it relates to educational program delivery. Finally, JCEP respondents describe the need for AEE faculty to invest "in research/evaluation to better communicate impact of Extension programs on communities and business sectors" (JCEP 8). Table 2 delineates the major themes that emerged for AAAE and JCEP respondents; percentages for the most frequent responses; and representative comments illustrating themes.

Table 2

Research Needs Suggested for AEE for Contributing to Extension Programming

Major Themes (Percentage of Responses)	Representative Comments
AAAE Key Themes (N=29)	
1. Extension professionals and their needs (34%)	1. "Onboarding, retention, and employee well-being" (AAAE 24)
2. Extension program evaluation (24%)	2. "Data about common elements of the Extension discipline throughout higher education" (AAAE 29)
3. Healthy and productive people and communities (24%)	3. "How to promote resilient, responsive rural communities" (AAAE 19)

Table 2

Research Needs Suggested for AEE for Contributing to Extension Programming, continued…

JCEP Key Themes (N=10)	
1. Translate research and provide professional development applicable to Extension's frontlines (70%)	1. "Determine what makes a great County Extension Center, and separately, what makes a great Extension educator" (JCEP 7)
2. Administrative leadership (50%)	2. "Extension professionals' perceptions of Extension leadership at the administrative level" (JCEP 1)

Note. Percentages represent the most frequent responses and will not equal 100% as one participant may have shared multiple responses, and not all respondents answered every question.

Conclusions/Recommendations/Implications

This study provided important insights about how AAAE members and JCEP board members view trends influencing Extension and research needs. Both groups described how new and emerging technologies were major trends affecting Extension, consistent with trends identified in a recent United Nations Food and Agriculture Organization report (Blum, et al., 2020). Both AAAE members and JCEP board members indicated that professional development in information technology is a key need.

In terms of research needs for Extension Education, both AAAE and JCEP groups described professional development of Extension professionals. Perhaps this is in response to the fact that many Extension professionals, as found in one Florida study, enter the profession without the requisite competencies needed for professional success (Benge et al., 2020). However, the focus on professional development may not fully recognize the social science research capabilities of AEE faculty. Nonetheless, for AAAE, research needs were onboarding, retention, County Extension Director management skills, and professional competency issues. JCEP described these professional development needs in terms of competencies, individual needs, and effective county Extension units. JCEP, largely than AAAE members, described competencies as a research priority. This demonstrates the salience and application of past Extension competency studies (Harder et al., 2009; Laki et al., 2014) and may indicate JCEP respondents feel technological and societal changes need greater consideration in these competency frameworks. Professional development needs should also explore changes in Extension organizational structures and ways to serve rural and limited resource populations (Swanson, 2011).

The AAAE questionnaire took place just before COVID-19 became a public health emergency in the United States. The JCEP questionnaire occurred during the eighth month of this public health emergency and its associated restrictions such as one state's face covering mandate and restrictions on assemblies (see Exec. Order No. 176, 2020). Principally, a host of COVID-19 precipitating circumstances including remote work, financial challenges, and personal stress have affected Extension professionals (Israel et al., 2020) which certainly may have had great influence on study participants' Extension Education perspectives. These precipitating circumstances may have contributed to the low response rate, and may have influenced respondents to place greater emphasis on technology.

The small response rate (n=32; 20.7%) among AAAE members was a limitation of this study. We conducted a post-hoc review of the AAAE membership and found only 56 (21%) AAAE members indicate extension, informal, or non-formal education as one of their research interests in either the AAAE membership database or AAAE members' University profile webpage. This smaller group of AAAE members may have been the most interested in responding to this survey.

One important limitation of this study is that researchers have a narrow understanding of the highly complex interactions of people and different ideas when using questionnaires as opposed to other methods

of qualitative research such as interviews and observations (Marshall & Rossman, 2006). Interviews would be helpful in gaining an in-depth of understanding to the open-ended responses shared in this study.

Future research should examine effective Extension administrative leadership and technology integration as both groups described these issues. The major implication of this study is that it highlights the trends and research needs that AEE faculty should be cognizant of as they plan and conduct academic, Extension and research programs.

References

Benge, M., Muscato, A.F., & Beattie, P.N. (2020). Professional development needs of early-career extension agents beyond the first year: Florida county Extension director perspectives. *Journal of Extension, 58*(6). https://joe.org/joe/2020december/rb1.php

Blum, M.L., Cofini, F., & Sulaiman, R.V. (2020). *Agricultural extension in transition worldwide: Policies and strategies for reform*. Food and Agriculture Organization of the United Nations. http://www.fao.org/3/ca8199en/CA8199EN.pdf

Buxmann, P., & Hinz, O. (2013). Makers. *Business & Information Systems Engineering, 5*(5), 357-360. http://dx.doi.org.prox.lib.ncsu.edu/10.1007/s12599-013-0283-3

Cochran, G.R., Ferrari, T.M., & Y.C. (2012). Trends affecting Ohio State University extension in the 21st century and the implications for human capital. *Journal of Agricultural Education, 53*(2). https://doi.org/10.5032/jae.2012.02043

Corbin, J., & Strauss, A. (2006). *Basics of qualitative research* (3rd ed.). Sage Publications.

