

# Trends Affecting Ohio State University Extension in the 21st Century and the Implications for Human Capital

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*Research with a diverse array of organizations in the public and private sectors has documented a common set of trends affecting organizations and their human capital in the 21st century. Similar trends have been identified as important for Extension organizations and the Cooperative Extension System. It is important to determine if such trends identified over the past 20 years remain current, or if new trends have emerged. Moreover, trends and their implications need to be described in sufficient detail to serve as a basis for action. The purpose of this study was to identify and describe current trends affecting Ohio State University Extension and the implications of those trends for the work of Extension professionals. The study was designed as action research with a series of highly participatory approaches to engage employees in defining, refining, and validating a list of trends and their implications. Mixed methods were used with an emphasis on qualitative approaches. The findings from this study consist of five trends and seven implications for Extension work, which are identified and described.*

Keywords: cooperative extension; extension professionals; trends; workforce

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## Introduction

In this ever–changing era, organizations are faced with challenges related to social, environmental and economic conditions, and with finding ways to cope with changes. A recent report from the Extension Committee on Organization and Policy (ECOP, 2010) highlighted changes and challenges facing the Cooperative Extension System (CES) and provided initial thoughts on dealing with these changes as related to the organization’s priorities, strategies, and staffing. Examining trends for the CES and the implications those trends may have on Extension work provides an opportunity for those in leadership roles to be future focused and to proactively manage human capital in the organization.

The research reported here is part of a larger research effort to develop a competency model

for Ohio State University (OSU) Extension (Cochran, 2009). Identifying trends and their implications for Extension work is a necessary step in a comprehensive competency modeling process and serves as a foundation for the development of a future–focused competency model.

## Conceptual Framework

As part of a larger competency modeling effort, the conceptual framework for this study is rooted in the competency and competency modeling literature. The concept of competencies and competency modeling has its roots over 50 years ago with John Flanagan’s research program in the United States Army Air Forces (Flanagan, 1954). Through the use of competency modeling, Flanagan’s work laid a foundation for a new approach to examining

what people do. Drawing from ideas and theory across multiple disciplines, psychologist David White (1959) identified a human trait called *competence*, described as “an organism’s ability to interact effectively with its environment” (p. 297). Since this early work with competencies, a number of researchers have contributed to the competency modeling field including David McClelland (1973), Richard Boyatzis (1982), Daniel Goleman (1988), Patricia McLagan (1980), C.K. Prahalad and Gary Hamel (1990), and David Dubois and William Rothwell (Dubois, Rothwell, Stern, & Kemp, 2004).

There are a number of approaches to competency modeling and specific methods employed for data collection, with conflicting views on which methodology produces the best results. Dubois (1993) described three major approaches to identifying competencies: (a) modified task analysis approach, (b) critical trait approach, and (c) situational approach. Some approaches focus primarily on the work process performed by exemplars (Boyatzis, 1982; Dubois 1993), while other approaches use a number of data-gathering methods to triangulate on critical competencies (Dubois, 1993; McLagan, 1988). The research reported here drew from some aspects of a borrowed-and-tailored approach (Rothwell & Lindholm, 1999) with a process of modifying an existing model and McLagan’s (1988) flexible approach with a focus on context and future trends as an important foundation for the modeling process.

Regardless of the approach to competency modeling, there is consensus on some recommended practices such as using participatory methods (Athey & Orth, 1999; Liles & Mustian, 2004) and competency modeling that includes identification of trends or future forces and the implications they may have on work in an organization (Athey & Orth, 1999; Dubois, 1993; McLagan, 1988; Parry, 1996; Schoonover, 2002). These authors suggest that understanding organizational context, including trends affecting work in an organization and how those trends affect what employees should know, be able to do, or behave, is an important first step for later competency modeling efforts. Therefore, the literature review examines trends affecting organizations in general and specifically for Extension organizations.

