Ohio State University Extension Competency Study:
Developing a Competency Model for a 21st Century Extension Organization

Dissertation

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ABSTRACT

The literature on competency-based human resource (HR) management provides a strong case for moving from a jobs-based to a competency-based approach to human resources. There is agreement in the literature (Dubois, Rothwell, Stern, & Kemp, 2004; Lucia & Lepsinger, 1999) on the benefits of using competencies throughout HR systems and impact has been documented through research with organizations using competencies. Within the Cooperative Extension System, several authors (Maddy, Niemann, Lindquist, & Bateman, 2002; Stone & Bieber, 1997) have recommended using competencies. Competency modeling is a critical first step in implementing a competency-based approach to HR management.

The purpose of this study was to develop and validate a competency model for a state Extension organization that was transitioning from a jobs-based to a competency-based approach to HR management. Specific research objectives were to: (a) identify and describe competencies required for Extension professionals in Ohio to be successful now and in the future; (b) construct a competency model that includes core competencies, describes what they look like in practice, and reflects organizational preferences; and (c) ensure that the competency model created is a valid one. This study was designed as action research and took place in Ohio State University Extension. Methods were highly participatory and relied on a criterion group of exemplary performers and key internal stakeholders for idea generation, model refinement, and validation. Mixed methods were
used with an emphasis on qualitative approaches, including reviews of existing research and gathering data from employees through interviews and group processes. Peer debriefing and survey research were used to validate and further refine the results. The research design included multiple cycles of data gathering, analysis, integration, and peer debriefing in four phases: background review and initial data collection, model development, model refinement and validation, and final review.

The findings from this study are represented by two key pieces of information, a list of trends and their implications for Extension work and the OSUE Competency Model. Five trends (changing and complex conditions, increased competition and limited resources, changing complex organizational structures, changing demographics, and technology and life in the e-world) and seven implications associated with those trends are identified and described. The OSUE Competency Model identifies and describes a set of core competencies (including definitions and key actions that further illustrate each), relevant across job groups, that are important now and in the future for OSU Extension employees. The 14 core competencies identified were: communication, continuous learning, customer service, diversity, flexibility and change, interpersonal relationships, knowledge of Extension, professionalism, resource management, self-direction, teamwork and leadership, technology adoption and application, thinking and problem solving, and understanding stakeholders and communities. Each competency is further described using 3 to 8 key actions. Research results are presented documenting that the competency model reflects organizational preferences, has high face and content validity, and has catalytic validity.
As action research, this study provided a competency model that will be used and further developed by the participants who constructed it. Recommendations are provided for Ohio State University Extension related to using the model and applying the research results to HR practices. This study also extends the body of knowledge in two ways: by providing a competency model with core competencies designed to cut across the entire organization, of which few exist, for state Extension organizations and by using a criterion group of exemplary performers to construct and validate the model. Implications for practice are shared that focus on the research process, methods used, and potential replication by other organizations. This research documented a process from initial information gathering through validation that could serve as a model for other organizations interested in developing their own competency model as a blueprint for successful performance.
DEDICATION

This work is dedicated to:

…my parents who gave me a strong work ethic and love for learning. With a former English teacher turned librarian for a mom, books and reading were always a part of my life. My dad showed me that with hard work, persistence, and a little lack of sleep you can get a college degree while working full time and supporting a family.

…the memory of my grandmother and grandfather, both graduates of The Ohio State University, who also showed me a love of lifelong learning. Both died while I was working on my dissertation and I think of them often.
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Throughout my graduate studies, a number of people have influenced my personal and professional growth. I am fortunate to have been surrounded by good people who provided learning opportunities, support, and encouragement. My advisor, Dr. Theresa Ferrari, has been a wonderful colleague and friend. I appreciate your guidance and our philosophical discussions. Through our collaborations, I have grown as an academic and a writer. You stretched me to think about the big picture while making sure I learned the details of how to write a literature review and use parallel construction.

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Dr. Deborah Maddy, my colleague at Oregon State University, served as a peer
debriefer. I’m so thankful that Garee connected us and you agreed to read, listen, critique,
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improved my research process and the competency model I developed. And thank you to
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but were rewarding to answer. I especially appreciate numerous discussions with and
thought provoking questions from Nikki and David during independent studies and exam
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and Kathy Lechman, for helping out with programming so I could focus.

Finally, I sincerely appreciate the contributions that so many of my Ohio State
University Extension colleagues made as participants in my research. Through
interviews, focus groups, reviewing materials, or completing a survey, each of you
contributed ideas that became part of this research that will be applied to make our
organization stronger.
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FIELDS OF STUDY

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Major focus areas: Extension Education
Research Methods and Statistics

Minor focus area: Leadership, Administration, and Finance of Higher Education
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CHAPTER 1
INTRODUCTION

This first chapter of the dissertation provides background information, identifies the research problem and research questions, discusses professional significance, and provides an overview of methodology. The chapter concludes with assumptions, limitations, and definitions for key terms that were used for the research.

Background

Research in the 1990s and early 21st century has documented the changing nature of work as organizations transition from an industrial to a knowledge-based economy. A number of studies (American Society for Training and Development [ASTD], 2006; Business-Higher Education Forum [BHEF], 2003; Casner-Lotto & Barrington, 2006) have identified the various skills and competencies important for the 21st century workforce and in so doing, have also identified a skills gap. The American Society for Training and Development (ASTD, 2006) summarized the issue by stating:

Organizations in the United States and around the world are finding themselves ill-equipped to compete in the 21st-century economy. The reason: too many workers lack the right skills to help their employers grow and succeed. At the same time that the global, knowledge-based economy places an ever-growing premium on the talent, creativity, and efficiency of the workforce, business leaders talk of a widening gap between the skills their organizations need to grow and the current capabilities of their employees. (p. 4)

This changing nature of work and related concerns about a skills gap have been driven by a number of trends. As organizations moved into the 21st century, they have
faced pressures resulting in organizational change. These pressures include increased use of technology; globalization; increased diversity; drives toward efficiency and quality service; increased rates of change; and flatter, more flexible organization designs with fewer boundaries between jobs (Dubois, Rothwell, Stern, & Kemp, 2004; Duderstadt, 1999; Lawler, 1994; McLagan, 1989a). The nature of organizational change and the changing nature of jobs are both the cause of and result of an increased emphasis on human capital. The ASTD Public Policy Council (2003) described the success of organizations as being dependent on the knowledge and capabilities of their employees. "In the knowledge-based economy of the 21st century, it is not capital equipment or technology that differentiates organizations; it is their workforce and the processes by which that workforce is established, leveraged, and maintained" (ASTD Public Policy Council, 2003, p. 5). Although Extension organizations have historically placed a high value on their people, the Personnel and Organizational Development Committee of the Extension Committee on Organization and Policy (ECOP) recently emphasized this point, describing employees as the most valuable asset of the Extension system (Maddy, Niemann, Lindquist, & Bateman, 2002).

A number of authors (Dubois et al., 2004; Lawler, 1994; Lucia & Lepsinger, 1999) have suggested that forces such as the changing nature of work and organizational pressures described above have converged, making a competency-based approach to human resource management more effective in leveraging human capital than the traditional jobs-based approach. A competency-based approach moves the focus away from jobs toward individuals and their competencies. Furthermore, core competencies, or those competencies that cut across jobs, have become increasingly important as
distinctions between individual jobs become more blurred, work roles change, and the environment is less stable (Byham & Moyer, 2005; Carnevale, 1991; McLagan, 1989a; Weatherly, 2005b).

Over the last three decades, the use of competencies has become widespread in businesses (Dauphinee, 2001; Dewey, 1997), education (Knox, 2006), government (Rothwell & Lindholm, 1999; Secretary’s Commission on Achieving Necessary Skills [SCANS], 1991), and specifically in Extension organizations (Liles & Mustian, 2004; Stone & Coppernoll, 2004). A majority of companies have moved to using competencies as a foundation for one or more of their human resource functions (Cook & Bernthal, 1998; Tabet, 2003), citing benefits such as strengthening human resource processes, aligning talent and strategic objectives, improving effectiveness and productivity, and driving organizational change (Dubois et al., 2004; Hay Group, 2003; Lawler, 1994; Lucia & Lepsinger, 1999; Rahbar-Daniels, Erickson, & Dalik, 2001).

Within the Cooperative Extension System, several authors have recommended using competencies, and a number of state Extension organizations have adopted a set of competencies. Stone and Bieber (1997) suggested that competency modeling should be a new language about work and can redefine the Cooperative Extension System to ensure future relevance. More recently, Maddy et al. (2002) recommended that “Cooperative Extension integrate core competencies and strategies throughout the System as standard practices for effective Extension programming. By doing so, the Cooperative Extension System will enthusiastically support and reflect a strong commitment to life-long learning” (p. 1).
Problem Statement

Extension was founded nearly 100 years ago with a mission focused on helping people solve their own problems and improving their lives. When Extension was created, the United States was a rural, agrarian society. Since then, there has been a shift from an industrial-based economy into an information age. As a result of these and other changes in our society, our economy, and the clientele served, Extension organizations are faced with a number of factors influencing how they carry out their mission. In this context, authors in human resource development and specifically in Extension organizations recommend competency-based human resource management as a powerful tool that can provide focus on individual behaviors that contribute the most to organizational success.

Furthermore, Ohio State University (OSU) Extension (2008) developed a strategic plan that identifies strategies to address many of the issues facing 21st century organizations (e.g., technology, diversity, flexibility, and productivity). One strategy identified in this strategic plan is for OSU Extension to transition from the current jobs-based approach to a competency-based approach to human resources. In order for an organization to implement a competency-based approach to human resource management, competencies must be identified and a model developed that describes these competencies. No current model exists for OSU Extension. Existing research has identified competencies for state Extension organizations and the Extension System. However, competencies used throughout human resource management systems need to have a high level of validity, include current and future needs of an organization, and reflect the unique culture and context of an organization.
Given the rapid rate of change facing organizations today, the gap in time since two state Extension organizations developed competency models—Texas Agricultural Extension Service in 1996 (Stone, 1997) and North Carolina Cooperative Extension in 1999 (Liles, 1999)—could be significant. Although developed more recently, the competencies used by ECOP (Maddy et al., 2002) were based heavily on those developed by North Carolina Cooperative Extension in 1999 (Liles, 1999) and still represent a significant time gap in a rapidly changing environment. New research is needed, especially in an environment where organizational structures have changed in many state’s Extension organizations. The literature recommends additional validation; it must go beyond steps used in previous studies if the organization is to create a valid and legally defensible model to be used in all aspects of human resource management. Although existing models in Extension may be a valuable source of information, further research is needed to develop and validate a model specifically for OSU Extension. OSU Extension is currently operating from a jobs-based approach to human resources, and a competency model has not been developed for OSU Extension. Thus a study to develop such a model was undertaken.