Creswell, J.W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Sage Publications.

Exec. Order No. 176, N.C. Gen. Stat. § 166A-19.10 (2020).

Geith, C., Immendorf, M.C., Griffin, A., & Stiegler, C.T. (2018). Informing innovations through deeper insight on strategic priorities and expansive ideas. *Journal of Extension, 56*(5). https://joe.org/joe/2018september/comm2.php

Graham, D.L., Arnold, S., & Jayaratne, K.S.U. (2016). Research Priority 6: Vibrant, resilient communities. In T. G. Roberts, A. Harder, & M. T. Brashears (Eds.), *American Association for Agricultural Education National Research Agenda: 2016-2020*. Gainesville, FL: Department of Agricultural Education and Communication.

Harder, A., Mashburn, D., & Benge, M. (2009). An assessment of Extension Education curriculum at land–grant universities. *Journal of Agricultural Education, 50*(3), 22–32. https://doi.org/10.5032/jae.2012.0204310.5032/jae.2009.03022

Hill, P., Ali, A.D., Narine, L.K., Spielmaker, D., & Schmutz, A. (2020). Evaluating Utah's rural online initiative: Empowering rural communities through remote work. *Journal of Extension, 58*(5). https://www.joe.org/joe/2020october/rb4.php

Israel, G.D., Diehl, D.C., Galindo, S., Ward, C., Ramos, A.K., Harrington, M., & Kasner, E.J. (2020). Extension professionals' information use, protective behaviors, and work-life stress during the COVID-19 pandemic. *Journal of Extension, 58*(6). https://joe.org/joe/2020december/a1.php

Laki, D., Jayarante, K.S.U., Moore, G.E., & Kistler, M.J. (2014). Identification of current proficiency level of Extension competencies and the competencies needed for Extension agents to be successful in the 21st Century. *Journal of Extension and Human Sciences, 2*(1). https://www.jhseonline.com/article/view/584

King, D. (2018). Hey, Siri, what is the future of Extension? *Journal of Extension, 56*(5). https://joe.org/joe/2018september/comm1.php

Marshall, C., & Rossman, G.B. (2006). *Designing qualitative research* (4th ed.). Sage Publications.

Mirando, M.A., Bewley, J.M., Blue, J., Amaral-Phillips, D.M., Corriher, V.A., Whittet, K.M., Arthur, N., & Patterson, D.J. (2012). Extension Education symposium: Reinventing Extension as a resource – What does the future hold? *Journal of Animal Science* 90(10), 3677-92. https://doi.org/10.2527/jas.2011-5074

Patton, L.D., & Njoku, N.R. (2019). Theorizing Black women's experiences with institution-sanctioned violence: a #BlackLivesMatter imperative toward Black liberation on campus, *International Journal of Qualitative Studies in Education, 32*(9), 1162-1182. https://doi.org/10.1080/09518398.2019.1645908

Patton, M.Q. (2011). *Developmental evaluation: Applying complexity concepts to enhance innovation and use*. Guilford Press.

Rathore, O.S., Chauhan, M.S., Dhakar, S.D., & Ojha, S.N. (1999). *Handbook of Extension Education*. Agrotech Publishing Academy.

Scheinberg, J., Radhakrishna, R., & Cutter, C. (2013). Food safety knowledge, behavior, and attitudes of vendors of poultry products sold at Pennsylvania farmers' markets. *Journal of Extension, 51*(6). https://www.joe.org/joe/2013december/a4.php

Schmitt, M.A., & Bartholomay, T. (2009). Organizational restructuring and its effect on agricultural extension educator satisfaction and effectiveness. *Journal of Extension, 47*(2). https://www.joe.org/joe/2009april/rb1.php

Singleton, Jr., R.A., & Straits, B.C. (2012). Survey interviewing. In J.F. Gubrium, J.A. Holstein, A.B. Marvasti, & K.D. McKinney (Eds.), *The sage handbook of interview research: The complexity of the craft* (2nd ed.). Sage Publications.

Smith-Lever Act of 1914, Pub. L. No. 63-95, Stat. 372 (1914). https://govtrackus.s3.amazonaws.com/legislink/pdf/stat/38/STATUTE-38-Pg372a.pdf

Stripling, C. T., & Ricketts, J. C. (2016). Research Priority 3: Sufficient scientific and professional workforce that addresses the challenges of the 21st century. In T. G. Roberts, A. Harder, & M. T. Brashears (Eds.), *American Association for Agricultural Education National Research Agenda: 2016-2020*. University of Florida Department of Agricultural Education and Communication.

Swanson, B.E. [MEASExtension]. (2011, August 30). Developing innovative extension systems, Part 1 [Video]. https://www.youtube.com/watch?v=8fgRtg0fANI

Webster, N. (2016). 4-H and its relevance in the era of #moments in urban communities. *Journal of Extension, 54*(1). https://www.joe.org/joe/2016february/comm1.php

White, A.J., & Teuteberg, D. (2015). Regionalization of the Washington State University Extension 4-H youth development program: Employee awareness, buy-in, and communication. *Journal of Extension, 53*(5). https://www.joe.org/joe/2015october/rb5.php