## Review of Literature

The changing environment and the trends affecting organizations have been prevalent topics in the literature for businesses and organizations. Moulton, Sunardi, and Ambrosini (2006) described an increased focus on human capital and how organizations are expecting employees to perform at higher levels as well as the need for organizations to be more customer-responsive, more process-oriented, and more involved in shared leadership. Key trends described in the literature over the past decade include: technological change and increased use of technology; increased globalization and diversity; accelerated speed to market; continued pressures for cost containment; growing importance of knowledge capital; increased rate and magnitude of change; and new organizational structures with organizations becoming more flexible, flat, and virtual (Bernthal et al., 2004; Dubois et al., 2004; Duderstadt, 1999; Lawler, 1994; McLagan, 1989). Overall, the literature describes a relatively consistent set of trends for organizations in the knowledge-based society of the 21st century.

Trends affecting Extension organizations and the CES have also been described in the literature, and they mirror what is described for organizations in general. Since Extension’s beginning in the early 1900s, the economy, demography, society, and the clientele that Extension serves have all changed (Patton, 1988). Similar forces as those described for businesses and organizations in general are driving trends in higher education (Duderstadt, 1999) and the CES as part of a shift to a knowledge- or information-based society (Patton, 1987, 1988; Seevers, Graham, & Conklin, 2007; West, Drake, & Londo, 2009). Among the challenges noted for Extension are the increasingly complex and changing social, environmental, and economic conditions that have produced external factors impacting Extension’s ability to carry out its mission (Ladewig & Rohs, 2000). Several authors have described the trends and pressures facing Extension organizations including: (a) technology – the accelerated rate of technological change; (b) diversity – the changing demographics of those served; (c) competition and resources – an increased

competition for funds, shifting sources of support, and limited resources; (d) globalization – how geography is much less of an issue affecting the work of Extension professionals and clientele needs; and (e) knowledge base – the volume, diffusion, and increased accessibility of the world's knowledge base (Agnew & Foster, 1991; ECOP, 2002, 2010; Harriman, 1989; Harriman & Daugherty, 1992; Ladewig & Rohs, 2000; McGee, 2006; Martenson, 2002; Meier, 1989; Patton, 1987, 1988; Seevers et al., 2007; Warner, Rennekamp, & Nall, 1996).

Ladewig and Rohs (2000) described an increased focus on human capital in Extension and how profound and interconnected changes are producing internal challenges that are requiring employees to become more customer driven, focused on cost effective approaches, fast and flexible to meet changing needs, process-oriented, involved in shared leadership, and focused on continuing to improve to satisfy customer expectations. Similarly, ECOP (2007) summarized internal challenges in three key areas including: (a) becoming more flexible and agile in identifying and serving a diverse array of clientele, (b) strengthening and diversifying funding streams, and (c) speeding up the rate of organizational transformation, and suggested improving the quality and skills of Extension personnel as one strategy for transforming Cooperative Extension. In addition, a needs assessment in Florida identified staffing, keeping current with technology, and a lack of documented program impacts as challenges for Extension to address (Harder, Lamm, & Strong, 2009).

A recent report from ECOP (2010) supported what has been reported over the past decade. The *2010 Leadership Advisory Council Report* (ECOP, 2010) identified that Cooperative Extension needs staffing patterns that are more trans-disciplinary and flexible as a priority to address the subject of dealing with change. Recommendations from the report also included four priorities that relate to trends and implications for human capital: (a) CES should change more quickly to meet the same mission in a range of new ways, (b) CES needs to be more flexible, (c) funding needs to be focused on the most important needs, and (d) impact needs to be documented for new and existing programs.

In summary, research with a diverse array of organizations in the public and private sectors has documented a common set of trends affecting organizations and their human capital in the 21st century. Furthermore, a set of related trends has been identified as important for Extension organizations and the entire CES. Although these trends have been identified, they have not been described in the context of Ohio State University Extension, and little research is available on the implications of those trends for employees of an Extension organization. Moreover, to our knowledge, there is no mention in the literature of using a participatory process to identify and validate the trends and their implications that are then used to create a comprehensive competency model for Extension.

### **Purpose and Objectives**

The purpose of this study was to identify and describe trends and their implications for work in OSU Extension as the first step in a larger research project on core competencies. The specific objectives were (a) to identify and describe current trends affecting OSU Extension and (b) to describe the implications of those trends for Extension professionals.