**Purpose and Research Objectives**

The purpose of this study was to develop and validate a competency model for a state Extension organization. Specific research objectives were to:

1. Identify and describe competencies required for Extension professionals in Ohio to be successful now and in the future.

2. Construct a competency model that includes core competencies, describes what they look like in practice, and reflects organizational preferences.

3. Ensure that the competency model created is a valid one.
Overview of Methodology

This research was situated in a post-positivist paradigm, knowing that research involving human perceptions of competencies would involve more subtle approximations of the truth than traditional research in the positivist paradigm. Closely aligned with action research, this study engaged people in the organization in the research process by constructing knowledge that was integrated with practice. Mixed methods were used with an emphasis on qualitative approaches then testing findings with a quantitative approach. Research processes were used to identify, refine, and describe competencies for use at the individual level, aligned with the organization’s strategic objectives. Methods were highly participatory and relied on a criterion group of high performers for model refinement and validation. Methods are fully discussed in Chapter 3, including the approach, research context, participants, research design, data analysis, data integration, and trustworthiness.

Definition of Terms

Terms that will be used throughout the study are operationally defined as:

Administrative Cabinet

Organizational decision-making is guided by the OSU Extension’s Administrative Cabinet. This group includes individuals in the following positions: Associate Vice President/Director of Extension; Chair of Extension/Associate Director, Programs; Associate Director, Operations; assistant directors; regional directors; Director of Communication and Technology; Director, South Centers; Leader, Business Operations; and Leader, Human Resources.
**Extension professional**

An Extension professional is any individual employed by an Extension organization.

**Job group**

Job group refers to clusters of related jobs within OSU Extension. Groups in this study include office support, program support, program management, technical support, educators, specialists, county and unit directors, and administrators.

- office support - titles including administrative associate, assistant to director, accountant, information assistant, information associate, office administrative associate, office assistant, office associate, office production assistant, and personnel technician
- program support - program assistants, program coordinators, and nutrition specialists
- program management - program director, program manager, program specialist
- technical support titles including graphic artist, senior graphic designer, systems developer, systems manager, technical editor, technology coordinator, TV producer, TV program manager, research assistant, and research associate,
- educators
- specialists - Extension titles including Extension specialist, horticulture specialist, aquaculture specialist
- unit directors - all directors including county extension directors, Adventure Central Director, Agricultural and Business Enhancement Center Director, Program Development and Evaluation, Government Relations, Leadership Center, and Outreach and Engagement
- administrators - Administrative Cabinet members
- administrative support – University employees in other departments who provide supervision to Extension-funded employees.
**Exemplary performer**

Exemplary performers are individuals whose performance would be described as exceptional or best-in-class. Exemplary performers are those who: (a) stand out and far exceed what is expected of them, (b) are highly motivated to achieve whatever it is they believe is worthy of achievement, and (c) people whose contributions extend or add value to the organization’s operation or product (Dubois & Rothwell, 2000; Rothwell & Lindholm, 1999).

**Effective performers**

Effective performers are fully successful individuals who are not exceptional or best-in-class, but are performing at a satisfactory or very good level (Rothwell & Lindholm, 1999). Also referred to as average performers, this is considered the threshold level below which an employee would not be considered competent for a job (Spencer & Spencer, 1993).

**Competency**

A competency is “a collection of related knowledge, skills, abilities, and other personal characteristics (KSAOs) working in concert to produce outstanding performance” (Weatherly, 2005a, p. 1). More specifically, a competency affects a major part of jobs within the organization, correlates with performance on the job, and can be measured behaviorally (Parry, 1998; Tabet, 2003; Weatherly, 2005a).

**Core competency**

In this study, core competency will be used to describe a broad set of competencies relevant across job groups. Core competencies will be “the basic
knowledge, attitudes, skills, and observable behaviors that lead to excellence in the workplace” (Liles & Mustian, 2004, p. 432).

**Competency model**

A narrative description of the critical competencies required for fully successful or exemplary performance in a job, role, or an organization (Dubois et al., 2004; Zemke, 1982). Competency models should be high leverage, that is, they include only the most important competencies that really have an impact on excellent performance. Models sometimes are also shown as a visual model. Competency models are used as decision tools in human resource management systems including recruitment and selection, training and development, performance management, and succession planning. Competency models are designed to meet the needs of an organization, including a list of competencies, definitions, and behavioral indicators.

**Competency title and definition**

A term and associated description of the knowledge, skills, abilities, and observable behaviors that represent the competency identified.

**Key actions**

Key actions are statements and general descriptions of behaviors that illustrate a competency. They personalize the competency or help bring to life what OSU Extension professionals do. The set of key actions should illustrate the different aspects of the competency identified. To best fit the broad application of the core competencies, they should be informative but general, not specific, and they should cut across jobs groups as much as possible.
Areas of expertise

Areas of expertise (AOEs) are the specific subject matter, technical, or professional knowledge and skills required for successful Extension work in individual jobs or job groups. They are above and beyond the core competencies. In order to be successful in a given job, Extension professionals must have a foundation of the appropriate core competencies and a blend of unique AOEs. While some Extension work is highly specialized, most requires expertise in several AOEs.

Assumptions

The following assumptions underlie this study:

1. Existing competency literature and models are valid as menus for constructing a model for Ohio State University Extension.

2. A criterion group of job incumbents can be identified for Ohio State University Extension based on performance and not other factors such as popularity. This study will use the best available information in the context of the organization to identify exemplary performers.

3. Individual incumbents involved as participants in the study, such as the Competency Project Team, Administrative Cabinet, and focus group participants, were able to articulate the competencies needed now and in the future.

4. It is possible to identify competencies that predict performance.

5. Use of participatory methods will yield valid results.

Limitations

The following limitations were acknowledged when undertaking this study:

1. Due to the nature of this research, the quality of the data and resulting model was limited by the information provided by incumbents.

2. Competencies identified were based on opinions and responses from expert groups rather than through direct observation or descriptions of behavioral events.
3. Because current measures of performance were used to select study participants, they may not address issues of future needs.

4. Analysis of the data and construction of a competency model were shaped by the researcher as well as study participants who contributed as members of expert panels.

5. Time constraints limited the data gathering and degree of validation in this study. There are trade-offs between speed and rigor.

6. The application of the findings is limited to OSU Extension.

**Significance of the Study**

Results from this study will provide an initial competency model for OSU Extension. As identified in the 2008 OSU Extension Strategic Plan, a competency model will be used by the organization for transitioning human resource functions from a job-based to a competency-based approach to human resource management. A competency-based approach to human resource management was identified as a strategy for the organization to meet a performance goal of “developing and sustaining world-class Extension professionals” (p. 9).

Findings from this study may also be used by other state Extension organizations as they develop or update competency models for their organizations. This study may add validity to competencies previously identified for Extension organizations. The results may also raise questions about changes that should be made to existing models. Finally, methods used in this study may serve as a model for other states to use when conducting research and developing competency models to support their human resource systems.
CHAPTER 2
LITERATURE REVIEW

A large body of literature related to the changing nature of work, workforce skills and competencies, and how that information is applied to human resource management in competency modeling form the basis of this research. The literature review will examine the current context for organizations and what is known about competency modeling, including existing competency models. This chapter will conclude with a section on competency modeling and identification that lays a foundation for many decisions made in this study.

Current Context

The Changing Nature of Work and the Skills Gap

In research publications (ASTD, 2006; BHEF, 2003; Casner-Lotto & Barrington, 2006; Moss & Tilly, 2001; Society for Human Resource Management [SHRM], 2008b) and the popular press (Wallis, Steptoe, & Miranda, 2006), the skills gap has been a prevalent topic. Although those surveyed and the intended audience of the publication vary from youth development (Levy & Murnane, 2006) and K-12 education (Casner-Lotto & Barrington, 2006) to higher education (BHEF, 2003) and the business sector (ASTD, 2006; SHRM, 2008b), the message is the same: The nature of work has changed,
there is a widening gap between the skills employers need and the capabilities of employees, and the issue is very important for the future.

The nature of work is changing, resulting in an increased demand for higher level skills. In the 19\textsuperscript{th} century, the United States moved from an agrarian society to an industrial society. For most of the 20\textsuperscript{th} century, factory and office workers focused on a single task, using a single machine in an environment where the technology of mass production emphasized discipline to the assembly line (SCANS, 1991). In 1991, the SCANS report concluded that American high school students needed to develop a new set of competencies and foundation skills if they wanted to enjoy a productive and satisfying work life. The shift to a knowledge- and technology-based economy has moved jobs from routine tasks to more opportunities for high skilled workers (Levy & Murnane, 2006; Partnership for 21\textsuperscript{st} Century Skills, 2003). According to the ASTD Public Policy Council (2003), “Every economy has a driving force. The agricultural economy relied on land, while the industrial economy leveraged machines. The knowledge economy of the 21\textsuperscript{st} century is anchored by two critical commodities: people and knowledge” (p. 6). Statistics support this description; although 80\% of jobs were classified as unskilled in 1950, over 80\% are classified as skilled today (BHEF, 2003). Levy and Murnane (2006, p. 54) described this changing job mix as a “hollowing out” effect where blue collar and administrative support jobs are declining while lower paid service sector jobs and higher paid categories are experiencing the greatest growth.

Furthermore, there is a significant skills gap, with new entrants and current workers lacking the most important skills. Reports over the past 18 years have documented a skills gap. For example, in a recent poll by the American Society for
Training and Development (2006), 95% of respondents said there was a skills gap in their organization or one was expected in the near future. In addition to specialized skills for their work, companies are asking for employees who have applied skills in communication, leadership, teamwork, adaptability, and problem solving (ASTD, 2006; BHEF, 2003; Casner-Lotto & Barrington, 2006; SCANS, 1991). In research on the skills gap, employers, educators, and other key stakeholders have consistently identified deficiencies for new entrants, who may be high school, two-year and four-year college graduates, and current employees (ASTD, 2006; BHEF, 2003; Casner-Lotto & Barrington, 2006; Moss & Tilly, 2001; Peter D. Hart Research Associates, 2005). It is important to note that the deficiencies reported by employers are in the same skills employers are also identifying as most important (e.g., communication and leadership).

Finally, the skills gap will be compounded by a shortage of workers resulting from changing demographics. Baby boomer retirees are a concern because large numbers of them will be eligible for retirement soon, resulting in a significant increase in the percentage of young workers (ASTD, 2006; Casner-Lotto & Barrington, 2006). According to BHEF (2003), the shortage of workers with some college-level skills will be more than 12 million by 2020; with baby boomer retirements, employers must fill high-performance jobs. In short, the nature of jobs is changing and research with a wide spectrum of stakeholders has identified a skills gap that will be compounded by changing demographics.

There is a disconnect between what individuals are learning through pre-employment education and professional development and what they need to learn for successful employment, and this disconnect is evident when employers report that new
entrants to the workforce are not prepared. Table 2.1 summarizes key terms that have
been used in youth development, education, and business to describe general sets of skills
important for life and for work.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Skills Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life skills (Barkman &amp; Machtmes, 2000; Hendricks, 1996)</td>
<td>Life skills are defined in the Targeting Life Skills Model (Hendricks, 1996) as “skills that help an individual to be successful in living a productive and satisfying life” (p. 4).</td>
<td>Examples: leadership, teamwork, decision-making, and problem-solving</td>
</tr>
<tr>
<td>Soft skills (Conrad, 1999; Moss &amp; Tilly, 2001)</td>
<td>Defined as nontechnical skills, abilities, and traits that pertain to personality, attitude, and behavior required to function in the workplace.</td>
<td>Grouped into two clusters (interaction and motivation) or framed using four workplace competencies: thinking and cognitive skills; oral communication skills; personal qualities and work ethic; and interpersonal and teamwork skills.</td>
</tr>
<tr>
<td>New basic skills (Murnane &amp; Levy, 1996)</td>
<td>Identified three basic skills that young people must develop to succeed in the workplace: hard skills, soft skills, and computers skills. More recently (2006) have used the terms expert thinking and complex communication to describe the skill set critical for success.</td>
<td>New basic skills include: hard skills (math, problem solving and reading), soft skills (oral and written communication and teamwork), and computer skills (the ability to use personal computers at a basic level). Expert thinking – ability to solve new problems that cannot be solved by applying rules. Complex communication – ability to transmit and convey a particular interpretation of information to others.</td>
</tr>
<tr>
<td>Cross-functional skills and attributes (BHEF, 1997, 2003)</td>
<td>Identified nine “cross-functional skills and attributes that college graduates need to compete in the workplace” (p 11).</td>
<td>Included leadership, teamwork, problem-solving, time management, self-management, adaptability, analytical thinking, global consciousness, and basic communications.</td>
</tr>
<tr>
<td>Applied skills (Casner-Lotto &amp; Barrington, 2006)</td>
<td>Defined as “skills that enable new entrants to use the basic knowledge they have acquired in school to perform in the workplace” (p. 15).</td>
<td>Identified 11 applied skills including critical thinking/problem solving, creativity/innovation, communication, diversity, leadership, lifelong learning, technology, teamwork/collaboration, professionalism, &amp; ethics.</td>
</tr>
<tr>
<td>Skills for success (ASTD, 2006).</td>
<td>Skills workers need to help their organizations grow and succeed.</td>
<td>Include: critical skills and competencies, business acumen, leadership skills, technical capacity, adaptability, innovative thinking, and personal responsibility for learning.</td>
</tr>
</tbody>
</table>
Researchers have described a set of important skills to invest in that cut across a wide variety of jobs (see Table 2.1). Basic skills (e.g., reading, writing, and math) are important as a foundation, and technical or job-specific skills also are necessary. But when basic knowledge and applied skills were combined, those skills cited most frequently by employers as important across all educational levels were the applied skills (Casner-Lotto & Barrington, 2006). The next section will review selected research over the last 20 years that identifies a relatively consistent set of skills people need to succeed in the 21st century workplace.

**Synthesis of Research on Workforce Skills**

In the business world, non-technical skills have often been described as soft skills. It is evident, as noted by Conrad (1999), that soft skills involve interaction with people, are environment specific, and are difficult to assess. Recent frameworks (see Table 2.1) have described sets of skills including those referred to as soft skills (e.g., communication or teamwork) but also skills that might be considered hard skills such as written communication and information technology application. As suggested by Casner-Lotto and Barrington (2006), the skills shared in recent frameworks can be categorized as those based on cognitive abilities (e.g., thinking skills), those based more on social and behavioral skills (e.g., work ethic), and those that combine both cognitive abilities and social skills (e.g., communication skills).

The studies and reports summarized in Table 2.1 all essentially began by assembling a group of experts (e.g., business people, educators, scholars, or policy makers) to generate a set of skills necessary for the workforce. While the language or organizing frameworks differ, SCANS (1991) and other national studies (Carnevale,
communication skills, thinking skills (e.g., problem-solving, creativity), teamwork, and personal characteristics and attitude (e.g., self-esteem, motivation, work ethic) as necessary workforce skills. Here the terms applied skills, 21st century skills, or skills for success in the knowledge economy will be used to describe a common set of skills reported by a number of authors as important skills for success in the 21st century workplace, an environment driven by information and knowledge. These frameworks align well with current research that has identified skills such as leadership, teamwork, problem solving, time management, initiative, communication, and career planning (ASTD, 2006; BHEF, 2003; Casner-Lotto & Barrington, 2006).

As described above and illustrated in Table 2.1, studies over the last 20 years have described skills in similar ways. Cochran and Lekies (2008) synthesized across these sources and identified a framework and a set of descriptors of the necessary skills. A panel of experts, comprised of OSU Extension professionals representing expertise in youth development, workforce development, and community development reviewed the key literature (see Table 2.1) and came to consensus on a framework of workforce skills supporting the knowledge economy. Drawing from the current literature and experience in Ohio, six general categories of skills were identified including thinking skills, communication, teamwork and leadership, lifelong learning and self-direction, technology adoption and application, and professionalism and ethics (Table 2.2).
Table 2.2
Skills for Success in the Knowledge Economy

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Thinking Skills</td>
<td>Thinking skills include critical thinking, problem-solving, creativity, and innovation. These skills involve the ability to:</td>
</tr>
<tr>
<td></td>
<td>• evaluate relevance, assess accuracy, and use information to solve problems.</td>
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<td></td>
<td>• think creatively and to generate new ideas and innovative solutions.</td>
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<td></td>
<td>• understand how systems (e.g., social, organizational) work, how to operate within them, and how to make improvements.</td>
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<tr>
<td>Communication</td>
<td>The ability to communicate effectively using the range of methods and tools available in today’s environment. Communication skills include an ability to:</td>
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<td></td>
<td>• listen, interpret, and convey information to others.</td>
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<td></td>
<td>• articulate thoughts clearly and effectively orally and in writing (e.g., one-on-one communication and public speaking skills, write memos and reports)</td>
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<tr>
<td>Teamwork and Leadership</td>
<td>The interpersonal skills to work effectively in a team and provide leadership include an ability to:</td>
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<td></td>
<td>• work cooperatively with others and contribute to a group effort.</td>
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<td></td>
<td>• build collaborative relationships, work with diverse teams, negotiate and manage conflict.</td>
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<tr>
<td></td>
<td>• motivate an individual or group.</td>
</tr>
<tr>
<td></td>
<td>• bring out the best in those around them to inspire innovation and performance.</td>
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<tr>
<td></td>
<td>• leverage the strengths of others to achieve common goals; use interpersonal skills to coach and develop others.</td>
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<tr>
<td>Lifelong Learning and Self-direction</td>
<td>Continually improving capabilities by:</td>
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<tr>
<td></td>
<td>• taking responsibility to set goals and improve skills through mentoring, training, formal education, or other learning activities.</td>
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<tr>
<td></td>
<td>• showing initiative by soliciting and receiving feedback, and learning from one’s mistakes.</td>
</tr>
<tr>
<td>Technology Adoption and Application</td>
<td>A firm foundation of technology skills includes:</td>
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<td></td>
<td>• a sound understanding of technology concepts, systems, and operations.</td>
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<tr>
<td></td>
<td>• selecting and using appropriate technology to accomplish a given task.</td>
</tr>
<tr>
<td></td>
<td>• identifying and solving problems with technology.</td>
</tr>
<tr>
<td>Professionalism and Ethics</td>
<td>The ability to maintain an appropriate level of professionalism and ethical behavior through:</td>
</tr>
<tr>
<td></td>
<td>• demonstrating accountability and effective work habits (e.g., punctuality, working effectively with others, time and workload management)</td>
</tr>
<tr>
<td></td>
<td>• ethical behavior (e.g., acting responsibly with larger community in mind).</td>
</tr>
</tbody>
</table>

*Note. From Cochran and Lekies (2008)*
In summary, knowing what people need to be successful in the workplace is well documented in the literature. Although different terms are used, there is widespread agreement as to the type of skills and personal qualities needed to be successful. Research from the 1990s through today has built a solid foundation. Employers, supervisors, workers, and other key stakeholders have spoken and their message about what skills are needed is consistent. In addition, there is a widening gap between the skills employers need and the capabilities of incumbents and new entrants to the workforce. The next section examines more specifics on changes, trends, and issues organizations are facing related to the knowledge economy and the skills gap discussed previously.

The Changes Organizations Are Facing: Trends and Issues Affecting Organizations and Their Human Capital

With current research indicating a skills gap and a shortage of experienced workers created by the aging baby boomer generation, it is particularly critical for organizations to develop and maintain capacities in terms of human capital. According to the American Society for Training and Development (2006), “Now more than ever, the success of public and private organizations in the United States and throughout the world depends on the knowledge and capabilities of their employees” (p. 4). There is a direct connection between human capital and organizational success, as skills shortages threaten the short- and long-term success of organizations (ASTD, 2006, ASTD Public Policy Council, 2003). Organizations will always face some type of skills gap (ASTD, 2006) but the key is having an infrastructure that promotes innovation and continuous learning where employees are updating their skills and knowledge to meet the needs of today’s rapidly changing environment (ASTD, 2006; Lawler, 1994; Senge, 1990; Stone & Bieber, 1997).
General Trends for Businesses and Organizations

The changing environment and other issues affecting organizations have been prevalent topics in the literature. The forces driving this change include a transition into a knowledge-based society and economy, changing demographics, globalization, technology, and market forces such as pressures for cost containment and quality services (Dubois et al., 2004; Duderstadt, 1999; Lawler, 1994). The American Society for Training and Development (McLagan, 1989a) summarized six major areas of organizational change as follows:

1. Pressures on workforce productivity for efficiency and quality.
2. Accelerated pace of change including a shrinking of the useful life span of information and changes due to technology.
3. Focus on the customer and quality that is pervasive and includes internal and external customers.
5. Business strategies more dependent on human capital.
6. Work structure and design changes resulting in flatter and more flexible organizational designs with blurred boundaries between individual jobs.

Since 1989, a number of other authors (Byham & Moyer, 2005; Carnevale, 1991; Dubois et al., 2004; Lawler, 1994; Moulton, Sunardi, & Ambrosini, 2006) have described significant trends affecting businesses and organizations that support and extend ASTD’s list. Carnevale (1991) described a new competitive framework that includes robust productivity, flexible volumes (meaning pursuit of variety and drive for customization), speed (shifting products to meet changing needs), affordable quality, and customer focus. Lawler (1994) added information technology, globalization, and a trend toward flatter organizational structures, resulting in an increased emphasis on self-management. More
recent publications (Byham & Moyer, 2005; Dubois et al., 2004) described trends including technological change, 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 flatter organizations with fewer layers and increased empowerment. Finally, Moulton et al. (2006) described an increased focus on human capital and how organizations are expecting employees to perform at higher levels, and to be more customer-responsive, more process-oriented, and more involved in shared leadership.