### **Methods and Procedures**

In keeping with the conceptual framework described earlier, the study was designed as action research (Noffke & Somekh, 2005; Patton, 1990) with a series of highly participatory approaches used to engage employees in developing, refining, and validating a list of trends and their implications. Consequently, mixed methods (Jones, Torres, & Arminio, 2006) were used, with an emphasis on qualitative approaches, including a review of existing research and gathering data from employees through interviews and group techniques. Peer debriefing and survey research were used to validate and further refine the results.

The general population for this study was all employees of OSU Extension, except those who were temporary employees. Data were collected from December 2008 through April 2009. At the beginning of the study, approximately 1,000 individuals were employed by OSU Extension

working on campus and across the state. In addition to a large number of employees with some type of teaching function (e.g., Extension educators and program assistants), a variety of job roles were part of the organization's support function including support staff, research staff, technical support, and administrators. Related to context, it is also important to note that part way through this research, the organization announced a restructuring plan and initial implementation of this plan happened during the study.

Purposeful sampling (Patton, 1990) was used, with various groups of employees selected for participation as key informants, including members of the Extension Administrative Cabinet, a Project Team (composed of 17 exemplary performers representing all job groups and several key internal stakeholders), focus group participants (drawn from the exemplary performer pool), and survey respondents (a census of the exemplary performers). This procedure drew from aspects of Patton's (1990) criterion sampling, maximum variation sampling, and sampling politically important cases; provided triangulation across sources; and addressed issues of validity and reliability (Marshall & Rossman, 1989). The research design included multiple cycles of data gathering, analysis, integration, and peer debriefing in three phases.

#### Phase I

First, researchers reviewed and assembled existing data for use in the study including existing research on trends and implications for human capital in organizations, in general and specifically related to Extension organizations, and data on external forces and internal context for OSU Extension. Next, a semi-structured interview was conducted with the organization's Leader of Human Resources (HR) to gather additional data. Researchers then coded the interview for themes related to trends and implications.

As the final part of Phase I, researchers identified a criterion group of exemplary performers using peer nominations, supervisory nominations, and performance data. From this group, purposeful sampling was used to recruit a team of 17 employees representing all job groups and several key internal stakeholders across the organization. Project Team members

were asked to review information on the current context for OSU Extension and the Extension system. After their review of background information, Project Team members participated in a face-to-face session, using a modified nominal group technique (Delbecq, Van de Ven, & Gustafson, 1975), to generate ideas about trends affecting OSU Extension and implications for Extension work. To develop descriptions of trends and implications, the group's discussion was recorded and transcribed for later analysis. After the group created a list of trends, researchers asked the team members to prioritize the five most important trends.

#### Phase II

Phase II involved data analysis and integration steps to write draft lists and descriptions of trends and implications as well as additional data gathering through group interviews, focus groups, member checks, and peer debriefing. For the first and subsequent data analysis and integration steps, researchers used a coding process traditionally described by qualitative researchers as open coding (Glesne, 2006; Patton, 1990), which involves repeatedly reviewing the data to identify themes and then using those groupings to name and further develop a concept. Themes and patterns emerged after several iterations. During this phase, researchers used the following data sources to write *Trends and Implications Draft 1*: (a) HR leader interview transcript, (b) Project Team transcripts, (c) literature review of trends and implications, and (d) OSU Extension context information including the organization's strategic plan (OSU Extension, 2008) and supporting research (Batte, Diekmann, & Loibl, 2007; Fisher Professional Services, 2007) as well as an external review of OSU Extension (Battelle Memorial Institute, 2005). Coding across each data source was used to organize concepts, cluster similar ideas, and write descriptions.

Next, researchers conducted a semi-structured group interview with the Administrative Cabinet, a group of upper-level administrators who provide leadership for the strategic direction of the organization. The group was asked to review *Trends and Implications Draft 1* and then respond to a series of questions. Researchers also held a second session with the Project Team where they were

asked to review and provide feedback on the same document. Finally, a peer debriefer (someone outside the organization but familiar with competency modeling) reviewed data, integration notes, and *Trends and Implications Draft 1* to validate analysis decisions and to provide feedback on the trends and implications at this stage of the process.