As a follow up to their previous research (McLagan, 1989b), ASTD sponsored a national study, published in 2004 (Bernthal, Colteryahn, Davis, Naughton, Rothwell, & Wellis, 2004), which provided an updated list of trends shaping the workplace and the training and development profession. The eight trends summarized in this study included the following:

1. Drastic times, drastic measures – uncertain economic conditions drive organizations to improve efficiency, productivity, and service quality while controlling costs and using limited financial and human resources.

2. Blurred lines – life or work? – new organizational structures are altering the nature of work with organizations becoming more flexible, flat, and virtual resulting in blurred lines of when and where work occurs.

3. Small world and shrinking – communication technology is changing the way people connect and is increasing interdependence.

4. New faces, new expectations – diversity is on the rise and with it associated issues, more temporary workers, and experience gaps with retirement of baby boomers.

5. Work be nimble, work be quick – accelerated pace of change requires adaptability for individuals and organizations.

6. Security alert! – Concerns about safety, security, and intellectual property have increased.
7. Life and work in the e-lane – technology has transformed the way we work and has increased efficiencies, including learning to reshape thinking about where and when learning can take place.

8. A higher ethical bar – ethics have risen to the surface as a major issue for organizations, leaders, and individual employees.

Overall, a relatively consistent set of trends for organizations in the knowledge-based society of the 21st century has been described in the literature. Next, this review will examine trends specific to Extension organizations.

**The Changes, Trends, and Issues Affecting Extension Organizations**

Changes and trends impacting businesses and organizations as the United States has shifted from an agrarian, to a manufacturing, and to knowledge-based society were described previously. Similar forces are driving trends in higher education (Duderstadt, 1999) and Extension organizations as part of a shift to a knowledge- or information-based society (Seevers, Graham, Gamon, & Conklin, 1997). In recent years, a number of challenges or issues have been identified for Extension in the 21st century (Seevers et al., 1997; ECOP, 2002; Ladewig & Rohs, 2000; McGee, 2006). Challenges noted for Extension include 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 (ECOP, 1987, 2002; Ladewig & Rohs, 2000; McGee, 2006; Seevers et al., 1997; Warner, Rennekamp, & Nall, 1996) have described the external factors or pressures facing Extension organizations to include:

1. Technology - accelerated rate of technological change.

2. Diversity - changing demographics of those served.
3. Competition and resources - increased competition for funds, shifting sources of support, and limited resources.

4. Globalization – geography is much less of an issue affecting the work of Extension professionals and clientele needs (e.g., helping clients adapt to living and doing business in a global environment).

5. Knowledge base – the volume, diffusion, and increased accessibility of the world's knowledge base.

Trends and issues specifically affecting Extension structure, function, and staffing include: funding issues such as less public funding and increased pressures for competitive funding; changing clientele needs; organizational influences seen through restructuring, downsizing, and changes in staffing patterns; and changes to delivery methods or how the mission is achieved (Seevers et al., 1997; Warner et al., 1996).

Changes over the last few years have influenced the organizational structures and the makeup of personnel, including reductions in numbers and experience levels (Braun, 1995; Garst, Hunning, Jamison, Hairston, & Meadows, 2007; Morse & O’Brien, 2006). Ladewig and Rohs (2000) described an increased focus on human capital in Extension and how profound and interconnected changes are producing internal challenges 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.

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.
In their *Vision for a 21st Century* report, ECOP (2002) issued recommendations for the Extension system. One recommendation relevant to this review included a challenge to meet changing needs by “building an organization that empowers, encourages and supports shared leadership and proactive decision-making by individuals who have the most relevant information and who operate at a level close to the issues” (p. 6). Another recommendation was to build effective leadership by developing hiring, compensation, and professional development strategies that attract, retain, and train qualified employees with the skills and competencies needed for work in a diverse society. Based on more recent research with Cooperative Extension directors and administrators, ECOP (2007) suggested improving the quality and skills of Extension personnel as one strategy for transforming Cooperative Extension. Several other authors (Garst et al., 2007; Maddy et al., 2002) have made the case for highly competent professionals being critical to the future of Extension.

In summary, the nature of work and jobs is changing and a skills gap has been described as a major concern for businesses and organizations. National research with a diverse array of organizations in the public and private sector has documented consensus on a general set of skills important for success in the 21st century knowledge-based economy. Furthermore, a similar set of organizational trends and issues has been outlined for businesses and organizations in general and specifically for Extension organizations. Lawler (1994) and others (Carnevale, 1991; Dubois et al., 2004; Lucia & Lepsinger, 1999) have suggested that such forces have converged, making a competency-based approach to HR management more appropriate and effective than a jobs-based approach for addressing the current challenges identified. The remainder of this review will
examine the literature on competency-based HR management with a focus on identification of competencies and developing competency models.

**Competency Models and Competency-Based Human Resource Management**

*From a Jobs-based to a Competency-based Approach*

Traditionally, job analysis, used as the basis for creating job descriptions and minimum requirements, has been the foundation of human resource activities (Dubois et al., 2004). Job analysis has focused on what people actually do in their jobs, perceptions of what people do, what people should be doing, and what should be done in the future (Dubois et al., 2004; Walker, 1980). Problems have occurred when organizations focus on jobs as the criterion for matching employees with work that is important for organizational success. There are at least two reasons for this situation. First, traditional job descriptions are written to clarify activity and may not clearly describe outputs needed for organizational success. Secondly, traditional job descriptions become quickly outdated in today’s rapidly changing, dynamic environment (Byham & Moyer, 2005; Dubois et al., 2004). Dubois et al. (2004) further suggested that job descriptions may become obsolete before they are written and thus become obstacles to organizational change. Several authors (Byham & Moyer, 2005; Carnevale, 1991; Dubois et al., 2004; Lawler, 1994; Weatherly, 2005a) have described forces or trends facing organizations and how a competency-based approach can help by moving the focus away from jobs and toward individuals and their competencies.

In his book *America and the New Economy*, Carnevale (1991) described a job convergence where jobs and skill requirements are becoming more alike. This convergence is driven from the top down and bottom up. From the top, supervisors are
surrendering autonomy and non-supervisory employees are taking on more general assignments. From the bottom, more flexible and powerful technology tools free up non-supervisory labor for general responsibilities (Carnevale, 1991). As described earlier, many organizations are changing their organizational structures away from top down hierarchies to flatter, more flexible structures. One result is an increased need for general skills such as interpersonal skills, teamwork, and leadership (Carnevale, 1991). While job-specific expertise will remain important, skill sets and work behaviors or competencies that cut across jobs have become increasingly important. As a result, distinctions between individual jobs begin to blur (McLagan, 1989a; Weatherly, 2005a). Thus as work roles change and move toward a less stable environment, competencies provide a tool for defining more flexible work roles (Byham & Moyer, 2005).

Other trends and issues facing organizations support a need for a competency-based approach to human resource management and are summarized in Table 2.3. Lawler (1994) described trends such as those in Table 2.3 combining to fundamentally challenge the idea of using jobs as a basis for managing individual and organizational behavior. One reason that cuts across the issues and trends is that competency-based HR management “focuses attention on the people who do the work rather than the work done by those people” (Dubois et al., 2004, p. 10). This focus on the people who do the work has resulted in competency-based HR management systems gaining recognition, acceptance, and support in organizations worldwide (Dubois & Rothwell, 2000; Lucia & Lepsinger, 1999; McLagan, 1996). In order to understand how competency models can be the basis of human resource management, it is important to explore the use of competency models in human resource systems and the literature on their benefits.


<table>
<thead>
<tr>
<th>Trend</th>
<th>Relationship to a Need for Competency-based HR</th>
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<tbody>
<tr>
<td>Technological change</td>
<td>Need to structure thinking around competencies that enable individuals to make best use of existing and emerging technology (Dubois et al., 2004)</td>
</tr>
<tr>
<td>Increased diversity and globalization</td>
<td>Requires more attention to diversity, open-thinking, and attention to employees who can work in and across different cultures. Competency-based HR helps identify capabilities needed and insure consistent standards are applied across an organization (Byham &amp; Moyer, 2005; Dubois et al., 2004; Lucia &amp; Lepsinger, 1999).</td>
</tr>
<tr>
<td>Accelerated speed to market change and maximizing productivity</td>
<td>Customer expectations are changing quickly and they expect rapid responses. And as organizations are being forced to become more lean, it is increasingly important to have employees with the right competencies to be effective. Competency-based HR can help focus selection, training, and evaluation systems based on current and future needs (Dubois et al., 2004; Lucia &amp; Lepsinger, 1999).</td>
</tr>
<tr>
<td>Growing importance of knowledge capital</td>
<td>Competency-based HR strives to identify and develop exemplary performance and bring average employees closer to exemplary (Dubois et al., 2004).</td>
</tr>
<tr>
<td>Rapidly changing, team-oriented environment</td>
<td>For organizations to anticipate and react to change, they must have individuals capable of dealing with the associated challenges where jobs change and roles change frequently. Competency-based HR management moves the traditional focus on work to individual competencies that may underpin all required roles, aligned with organizational problems and strategic issues. In an environment with jobs in flux, competency models provide a tool for describing skills required now and in the future as needs change (Byham &amp; Moyer, 2005; Dubois et al., 2004; Lucia &amp; Lepsinger, 1999).</td>
</tr>
<tr>
<td>Organizations with fewer layers, flatter structure, and empowerment/increased employee involvement</td>
<td>Competencies can help identify the skills needed to operate in an organization with less hierarchy and a culture of high involvement where learning, flexibility, and initiative are important. Competencies help define organizational expectations in an environment where employees have the capacity to do more than in the past (Byham &amp; Moyer, 2005). Fewer advancement opportunities and a need for horizontal movement increase the need for defining competencies so the right people can be identified and moved across or up in the organization without mismatches or error (Byham &amp; Moyer, 2005; Lawler, 1994).</td>
</tr>
<tr>
<td>Clarifying work expectations</td>
<td>Addresses issues raised about traditional human resource management by describing: (a) what skills, knowledge and characteristics are required; and (b) what behaviors have the most impact on performance success. This promotes shared understanding about how to perform and what it takes to succeed (Lucia &amp; Lepsinger, 1999).</td>
</tr>
<tr>
<td>Popularity of multi-perspective instruments for evaluation</td>
<td>The use of multi-perspective instruments to help people understand how they are perceived by others has elevated the importance of competencies that form the categories against which people are evaluated (Byham &amp; Moyer, 2005).</td>
</tr>
<tr>
<td>More difficult personal career planning</td>
<td>The dynamic nature of the workplace makes career planning more difficult because paths to advancement are less clear. Competencies provide a framework for self-development efforts and career planning (Byham &amp; Moyer, 2005).</td>
</tr>
</tbody>
</table>
How Competency Models Are the Basis of and Provide Benefits to Human Resource Management Systems and Organizations

While HR management has been defined in various ways, this term and other terms like human capital, intellectual capital, and talent management all share the common idea that people have capabilities that drive organizational performance (i.e., people make a difference in how organizations perform) (Dubois et al., 2004). Consequently, effective organizations must find, use, develop, and keep people to fulfill their mission. Human resource management is the process of doing that (Dubois et al., 2004; Lado & Wilson, 1994). HR management systems typically include some aspect or aspects of the following: recruitment and selection, performance management, compensation, training and development, and career and succession planning (Dubois & Rothwell, 2000; Lucia & Lepsinger, 1999; Schippmann, 1999). In traditional HR management, work analysis becomes the basis for recruiting, selecting, training, rewarding, appraising, and developing people. In contrast, competency-based HR management has a focus on the identification, modeling, and assessment of competencies. Using this approach, the HR function seeks to discover the skills, knowledge, and characteristics that contribute directly to the organization’s success and configure HR activities around those competencies (Dubois et al., 2004; Lucia & Lepsinger, 1994; Thompson et al., 1996).