Researchers analyzed and integrated data across five key sources to revise the working draft, creating *Trends and Implications Draft 2*, which included names and descriptions for categories. Data sources included: (a) Administrative Cabinet group interview, (b) group interview with Project Team, (c) peer review, (d) additional sources of data needed for discussing demographics, and (e) *Trends and Implications Draft 1*. Again, the peer debriefer reviewed data, integration notes, and *Trends and Implications Draft 2* to provide another validity check.

### Phase III

In Phase III of the project, researchers developed a questionnaire to gather additional data about trends. The questionnaire included questions about the trends identified in *Trends and Implications Draft 2*, with respondents asked to rate the importance of each trend on a five-point Likert-type scale (*not important, slightly important, moderately important, very important, essential*). A comment box gave respondents an opportunity to provide open-ended feedback related to the trends. A census of employees in the exemplary performer criterion group was used ( $n = 94$ ). The survey was administered electronically using Zoomerang® and followed Dillman's (2000) recommendations for messages and reminders. The response rate was 71 percent (67 of 94 employees in the criterion group completed the questionnaire). To address nonresponse error, demographics of respondents were compared to the population (Miller & Smith, 1983). Respondents closely mirrored the demographics of the criterion group in terms of gender, race, years of service, job group, and work location.

Researchers compiled and analyzed the qualitative and quantitative data using open coding and descriptive statistics. These results were then used to create a *Trends and Implications Final Draft*. Again, the same peer debriefer reviewed and validated the decisions

made in this final round of analysis and integration.

## Results/Findings

The purpose of this study was to identify and describe trends and their implications for work in OSU Extension. Because of this purpose and the primarily qualitative nature of the research, the results were developed in a document listing and describing trends and their implications. The successive iterations of the list and accompanying descriptions of the trends and their implications for Extension work represent the results of the study. Due to space limitations, each version is not presented in its entirety. The following section illustrates the process of how the trends and implications were derived, and concludes with the final set of trends and implications that resulted from this process.

### *Trends and Implications Draft 1*

As described in the methods section, four sources of information (HR Leader interview, data from the nominal group process with the Project Team, OSU Extension internal documents, and literature review) were used to develop *Draft 1*, a descriptive list of trends and implications. This document included six trends, eight implications, and their associated descriptions. Trends identified in *Draft 1* included:

- complex and changing conditions;
- increased competition and limited resources;
- changing organizational structures;
- changing demographics;
- technology and life in the e-world; and
- globalization and increased accessibility to the world's knowledge base.

Implications identified in *Draft 1* included:

- be flexible, innovative, and embrace change;
- customer driven, a focus on quality and responsiveness;
- demonstrate the value;
- entrepreneurial spirit/activity;
- become proficient in technology use and application;
- life and work;
- relationships; and diversity.

*Trends and Implications Draft 2*

Researchers developed *Trends and Implications Draft 2* using five key sources of data including: (a) Administrative Cabinet group interview, (b) Project Team interview, (c) peer review, (d) additional sources of data needed for discussing demographics, and (e) *Draft 1* and its associated data. In creating *Draft 2*, researchers made changes to titles for some of the trends and implications and some implications were combined or reorganized. Most changes were revisions and additions to the descriptions of trends and implications to reflect themes in the data from the sources mentioned above. *Draft 2* contained essentially the same six trends, but the implications were reduced from eight to seven. In addition the descriptions of the trends and implications were edited for clarity and to create more detailed descriptions. The *Trends and Implications Draft 2* was not revised again until after feedback from survey respondents in Phase III, and only minor changes were made at that time. Thus, the *Trends and Implications Draft 2* was very similar to the final *Trends and Implications* final document that is described below.