The objective of a competency-based approach is to “identify the competencies required of high performers in key positions throughout the organization; strive to eliminate any competency gaps that exist through effective selection and/or training and development; and ensure that meritorious performance is recognized and rewarded” (Weatherly, 2005a, p. 4). McLagan (1980) described competency models as a focal point
for planning, organizing, integrating, and improving all aspects of HR management systems, a concept called horizontal alignment (Mulder, 2001). Stone and Bieber (1997) noted that “competencies help make forward-looking HR decisions by clarifying the knowledge, skills, and behaviors needed in the future and by serving as a foundation upon which to build employee selection, training, professional development, performance appraisal, and succession planning” (p. 2). Weatherly (2005b) stated that “competencies can be used to support the entire HR platform within an organization – from selection and recruitment to training and development, succession planning and total rewards” (p. 1). Numerous authors agree that competency models can support all of the HR management systems (Berntthal et al., 2004; Dubois et al., 2004; Hayes, 1979; Lucia & Lepsinger, 1989; McLagan, 1980; Moulton et al., 2006, Stone & Bieber, 1997; Weatherly, 2005b). These systems include: (a) recruitment and selection; (b) orientation; (c) training and development (e.g., curriculum design and targeting training resources); (d) individual development; (e) coaching, counseling, and mentoring; (f) performance management (e.g., multi-perspective feedback and appraisals); (g) compensation (e.g., salary adjustments based on merit); (h) career development; and (i) promotion and succession planning.

For example, one goal of looking at competencies is to discover the difference between fully successful and exemplary performers, pinpoint those differences, and then select more people who function at the exemplary level or help others develop that capability (Dubois et al., 2004). Conceptually, an organization uses a competency model to staff positions with employees who possess the characteristics of high performers. To better understand the reasons behind using competencies in HR management, it is
important to look at what competency-based HR management looks like, the benefits specifically related to some of the HR management systems, and the benefits overall.

**Benefits to HR management systems.** Dubois et al. (2004) described the differences between traditional and competency-based HR management and the benefits as well as the differences in each of the HR systems and the benefits. In terms of the overall HR function, competency-based HR management moves the focus from compliance and policies to HR playing an important role in talent management, a role that contributes directly to the organizational mission and productivity. While HR continues to fulfill its compliance responsibilities, it does so in a competency-based environment. HR planning shifts from a focus on head counts and forecasts based on the past to a concentration on talent and qualitative planning methods.

Recruitment and selection moves away from qualifications, and assumptions that qualifications equal ability to perform, to a focus on decisions based on competency models for the organization that define the knowledge, skills, and attributes of high performers (Dubois et al., 2004). By clarifying behaviors and practices of effective employees, competency models increase the likelihood that resources invested in hiring put the right people in the right jobs (Lucia & Lepsinger, 1999). Competency models provide a complete picture of the job requirements, increase the chance those hired will succeed, ensure a more systematic interview process, and help distinguish between competencies that can be improved through training and those that are more difficult to develop. For example, selection often focuses on a narrow aspect of a job (e.g. technical or subject matter skills) without taking into account the other qualities needed to be successful (e.g., teamwork). A competency model provides a more complete picture for
the interviewer and interviewee (Lucia & Lepsinger, 1999). Using competency-based interviewing techniques (e.g., behavior-based interviews), hiring managers can be more effective in determining if an individual has the knowledge, skills, and characteristics to be successful (Stone, 1997).

A competency-based training and development system builds individual competencies aligned with measurable exemplary performance and includes a process for individuals to discover their own competencies and for the organization to identify and cultivate talent (Dubois, et al., 2004). An important aspect of this view of employee development is that much of the efforts to build competencies occur through learning experiences on the job that are intentional efforts. Also, organizations can target competencies that are most relevant or have the greatest impact, avoiding a short-term perspective. Lucia and Lepsinger (1999) described four primary benefits of competency-based HR systems.

1. Competency-based HR systems enable a focus on relevant skills and behaviors. When people are clear about what it takes to succeed, they are better able to make decisions about training and development. Individuals are encouraged to become more active in their own development.

2. Competency-based HR systems ensure alignment of training and development. Focus for training and development aligns with what is essential for the organization. A well constructed competency model describes behaviors for effectiveness on the job and supports the organization’s strategic direction. Thus, HR can develop programs to meet future needs.
3. Competency-based HR systems make the most effective use of training and development. This approach removes the guesswork on where to focus scarce resources so time and money are well spent. Can help identify who needs which skills at which point in their career and then provide training and development when employees have a use for it; a time when they are more likely to apply and reinforce experiences.

4. Competency-based HR systems provide a framework for bosses and coaches. The clarity and specificity of competency models provide bosses and coaches a shared picture of what it takes to succeed. Behaviors described in the model can be used as a basis for constructive development discussions.

The feedback described above is also important in performance management. Using traditional approaches to performance management, key concerns or issues have been raised such as lack of agreement on performance criteria, lack of balance in appraising what is accomplished and how it is accomplished, and lack of specificity in discussion of deficiencies (Lucia & Lepsinger, 1999). Competencies provide a yardstick against which all individuals, or at least a broad band of individuals, can be evaluated (Byham & Moyer, 2005). This is particularly beneficial in an environment where jobs may be fluid and people move from one job to another within an organization. Lucia and Lepsinger (1999) described three key ways a competency-based approach improves the performance management system. First, use of a competency model provides a shared understanding of what will be monitored and measured. For example, integrating elements of the model into appraisal forms helps balance what gets done, showing a concern for both results and the behavior or manner in which they are attained. Secondly,
competencies provide focus and help facilitate the performance appraisal dialogue. Finally, competencies are a framework for gaining information about behavior, offering a starting point by identifying specific behaviors (e.g., if the competency is teamwork, a boss can look for evidence of behaviors that support teamwork like resolving conflict). Gaining information through peer or 360-degree feedback is easier with competencies as a guide.

Another example of how competencies benefit HR systems is in succession planning. Many organizations prefer promoting from within, which makes sense for many reasons but is not simple. Lucia and Lepsinger (1999) described key components of succession planning to include: (a) a list of positions under consideration; (b) agreement among decision makers about what is required for success in each; (c) a list of who is ready for filling positions now and why; and (d) a list of who will be ready soon, accompanied by the person’s developmental needs and actions to close the gaps. Using a competency model to support these components clarifies required skills, knowledge and characteristics; provides a method to assess candidate readiness; focuses training and development plans to address missing competencies; and allows an organization to measure its bench strength.

The benefits of a competency-based approach were described for several of the HR systems. From an organizational perspective, benefits combine to provide positive results for organizations.

*Use of competencies and benefits to organizations.* Linkages have been made between the use of competency-based HR management and macro level benefits for organizations, both in general and for key areas important for organizational success. A
number of authors (e.g., Hay Group, 2003; Lawler, 1994; Mulder, 2001) have suggested that a competency-based approach to HR leads to the organization performing better. Research by Rahbar-Daniels et al. (2001) identified four key drivers or expected benefits of introducing competencies: (a) strengthening HR processes, (b) achieving cultural integration and organizational alignment, (c) improving operational effectiveness, and (d) driving organizational change. Companies are using competencies and reporting a positive impact within their organization as a result of using such an approach.

The use of competency models and approaches to HR management is widespread in the United States and internationally. Examples of organizations using competencies include corporations such as 3M, Allstate, Sony, AT&T, Burger King, Canadian Imperial Bank, Chase Manhattan Bank, and Geon (Dauphinee, 2001; Dewey, 1997; Lucia & Lepsinger, 1999), government organizations such as the Secretary’s Commission on Achieving Necessary Skills (1991) and the Leadership Effectiveness Framework (Rothwell & Lindholm, 1999), professional organizations such as the American Society for Training and Development (Bernthal et al., 2004), and Extension organizations such as North Carolina State University Extension (Liles & Mustian, 2004) and Texas Extension (Stone & Coppermoll, 2004). Research based on a survey with 292 members of the HR Benchmark Group found that: (a) 75% of organizations were using competencies in selection, promotion, and training and development; (b) 65% were using competencies in performance management; and (c) many were also using them in career and succession planning (Cook & Bernthal, 1998).

The American Compensation Association-sponsored research (Thompson et al., 1996) demonstrated that competencies can serve as a foundation of an integrated HR
system. Respondents in this study were positive about the use of competencies in raising the bar on employee performance and providing a framework to integrate HR applications. Another study by the HR Benchmark group (Cook & Bernthal, 1998) found competencies strengthen HR systems. Organizations reported positive impact in specific areas (e.g., 91% reported improved training and development processes when supported by competencies) and overall organizational outcomes (67% reported competences to be at least moderately effective in improving organization performance) when competencies supported their HR system. Cook and Bernthal also found that supporting multiple HR systems with competencies increases overall performance and that impact increases over time. For organizations using competencies for two years or more, the percentage reporting improved organization performance increased to 75 percent.

Specific benefits of using a competency-based approach to HR management have been described in several key areas. Alignment is the term used to describe how competencies link where an organization is going (strategic objectives) and the talent needed to get there (skills of individuals). Competency-based HR management supports and facilitates an organization’s strategic objectives (Dubois et al., 2004; Lawler, 1994; Mulder, 2001; Stone & Bieber, 1997). Focus has been used to describe the similar concept of competencies helping focus HR systems as well as individual behaviors and quality of work that supports the mission, values, and strategic goals of an organization (Byham & Moyer, 2005; Dubois et al., 2004; Lucia & Lepsinger, 1999; Mulder, 2001; Thompson et al., 1996). Adapting to and driving organizational change is another benefit. In an era of rapid change, new skills may be required for changing roles in organizations. Competency models provide a tool for identifying what is needed today and in the future.
This approach creates a more flexible and responsive pool of talent by adjusting selection criteria and professional development systems and by supporting development of a broad set of skills (Byham & Moyer, 2005; Lucia & Lepsinger, 1999). "Core competencies are becoming increasingly important as organizations become more flexible in using their workforces [sic] and as they strive to drive organizational change throughout the organization using human resource systems as the vehicle" (Byham & Moyer, 2005, p. 78).