*Survey Results*

Survey respondents (the exemplary performer criterion group) were provided with a copy of *Trends and Implications Draft 2* and an overview of the process used to develop the document (i.e., a review of existing research, a review of data on current context for OSU Extension, and interviews with Administrative Cabinet and the Project Team). Respondents were then asked to read each trend and the associated description as presented in *Trends and Implications Draft 2*. The first question asked respondents to rate the importance of each trend. In general, most respondents rated all six trends either “very important” or “essential.” As illustrated in Table 1, responses at the highest end of the scale (essential) ranged from a low of 21 percent (20.9% for *changing demographics*) to a high of 48 percent (47.8% for *increased competition and limited resources*). From 61 percent to 91 percent of respondents rated these trends as very important or essential. At least 86 percent of respondents rated each trend as moderately important, very important, or essential.

Table 1  
*Level of Importance for Trends Rank Ordered by Percentage Rating as Essential*

Trend <sup>a</sup>	Response Options (%)				
	Not Important	Slightly Important	Moderately Important	Very Important	Essential
Increased competition and limited resources	0.0	1.5	4.5	46.3	47.8
Technology and life in the e-world	0.0	3.0	7.5	43.3	46.3
Changing and complex conditions	0.0	0.0	7.5	47.8	44.8
Changing complex organizational structures	0.0	1.5	10.4	46.3	41.8
Globalization and increased accessibility to the world’s knowledge base	1.5	6.0	23.9	40.3	28.4
Changing demographics	0.0	13.4	25.4	40.3	20.9

*Note.* Trends are rank ordered from highest to lowest based on percentage of responses in the essential category. Percentages may not sum to 100 due to rounding.

<sup>a</sup>*n* = 67 for each item.

Respondents provided 15 open-ended comments in three general areas: (a) supportive comments (support for the trends in general or support for specific trends), (b) suggestions for

changes to refine the content, and (c) other comments. Several statements indicated support. One person stated he made the choice to use ratings of moderately important for some

trends “to give an indication of my ‘relative’ importance to other issues. I think ALL are fairly on the essential end.” Another respondent said, “I believe each one of these factors is essential in Extension at this point in time. Each one of these trends seems to be addressed almost on a daily basis as we look into the future.”

The second group of comments included critiques or suggestions for changes to the content. There were suggestions for changes to clarify wording or to combine concepts. Several focused on the trend *globalization and increased accessibility to the world’s knowledge base*, including one suggestion to combine *globalization* with *technology*. The final area of comments was other questions to the researchers about how the data would be used within the organization.

#### *Trends and Implications Final Draft*

In the survey phase, all trends had received relatively high ratings that were supported by open-ended comments. However, based on suggestions for changes given in other open-ended comments and reviewing again the literature used in previous steps, researchers made some changes to *Trends and Implications Draft 2*. *Globalization* was removed as a trend and combined with Trend #1, *changing and complex conditions*, which already included a reference to the knowledge economy. Researchers moved other content from the description of *globalization*, the aspect related to increased accessibility to the world’s knowledge base, to the *technology and life in the e-world* trend. The result of this step was the final *Trends and Implications* document, which included five trends and seven implications. What follows is the final *Trends and Implications*, which consists of a list and descriptive paragraphs developed by the researchers using the data and validity checks from each phase.

#### *Trends Affecting OSU Extension*

1. *Changing and complex conditions*. Globalization and changing social, environmental, and economic conditions are affecting OSU Extension, the work of our employees, and our clientele. Individuals and families are coping with and living with risk of change, at times sudden change (e.g., finances, employment, health, terrorism). Critical issues

including the economy, education, and health are complex to address. Ohio’s transition into a knowledge-based economy means changes for individuals, families, and communities and for education, workforce development, and economic development. For example, clientele are adapting to living and doing business in the knowledge economy. In this environment, physical geography is much less of an issue affecting the work of Extension professionals and clientele needs.

Constant change is here, with issues and solutions that are quite complex. Additionally, the pace and magnitude of change are increasing, which requires flexibility and adaptability from individuals and organizations. This trend affects and is interrelated with the remaining trends.

2. *Increased competition and limited resources*. Closely related to the first trend, increased competition, shifting sources of support, and limited resources are all market forces that have led to pressures for securing competitive funding, containing costs, and providing quality services. Although Extension continues to receive significant support from traditional sources, there is a trend toward increased competitive funding both from traditional and new sources. Competitive funding means increased accountability to a wide variety of stakeholder groups that are part of the competitive environment.

In an environment where clientele have more choices, people are busier and there are conflicting demands for their time, and Extension is competing with other organizations or sources of information, a focus on customer service and quality will be important. All of these pressures will drive OSU Extension to improve efficiency and service quality while limiting costs in terms of human and fiscal resources. Finally, limited fiscal resources and fewer people will increase pressures for high performers who can support and deliver effective programming with fewer resources.

3. *Changing complex organizational structures*. New and emerging organizational structures are more flexible, flat, and virtual. These new structures may result in less differentiation between jobs and a blurring of the lines between where work and life occur. As the boundaries of life and work can become blurred because of technology, it is critical to recognize

the importance of work–life balance and that it may be valued differently by new generations of Extension employees. Also, flatter organizational structures with fewer people will mean balancing a need for abilities to self–manage and work independently and to work in teams: Both will be important.

OSU Extension’s organizational structure and funding are complex, a trend that will continue. As a result, there are a wide variety of internal and external stakeholders with different needs and interests. Grant–funded programs with specific requirements are another example of funding complexity and additional stakeholders. These factors can lead to tension or conflicting demands (e.g., between local commitments and statewide issues) for individual employees or teams.

4. *Changing demographics.* Increasing diversity and changing demographics mean changes for Extension clientele and the workplace: Diversity is on the rise; the population is aging, with large numbers of baby boomers retiring but also increases in older workers, and Ohio’s population is seeing only minor growth. Approximately four fifths of Ohioans live in metropolitan areas; population in urban centers is declining with growth seen in exurban cities, villages, and townships. Poverty and income levels are issues that vary by location, circumstances, and characteristics. Changing social demographics such as family structures are also important. Although predictions are constantly changing, demographic trends for Ohio have implications as Extension plans and delivers programs to meet the needs of a changing population.

These trends will mean OSU Extension’s workforce will see new faces and new expectations. Significant numbers of employees are reaching retirement age and may retire in the near future. Large numbers of retirements could leave an experience and knowledge gap. However, some individuals are choosing to work longer. Older workers are re–entering the workforce at the same time as young workers are entering the workforce. Finally, it is likely that OSU Extension will (and should) see an increasingly diverse workforce that reflects that changing population in Ohio.

A multigenerational and multicultural work environment will lead to new thinking and creativity for work teams and programs. This

environment will also present new challenges for the organization and for those providing leadership with the potential for tension among employees and between supervisors and employees. Younger generations in the organization means accommodating differences in how long employees stay in a job, how individuals approach work, how they communicate, and what they value (e.g., current research shows that newer generations in the workforce place a higher value on work–life balance).

5. *Technology and life in the e–world.* Increased use of technology and accelerated rates of technology change affect the way people connect and are therefore transforming the nature of work. The right technology tools used in the right ways improve efficiency, helping with competition and limited resources (e.g., technology has led to virtual offices as one way of doing work).

Communication technology is changing the way Extension professionals connect with each other and with clientele. More relationships are being developed and sustained without face–to–face interaction. Technology is changing where and when learning can take place, which has implications for Extension teaching and for Extension professionals as learners. A related issue is different levels of access that clientele and Extension professionals may have to technology.

The volume, diffusion, and increased accessibility to the world’s knowledge base have changed the playing field. For some Extension professionals this may mean increased specialization and decreased generalization; for others it may mean helping clients make choices about information sources.

#### *Implications of Trends Affecting OSU Extension*

1. *Be flexible, proactive, and embrace change.* In a rapidly changing environment, the ability to adapt and be flexible will be important for Extension employees at all levels. Employees will need to be forward thinking and recognize needs in a fast–paced world. They will need to understand, accept, and respond to an increasingly diverse clientele base. In this environment, Extension professionals will need to be lifelong learners who continue to improve their skills and capabilities to satisfy the changing needs of clientele.