Other key benefits mentioned in the literature center around productivity and cost reduction. In terms of maximizing productivity, competencies help businesses and individuals focus on what will have the biggest impact (Dubois et al., 2004; Lucia and Lepsinger, 1999; Mulder, 2001). Discussing the impact of competency-based approaches, Dubois et al. (2004) stated that “recognizing critical differences in individual productivity implies that more work might be done by fewer people, or that better work might be done by the same number of people” (p. xii). Costs can also be avoided because competencies reduce the costs of poor selection decisions and investments in professional development (Hay Group, 2003).

Organizational and individual commitment to learning is another benefit of competencies mentioned by several authors (Hamel & Prahalad, 1995; Lawler, 1994; Maddy et al., 2002; Stone, 1997; Thompson et al., 1996). This commitment to learning includes attracting employees with an interest in learning and fostering ongoing learning as well as an environment or organizational culture supporting lifelong learning. Specifically for Extension organizations, Maddy et al. (2002) recommended use of core competencies throughout the Cooperative Extension System as a best practice that would
support and show a commitment to lifelong learning. Finally, Rothwell & Lindholm (1999) described competency-based HR management as the “keystone bridge between individual career development and organizational strategy” (p. 101). The concept of portability is important in an environment of boundaryless careers where individuals move throughout an organization and across organizations. Competencies are portable and are taken with an individual from project to project, job to job, and employer to employer.

**Background – The Competency Movement**

The competency movement has roots over 50 years ago. During that time, contributors to the field have included John Flanagan, Robert White, David McClelland, Richard Boyatzis, Daniel Goleman, Patricia McLagan, Lyle and Signe Spencer, C.K. Prahalad and Gary Hamel, David Ulrich, David Dubois, and William Rothwell. This section of the literature review will provide a brief overview of the competency movement, key authors, and their concepts. While some authors go back as early as Frederick Taylor, the father of scientific management, in discussing competencies (Lucia & Lepsinger, 1999), there is agreement that early roots for key methodologies used in subsequent competency studies were in John Flanagan’s critical incident technique (Flanagan, 1954).

Flanagan’s studies were conducted with the Aviation Psychology Program of the United States Army Air Forces during World War II. These studies focused on the differences between success and failure in a job assigned (e.g., flight mission, combat leadership). Flanagan (1954) established a five-step procedure for collecting data: (a) determining the general aim of the activity, (b) developing general plans and
specifications for collecting factual incidents about the activity, (c) collecting the data (focus on objectivity), (d) analysis – summarizing and describing the data so it can be useful for practical purposes, and (e) interpretation and reporting of the requirements for the activity. His critical incident technique was described as “a set of procedures for collecting direct observations of human behavior in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles” (p. 327). Flanagan’s work, although over 50 years ago and not specifically about competencies, laid a foundation for a new approach to looking at what people do (Rothwell & Lindholm, 1999). His work was later extended to examine significant behavioral events that distinguish between exemplary and fully successful employees.

In the late 1950s, psychologist Robert White (1959) identified a human trait he called competence and described it as “an organism’s capability to interact effectively with its environment” (p. 297). White pulled ideas and theory from animal behavior, child development, cognitive psychology, psychoanalytic ego psychology, and the psychology of personality (e.g., drive, instinct, motivation) together into a larger conceptual picture he called competence. Harvard psychologist David McClelland, often called the father of the U.S. approach to competency-building, built on and extended the work of David White and John Flanagan (Lucia & Lepsinger, 1999; Rothwell & Lindholm, 1999). The first tests of McClelland’s methods were with the U.S. State Department Foreign Service Information Officers in the early 1970s.

Traditionally the State Department had used a series of exams to select Foreign Service Information Officers but concerns were being raised about lack of relationship between test scores and on-the-job success. Instead of the traditional aptitude measures,
McClelland used his competency approach including: (a) a criterion sample of superior performers and average performers, (b) behavioral event interviews (BEIs) to obtain accounts of what they did in critical situations, (c) thematic analysis to identify characteristics that differentiated between the two criterion samples, and (d) validation using two methods – a new criterion sample and BEIs, and new kinds of tests to measure the competencies such as the Profile of Non-verbal Sensitivity (Lucia & Lepsinger, 1999). McClelland’s 1973 article, *Testing for Competencies Rather Than Intelligence*, raised questions about intelligence tests as predictors of job success and launched the competency modeling movement in the United States.

In 1973, McClelland and fellow psychologist David Berlew founded McBer and Company to put their ideas into practice. In cooperation with the American Management Association (AMA), McClelland and colleagues launched the first large scale competency program to define job competency with a focus on isolating the characteristics of superior performance (Rothwell & Lindholm, 1999). The AMA study asked the question what competencies do successful managers possess that not so successful ones do not and identified five groups of competencies essential to the job success of managers: specialized knowledge, intellectual maturity, entrepreneurial maturity, interpersonal maturity, and on-the-job maturity (Hayes, 1979). The McBer-AMA study found most managers had a good grasp on specialized knowledge or competencies needed for their job but that the remaining four competencies distinguished between exemplary and fully performing managers. The AMA competency model was a criterion-validated model, linking generic competencies to performance on the job.
McClelland is credited with coining the term *competency*, which he defined as a characteristic that underlies human performance (Dubois et al., 2004). Instead of using the widely accepted intelligence-based tests used at the time, McClelland analyzed stories and found patterns to determine competencies outstanding performers had that others did not. His work established two key tools or methods for: (a) obtaining criterion samples of star and average performers, and (b) identifying operant thoughts or behaviors casually related to successful outcomes using BEIs (Hay Group, 2003; Spencer & Spencer, 1993). McClelland complemented Flanagan’s (1954) approach in that performance needed to be clearly defined and success or failure was the result of multiple influences (Rothwell & Lindholm, 1999). He extended Flanagan’s work by including individual experiences and perceptions of events that would later become key factors in developing competency models (Lucia & Lepsinger, 1999). Athey and Orth (1999) summarized McClelland’s (1973) work and descriptions of key advantages as:

1. The best way to understand performance is to observe what people *actually do* to be successful (i.e., competencies) rather than relying on assumptions about underlying traits or attributes such as intelligence.
2. The best way to measure and predict performance is to have people *perform* key aspects of the competency you want to measure, rather than administering a test to assess underlying traits or attributes.
3. Competencies can be *learned and developed* over time, in contrast to traits or attributes that are viewed as inherent and largely immutable.
4. Competencies should be made *visible and accessible* to people so they can understand and develop the required level of performance, rather than be cloaked in the veil of mystery associated with traits and intelligence factors.
5. Competencies should be linked to *meaningful life outcomes* that describe the way people must perform in the real world, rather than esoteric mental traits or constructs that only psychologists can understand. (p. 216)

Although many different methods for identifying competencies have evolved, the most effective share certain characteristics, following McClelland’s dictate to determine what
leads to superior performance and find out what those performers do (Lucia & Lepsinger, 1999).

McLagan and Boyatzis were two additional contributors to the competency movement. McLagan (1980) introduced competency models as the focal point for planning, organizing, integrating, and improving all aspects of HR management including: recruitment and selection; assessment; individual development; training and curriculum design; coaching, counseling, and mentoring; succession planning; and career pathing. Boyatzis worked with McLagan on training and development competency-based projects, defined by comparing the differences between exemplary and fully-successful job incumbents (Rothwell & Lindholm, 1999). Working with McLagan and part of McBer and Company founded by McClelland, in 1982 Boyatzis published the first empirically-based and fully-researched book on competency model development (Rothwell & Lindholm, 1999) titled *The Competent Manager: A Model For Effective Performance*. In this book, Boyatzis reanalyzed data from a number of competency studies of managers and found a set of competencies, common across organizations, that distinguished superior managers from others. Boyatzis (1982) defined competencies as "characteristics that are causally related to effective and/or superior performance in a job" (p. 23). BEIs (McClelland, 1978) were used to document competencies by determining the actions, their place in a system and sequence of behavior, the results, and the intent of the actions. His approach expanded the view of competency modeling by linking job demands, environment, and individual competence as three areas influencing job performance (Boyatzis, 1982; Rothwell & Lindholm, 1999).
McLagan’s contributions continued throughout the 1980s and beyond. Rothwell and Lindholm (1999) stated that within the United States training and development community, McLagan became “perhaps the most widely-known practical theorist” (p. 94). Her work in the 1980s established a pattern that has inspired subsequent competency modeling work. Two of her books, *Models for Excellence* (McLagan & McCullough, 1983) and *Models for HRD Practice* (McLagan, 1989b) provided competency models for the training and development and human resource development fields that served as practical examples for training and development practitioners (Rothwell & Lindholm, 1999). McLagan’s 1989 study used a four-stage process that included: (a) expert groups reviewing existing data from previous studies to create an updated list of future forces, roles, outputs for roles, and competencies needed; (b) a sorting activity to further clarify roles and outputs; (c) survey research with role experts responding to a draft model; and (d) another round of survey research with role experts reviewing and responding to an updated model. McLagan’s final model included future forces, quality requirements, competencies, and ethical issues. More recent studies, influenced by McLagan (1989b) but not using her outputs-driven methodology, have examined workplace learning and performance roles, future trends, competencies, and outputs (e.g., Bernthal et al., 2004; Rothwell, Brock, Dean, Rosenberg, & ASTD, 1996; Rothwell, Sanders, & Soper, 1999).

In the early 1990s, two members of the McBer and Company team published *Competence At Work: Models For Superior Performance* (Spencer & Spencer, 1993), which Rothwell and Lindholm (1999) suggested may be “the most research-oriented and comprehensive of all the competency books in providing the theoretical background for competency modeling” (p. 95). In this book, Spencer and Spencer provide guidance on
how to develop a competency dictionary and competency model, summarize 20 years of research using the McClelland/McBer job competence assessment (JCA) methodology, describe human resource management applications of JCA research, and suggest future directions.

Spencer and Spencer (1993) built on Boyatzis’ definition of competency, defining a competency as “an underlying characteristic of an individual that is causally related to criterion-referenced effective and/or superior performance” (p. 9). This definition is expanded from the definition used by Boyatzis (1982) by saying a characteristic is not a characteristic unless it predicts something meaningful in the real world. Causally-related means that the competency causes or predicts behavior and performance. Criterion-referenced means that the competency actually predicts who does something well or poorly. Spencer and Spencer (1993) provide detailed descriptions of how to conduct the classic competency study with the following steps: define performance effectiveness criteria, identify a sample of exemplary and fully-successful performers, collect data (e.g., BEI’s, expert panels), analyze data to identify job tasks and competencies, validate the model, and prepare applications of the model. Finally, Spencer and Spencer reviewed competency studies across a variety of jobs to develop a generic competency model that includes 21 competencies in six clusters.