2. *Be customer driven with a focus on quality and responsiveness.* Expectations have risen for timely responses and delivery of effective, high quality programs or services. A customer focus will lead to credibility with clients and funders. For example, the pace of life in the 21st century and shifting clientele needs point to alternate delivery methods for educational programming, just-in-time learning, and small chunks that fit today's lifestyle.

3. *Demonstrate and communicate the value of Extension work.* In a competitive environment with limited resources, credibility and accountability within the organization, to funders, and to other stakeholders are critical. Employees will need to be efficient (e.g., share resources, work across traditional boundaries, and reduce operational expense). When balancing demands of multiple stakeholders, Extension professionals will need to make the case for what they are doing and how they determined priorities.

Extension professionals must be able to demonstrate sound fiscal practices, document impacts using cutting edge research and evaluation methods, and communicate results to different stakeholder groups through marketing and public relations efforts. Communicating efforts or impacts of a program, team, or unit will be important as will documenting individual contributions to these team efforts.

4. *Demonstrate an entrepreneurial spirit.* Extension professionals should be creative, innovative, and take risks. An entrepreneurial spirit will lead to additional support for current and new stakeholders and will diversify funding streams. In an environment where Extension cannot depend on traditional funding sources, this will be important for successful Extension employees.

5. *Become proficient in technology use and application.* Extension professionals must understand technology; its current uses in their work; and its current uses for communications, building relationships, project work, research, and teaching. Extension professionals will need to learn and use a wide variety of technology tools to improve efficiency of day-to-day operations and to support programming. With more Extension teaching using e-learning, just-in-time delivery, and technology that clients want, Extension professionals will need skills and creativity to increase technology use.

Technology can add value to Extension work but can also be overwhelming and cause conflict in the work environment. Extension professionals need time and training to learn new skills in how to use technology, troubleshoot, and identify the appropriate mixes of tools for their work. Learning technology skills will be particularly important for those professionals who are less comfortable with current and emerging technology. Although technology may never completely replace the richness of face-to-face Extension work, the challenge is for professionals to learn and use technology to improve efficiency and quality of work.

6. *Effectively manage work and life issues.* Technology and organizational changes mean employees need to be prepared to work in a flexible, flatter work environment. Extension professionals have to prioritize, balance, and respond to multiple demands. Technology has also blurred the lines of where and when work occurs, which means there is an increased need for employees to balance work and personal lives in a way that meets their needs.

7. *Build relationships and collaborate in a diverse environment.* Extension professionals need to be process oriented. This need was captured by one project team member who stated, "We're never any better than the strength of our relationships." This strength comes from understanding the importance of networking and building relationships, and the ability to do so internally and externally (e.g., with colleagues, clientele, and state and local leaders).

Relationships are a high priority; they are critical in terms of maintaining Extension's clientele base, maintaining support for the organization, and working with partners. Extension professionals need to partner with others for funding reasons, for programmatic reasons, and to reduce duplication. "By partnering we can improve our programming effort and quality," noted a project team member.

Effective teamwork within offices, with clientele and partners, and with interdisciplinary and cross-functional teams will require more effort as the workplace becomes more diverse. Leaders and team members need to understand cultural issues that might cause conflict and need to have the skills to deal with conflict constructively. One example identified in the

trends is differences between generations in communication and approaches to work. A multigenerational workplace will require finding the right combination of high tech and high touch communication.

### Conclusions/Recommendations/Implications

The purpose of this study was to identify and describe current trends and issues for OSU Extension and the implications of these trends for Extension professionals. Based on a review of the literature, the researchers' experience as Extension employees, and the research findings, a conclusion is made that the *Trends and Implications* reported in the findings, which were constructed and validated using data from exemplary performers, represent current thinking on the key trends for OSU Extension and the implications those trends may have on Extension work.

The trends developed and validated in this study are generally congruent with the literature for organizations in general (Bernthal et al., 2004; Carnevale, 1991; Dubois et al., 2004, Duderstadt, 1999; Lawler, 1994; Moulton et al., 2006) and specifically for Extension organizations (Agnew & Foster, 1991; ECOP, 2002, 2007, 2010; Ladewig & Rohs, 2000; McGee, 2006; Warner et al., 1996). Trends related to change, complexity, competition, limited resources, demographics, organizational structures, and technology are common in the literature cited previously and are also seen in the findings presented here. Alternately, there is limited information in the literature about the implications of current trends on Extension work. Although several authors suggest implications for work in general (Carnevale, 1991; Moulton et al., 2006), only a few (ECOP 2002, 2007, 2010; Harder et al., 2009; Ladewig & Rohs, 2000; Patton, 1987; West, Drake, & Londo, 2009) have described implications for Extension work and those who have done so lack the detail needed to fully understand what those implications mean for work in an Extension organization.

There are limitations to the research reported here. The research was conducted by employees of the organization being studied, and it occurred during a time of organizational restructuring. The sources of data were internally focused (e.g., employees, not external

stakeholders). Analysis of the data was shaped by the researchers as well as by study participants who contributed as members of expert panels and survey respondents. In addition, application of findings is limited to OSU Extension. However, efforts were made to ensure trustworthiness and establish validity, including triangulation, peer debriefing, member checks, and clarification of researcher bias.

There is evidence of validity for the trends and implications described in this study. The methods and specific research processes used in this study were conducive to building face and content validity because employees and other key internal stakeholders were involved in identifying and describing the trends and implications. The way in which the content was developed and provided to employees for feedback and refinement led to titles and descriptions that made sense to them; in turn, if it makes sense, it is more likely to be used. Congruence between the *Trends and Implications* and other literature also supports content validity. Thus, the trends and implications created in this study build on and extend the literature in several ways.

First, this study provided current descriptions of what trends mean in the context of a state Extension organization and in a language that is meaningful for the organization's employees. For example, findings from this study and others identified *changing organizational structures* as a trend, which was further illustrated in *Trends and Implications* as flatter organizational structures with fewer people that will mean balancing a need for abilities to self-manage and work independently and to work in teams. Both will be important and, based on the *Trends and Implications*, should be reflected in the organization's plans for developing human capital. Moreover, these trends and implications are important considerations when designing pre-service curriculum for Extension educators (Harder, Place, & Scheer, 2010).

Secondly, the list of seven implications created in this study fills a gap in the literature by providing a list of implications and describing them in terms specific to Extension work. An Extension-specific description of implications is more meaningful for those applying the research to practice. Finally, the list and the descriptions of trends and

implications represent current thinking on trends and the implications for Extension work in a state Extension organization.

Furthermore, the trends and their implications appear applicable to other organizations in addition to Extension. Whereas direct application of the research findings may be limited to OSU Extension, they may be applicable to other organizations with a similar mission and range of job groups. As well, the research methods used might be useful to other organizations that wish to accomplish similar goals. In addition, there are broader implications for practice for educators preparing students for work in similar organizations and for employers in general.

Based on the findings of this study, the following recommendations are offered for further research. Additional research is needed to describe trends and their implications for work in other state Extension organizations and across the Cooperative Extension System. This research could answer questions about the most important trends nationally and what those trends mean for preparing and supporting human capital in the Extension system. Also, data from external stakeholders could add a valuable perspective for understanding trends and implications. Further research could also analyze to what extent trends and their

implications for Extension work are reflected in current competency models being used in the Cooperative Extension System as a foundation for curriculum development in academic programs and for human resource management practices.

Themes related to change in the world, in communities, and in organizations are seen in the literature and in the popular press, and they were evident in this research. The themes are relevant now, as well as being future focused. Indeed, although the specific applications may be different, some of the trends were identified at least 20 years ago (Agnew & Foster, 1991; Patton, 1987, 1988). Given trends such as changing and complex conditions and other pressures organizations are facing, if organizational leaders want to be proactive in managing their human capital, it is important for them to apply current information on trends and the implications those trends may have on work in the organization to their planning and support of human capital. The research reported here is the first step in a larger research process (Cochran, 2009; Scheer, Cochran, Harder, & Place, 2011) where OSU Extension is applying research on trends and implications to identify and promote competencies needed for organizational success.

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