Goleman, who completed his doctoral studies under McClelland, has written extensively on emotional intelligence and associated competencies (Goleman, 1988). Goleman described research on workforce skills (Goleman, 1988; see also Table 2.1), noting that employers frequently rated non-academic and non-technical skills more important than technical skills. He also suggests that findings from competency research
since the 1970s have a common core of personal and social abilities. These abilities, which Goleman calls emotional intelligence, are based on five elements: self-awareness, motivation, self-regulation, empathy, and adeptness in relationships. Translated into on-the-job capabilities, Goleman defines emotional competency as “a learned capability based on emotional intelligence that results in outstanding performance at work” (p. 24). Finally, Goleman supports his assertion that emotional competencies are essential for excellence in every job by citing findings from other studies (e.g., Spencer & Spencer, 1993) demonstrating that generic competencies, most of which are emotional competencies, account for a large percentage of behaviors of star performers.

Other authors have moved competency modeling beyond individual performance into organizational performance and capability. Rothwell and Lindholm (1999) described Prahalad’s work as a seminal thinker. Prahalad and Hamel (1990) introduced the concept of core competence for an organization, referring to the unique competencies associated with market competitiveness. The term core or organizational competency is used in reference to the collective learning and performance capabilities of the entire organization (Athey & Orth, 1999; Prahalad & Hamel, 1990). “Core competencies are the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies….Core competence is communication, involvement, and a deep commitment to working across organizational boundaries” (Prahalad & Hamel, 1990, p. 82).

Organizational capability describes what an organization is able to do and how it is able to do it. Capability thus represents collective skills, abilities, and expertise within an organization (Ulrich, 1997 as cited in Rothwell & Lindholm, 1999). Capabilities are
associated with groups of individual competencies that are collectively organizational competence. Traditionally, competitive advantage is derived from financial capability, strategic or marketing capability, and technological capability. Organizational capability is a fourth source of competitive advantage (Rothwell & Lindholm, 1999). As an alternative to job-based organizational systems, information on organizational competencies is used to develop organizational capabilities that provide the competitive advantage (Lawler, 1994).

**Terminology - Defining Competency and Related Key Terms**

Before moving to existing competency models and the research behind them, a review of key terms and definitions is important. Based on interviews with experts in the field, Zemke (1982) described competency, competencies, and competency models as “Humpty Dumpty words meaning only what the definer wants them to mean” (p. 28). There is not clear consensus on definitions, with considerable disparity in some areas such as whether to include or exclude personality traits, values, and styles. These differences in definitions come from basic philosophical and procedural differences. For the purpose of this review, I will discuss key definitions found in the literature for a variety of relevant terms.

**Competency**

McClelland (1973) proposed the concept of competency in the 1970s, describing competency as a characteristic that underlies performance. In a general sense, competency refers to “any underlying characteristic an individual possesses and uses which leads to successful performance in a life role” (Dubois, 1993, p. 5). When the target is workplace performance, as in this review, authors use the term competency or
job competency to refer to competencies at the individual level that contribute to success on the job. A job competency is “an underlying characteristic of a person which results in effective and/or superior performance in a job” (Klemp, 1980 as cited in Boyatzis, p. 21).

Boyatzis (1982) extended this definition, describing competencies as:

characteristics that are causally related to effective and/or superior performance in a job. This means that there is evidence that indicates possession of the characteristic precedes and leads to effective and/or superior performance in that job. In addition to the theoretical predication as to the causal relationship between the characteristic and job performance, an empirical relationship between the characteristic as an independent variable and job performance as a dependent variable should exist. (p. 23)

Spencer and Spencer (1983) expanded the concept, defining a competency as “an underlying characteristic of an individual that is causally related to criterion-referenced effective and/or superior performance” (p. 9). The latter two definitions make explicit the idea of competencies being causally related to performance and criterion-referenced. Criterion-referenced refers to the competency predicting who does something well. Spencer and Spencer include motives, traits, self-concept, knowledge, and skill as characteristics contributing to competency.

Dubois and Rothwell (2000) have used similar definitions in their work with competency-based human resources, defining competency as “an underlying characteristic of an employee (this is, a motive, trait, skill, aspect of one’s self-image, social role, or a body of knowledge) that results in effective and/or superior performance” (p. 14). Dubois et al. (2004) added patterns, mind-sets, and ways of thinking, acting, and feeling in their list of what might be included as a characteristic. Dubois and Rothwell (2000) described competencies as tools used by workers to complete units of work or job tasks. Knowledge and skills are more obvious competencies. Others are more abstract
(e.g., patience, perseverance, flexibility, and self-confidence), but have been associated with successful completion of some types of work (Dubois et al., 2004; Dubois & Rothwell, 2000).

McLagan (1980), who has contributed several competency models to the human resource development field, defined competencies as “the knowledge and skills which underlie effective job performance” (p. 22). Later definitions used by McLagan have a focus on contributions and outputs, describing competencies as “a personal capability that is critical to the production of a quality output or outputs” (McLagan, 1988, p. 374). A more recent study by ASTD, which builds on McLagan’s previous work, defined competency as “clusters of skills, knowledge, abilities, and behaviors required for job success” (Bernthal et al., 2004, p. 51). In 1995, suggestions from hundreds of human resource development experts attending a conference in Johannesburg were used to develop the following definition of competency:

- a cluster of related knowledge, skills, and attitudes that affects a major part of one’s job (a role or responsibility), that correlates with performance on that job, that can be measured against well-accepted standards, and that can be improved via training and development. (Parry, 1996, p. 50)

One difference between definitions described so far is that some definitions (e.g., Boyatzis, 1982; Spencer & Spencer, 1993; Dubois & Rothwell, 2000) use the term underlying capabilities (e.g., Bernthal, et al., 2004; Parry, 1996) whereas McLagan’s and Parry’s definitions use terms like knowledge, skills, abilities, and behaviors to describe the “thing” that represents a competency.

Byham and Moyer (2005) described the first definition such as that used by Spencer and Spencer (1993) dealing with personality issues or underlying characteristics as the clinical approach and the latter the behavioral approach. In the behavioral
approach, competencies are “descriptions of clusters or groupings of behaviors, motivations, and knowledge related to job success or failure under which new data on motivation, knowledge, and behaviors can be reliably classified” (p.11). On the other hand, definitions described as clinical by Byham and Moyer focus on underlying characteristics, including personality issues, which may appear harder to develop.

The language in definitions currently used by HR practitioners (Moulton et al., 2006; Tabet, 2003; Weatherly, 2005a) and specifically in Extension competency projects (Liles & Mustian, 2004; Maddy et al., 2002; Stone & Bieber, 1997) is similar to that of Parry and McLagan and does not include the term underlying characteristics. According to Weatherly (2005a), there is growing consensus in the HR field that a competency is “a collection of related knowledge, skills, abilities, and other personal characteristics (KSAOs) working in concert to produce outstanding performance in a given area of responsibility” (p. 1). Tabet (2003) and Weatherly (2005a) extend their definitions with aspects of Parry’s (1998) including that competencies (a) affect a major part of one’s job, (b) correlate with performance on the job, (c) can be measured against well accepted standards, and (d) can be improved with training and development. The concept of competency including knowledge and skills alongside other characteristics (e.g., attitudes, behaviors, work habits, abilities and personal characteristics) was supported in a recent review by Le Deist and Winterton (2005).

The United States Office of Personnel Management (OPM) has defined competency as “a measurable pattern of knowledge, skill, abilities, behaviors, and other characteristics that an individual needs to perform work roles or occupational functions successfully” (Rodriguez, Patel, Bright, Gregory, & Gowing, 2002, p. 310). For the
Cooperative Extension System, Maddy et al. (2002) defined core competencies as “the basic knowledge, attitudes, skills, and behaviors that contribute to excellence in Extension education programs” (p. 1). North Carolina Cooperative Extension has defined core competencies as “the basic knowledge, attitudes, skills, and observable behaviors that lead to excellence in the workplace” (Liles & Mustian, 2004, p. 432).

**Threshold and Differentiating Competencies**

Boyatzis (1982) defined threshold competencies as "a person's generic knowledge, motive, trait, self-image, social role, or skill which is essential to performing a job, but is not causally related to superior job performance" (p. 23). Threshold competencies are characteristics everyone in a job needs to be effective but do not distinguish superior from average (Hay Group, 2003; Spencer & Spencer, 1993). For example, speaking a native language might be a threshold competency while those characteristics that differentiate superior from average and poor performance are competencies of interest for competency projects or differentiating competencies. Differentiating competencies are distinguishing characteristics, those that superior performers have that average performers lack.

**Fully Successful and Exemplary Performers**

Rothwell and Lindholm (1999) described exemplary or superior performers as “best-in-class or most productive workers” (p. 91), whereas fully successful or effective employees are not best-in-class. Fully successful or effective performance are terms used to describe individuals who are effective, that is performing at a minimally acceptable standard below which an employee would not be considered competent to do the job (Spencer & Spencer, 1993). Exemplary performance has been defined statistically as one
standard deviation above average or a level achieved by one out of ten employees. Research has indicated the best-in-class performers are as much as 20 times more productive as compared to other job incumbents (Dubois et al., 2004). Dubois & Rothwell (2000) further described exemplary performers as those who: (a) stand out and far exceed what is expected of them, (b) are highly motivated to achieve whatever it is they believe is worthy of achievement, and (c) people whose contributions extend or add value to the organization’s operation or product.

**Competency Model**

Lucia and Lepsinger (1999) stated that “a competency model describes the particular combination of knowledge, skills, and characteristics needed to effectively perform a role in an organization and is used as a human resource tool for selection, training and development, appraisal, and succession planning” (p. 5). Dubois et al. (2004) defined a competency model as “a written description of the competencies required for fully successful or exemplary performance in a job category, work team, department, division, or organization.” (p. 23). The definition used by Boyatzis (1982) included two dimensions: (a) a description of the competencies; and (b) some description of levels that individuals may possess of a competency. Competency models typically include a list of competencies and behavioral indicators that make the competency come alive in terms of what it looks like in the context of an organization (Dubois & Rothwell, 2000; Lucia & Lepsinger, 1999). Competency models are used to align individual capabilities and human resource functions with organizational strategy.
Competencies and Competency Modeling – Existing Research

Efforts have been made to apply competency modeling in public education, government, professional associations, private sector businesses, and Extension organizations. This section will describe models developed in the public education and government sector, others developed for specific professional associations, generic models, an application in a specific corporation, 3M, and will conclude with those for Extension organizations.

Government Sector and Public Education

Examples of studies conducted in the government sector to create and apply competency models include the Secretary’s Commission on Achieving Necessary Skills and the Leadership Effectiveness Framework. In 1990, the U.S. Secretary of Labor appointed the Secretary’s Commission on Achieving Necessary Skills, called SCANS, with the task of examining changes in the world of work and the implications these changes had for learning. The SCANS study was based on research on a variety of occupations across five employment sectors: manufacturing and construction, health services and human services, retail trade and communications, accommodations and food services, and office and finance (SCANS, 1991). To identify competencies, researchers used a literature review and meetings with key stakeholders including business owners, public employers, unions, workers, and supervisors. Expert panels and BEIs were also used as sources of data (Rothwell & Lindholm, 1999). Based on this research, the SCANS study identified five competencies and a three-part foundation of skills and personal qualities as critical to job performance (see Table 2.1). The SCANS model described each of the five competencies and three to six sub-competencies for each of the
main competencies. Levels of proficiency, examples, and sample performance benchmarks were also provided. For example, a work-ready level of proficiency in the interpersonal competency would be an ability to schedule a small work team. SCANS (1991) described the competencies in their model as different from technical knowledge, thus spanning a number of professions. SCANS concluded that in each profession examined, the five competencies were at least as important as technical expertise, and they represented attributes high-performance employers seek in employees.

A second example in the government sector is the Leadership Effectiveness Framework (LEF). The LEF is a competency model developed by the OPM and focused on public administration, specifically supervisors, managers, and executives in the federal government (Rothwell & Lindholm, 1999). OPM developed the LEF in the early 1990s through research that included a comprehensive literature review, development of a tool called the Leadership Effectiveness Inventory, and survey research with 10,000 employees in the target group (Corts & Gowing, 1992, and Gregory & Park, 1992, as cited in Naquin & Holton, 2006). Research results were used to identify competency requirements across three employment levels (supervisors, managers, and executives) and to develop a competency model identifying 27 competencies essential to government leadership (Corts & Gowing, 1992 and Gregory & Park, 1992 as cited in Naquin & Holton, 2006; Rothwell & Lindholm, 1999). The LEF and the associated measurement tool, the Leadership Effectiveness Inventory, was transferred to the United States Department of Agriculture’s Graduate School in 1995 and has been used to train and develop federal executives (Rothwell & Lindholm, 1999).
Research to develop the LEF model as well as a number of other studies conducted by the U.S. Office of OPM has used the Multipurpose Occupational Systems Analysis Inventory–Closed-ended (MOSAIC) approach (Rodriguez et al., 2002). The MOSAIC approach is a survey-based job analysis used to collect data on occupations within a group and is applied to a variety of human resource functions. The MOSAIC methodology consists of the following key steps: review of the literature and job documents, development of competencies and tasks, identification of rating scales for the survey, linkage of tasks to competencies, and development of competency-based benchmarks or questions. The tool was described as multi-purpose because it is designed to collect data on competencies used in multiple HR functions. Data collected typically include (a) importance, (b) required at entry, (c) distinguishing value, and (d) need for training.

The LEF model was updated in 1998 (Eyde at al., 1999, as cited in Rodriguez et al., 2002) through a literature review, benchmarking study, and focus groups. According to Rodriguez et al., the updated model provided the basis for the Federal Senior Executive Service (SES) Leadership Core Qualifications that currently include a list of 28 competencies. Six competencies are categorized as fundamental and are interpersonal skills, oral communication, integrity/honesty, written communication, continual learning, and public service motivation. The remaining 22 competencies fall under each of the Executive Core Qualifications, which include: leading change, leading people, results driven, business acumen, and building coalitions (United States Office of Personnel Management [U.S. OPM], 2006). Each is described with a one- to two-sentence definition. The competencies in the Executive Core Qualification are used by the
USDA’s Graduate School in a Leadership Effectiveness Inventory (Graduate School - USDA, 2008) for training and development and by the U.S. Federal Government’s Senior Executive Service for assessing applicants (U.S. OPM, 2006).

**Professional Associations**

Two examples of competency models created for professional associations include the American Management Association (AMA) and the American Society for Training and Development (ASTD). AMA managerial competency model research conducted by McBer and Company for the American Management Association identified competencies that were assembled to become the AMA Managerial Competency Model, a set of generic competencies applicable to all managerial jobs being studied (Hayes, 1979). Eighteen hundred managers were studied over a five-year period to produce a criterion-validated model using standards of performance. The research conducted by McBer and Company (Hayes, 1979) found that most managers had a good grasp on specialized knowledge or competencies needed for their job. Because most managers had a good grasp on the specialized competencies necessary in their jobs, these competencies did not distinguish between exemplary and fully-performing managers. Four other groups of competencies in this study did differentiate between exemplary and fully-performing: intellectual, entrepreneurial, interpersonal, and on-the-job maturity.

Later research, supported in part by the AMA, continued to examine the characteristics of managers and how those characteristics are related to effective performance in a variety of management jobs across organizations (Boyatzis, 1982). Specifically, Boyatzis sought to explain some of the differences in general qualitative descriptions of performance that may occur across specific jobs and organizations as a
result of the competencies managers share. The conceptual model for his work includes a complex and dynamic interaction between a person and his or her environment. The person has motives, traits, self-image, social roles, and skills, all contributing to competencies, which are applied to the functional and situational demands of a job. The interaction between the person and job demands results in actions or demonstrated behavior. Job demands are influenced by the organizational environment as well as the cultural environment for the individual and the organization. Thus each of the components has some impact on the others and will affect if, how, and to what extent competencies are applied on the job.

Boyatzis (1982) studied a sample of 2,000 managers in 41 types of jobs including both government organizations and Fortune 500 companies in order to empirically determine the characteristics of managers that support effective performance. Existing data from previous studies were collected and analyzed. Performance data were collected. Data were also collected on social-role level, skill level, and motive/trait/self-image levels using job element analysis, BEIs, and tests/measures (e.g., Picture Story Exercise and Learning Style Inventory) for which data were available across several samples. Through statistical analysis, Boyatzis identified 12 competencies and 7 threshold competencies (i.e., those that are necessary for average performance but do not differentiate between average and exemplary). The 12 competencies and 7 threshold competences were grouped into clusters and included the following:

1. Goal and action management cluster – competencies: efficiency orientation, proactivity, diagnostic use of concepts, and concern with impact

2. Leadership cluster – competencies: self-confidence, use of oral presentations, and conceptualization; threshold competency: logical thought
3. HR management cluster – competencies: use of socialized power and managing group process; threshold competencies: positive regard and accurate self-assessment

4. Directing subordinates cluster – threshold competencies: uses of unilateral power, developing others, and spontaneity

5. Focus on others cluster – competencies: perceptual objectivity, self-control, and stamina and adaptability

6. Specialized knowledge cluster – threshold competency: specialized knowledge

ASTD has sponsored several competency studies over the last 30 years. Each of these studies attempted to identify roles and competencies for successful practitioners in the human resource development field. Examples include *Models for Excellence* (McLagan & McCullough, 1983) and *Models for HRD Practice* (McLagan, 1989b), with the most recent being *ASTD Competency Study: Mapping the Future* (Bernthal et al., 2004).

The 1983 study methodology included a series of phases to accomplish the following steps: (a) determine the domain of the training and development field, (b) determine the key roles for the field, (c) identify the major environmental forces expected to affect the field in the near future, (d) identify critical outputs for the field, (e) identify critical competencies, (f) develop behavioral anchors for those competencies, and (e) cluster the roles to reflect common competency requirements (McLagan & McCullough, 1983). Thirty-one competencies were identified with associated behavioral anchors. McLagan’s (1989b) study used a four-phase process. Phase 1 included expert groups to review existing data and then update or revise the existing model. In Phase 2, a card sort activity was used with expert panels and local ASTD chapters to clarify roles and outputs identified in the preliminary model. Survey research with over 700 role experts
responding to a questionnaire about the draft model was used in Phase 3. These data were used by the task force to add new items and eliminate items that were redundant or confusing. In the final phase, Phase 4, a new group of role experts completed a second questionnaire, reviewing and responding to the second draft of the model. Modifications were made and the final model included future forces, quality requirements, competencies, and ethical issues. Thirty-five competencies that were given the highest importance rating by 50 percent or more of those surveyed were included in the final model.

The most recent competency study conducted by ASTD was led by Development Dimensions International and Rothwell & Associates (Bernthal et al., 2004). The purpose of this study was to “develop a valid and defensible list of roles, competencies, and AOEs [areas of expertise] relevant for practitioners in the workplace learning and performance profession” (p. 89). Bernthal et al. further described the purpose of the study and subsequent report as describing a competency model that is “comprehensive, inspiring, and future-oriented” and would “provide a foundation for competency based applications” (p. xvii).

Like the McLagan (1989b) study, the research process for ASTD’s 2004 study (Bernthal et al., 2004) included four phases. Although there were some similarities including use of expert groups and validation surveys, the process was not identical. Research methodology used by Bernthal et al. included:

1. Phase I (needs assessment and data collection) – this included a literature review, expert interviews, and data from group sessions at the ASTD 2003 Conference.

2. Phase II (new model development) – data were integrated and new competencies were mapped to at least five other competency studies to create
a first draft. Expert group interviews and content review were then used to refine and revise to create a second draft. A final expert review of revised content was then used to create draft three.

3. Phase III (validation survey) – Survey research was used, with respondents rating roles and competencies in terms of importance and frequency of use.

4. Phase IV (project team refinement and advisory committee approval) – Using data collected from the survey, the project team created a final model that was reviewed by an advisory committee. Minor revisions were made based on advisory committee input to create the published version.

The final model includes information on trends shaping the workplace, foundational competencies, areas of expertise, and roles. Twelve competencies in three clusters were identified by Bernthal et al. Listed by cluster, then competencies within that cluster, they include: (a) interpersonal competencies (building trust, communicating effectively, influencing stakeholders, leveraging diversity, networking and partnering), (b) business/management competencies (analyzing needs and proposing solutions, applying business acumen, driving results, planning and implementing assignments, thinking strategically); and (c) personal competencies (demonstrating adaptability, modeling personal development).

Generic Models

In their book *Competency at Work*, Spencer and Spencer (1993) summarized 20 years of research using the McClelland/McBer job competence assessment (JCA) methodology. Through this summary, the authors provide a generic competency dictionary for competencies found most often to differentiate superior from average performers and generic competency models for jobs in the following categories: sales, technical/professional, helping and human service, managerial, and entrepreneur. Their research involved analyzing data from 286 competency studies across the categories of
jobs. Spencer and Spencer found that 21 competencies accounted for 80 to 98 percent of the behaviors reported in each model analyzed. Organized by clusters, generic competencies identified were:

1. Achievement and action - achievement orientation; concern for order, quality, and accuracy; initiative; information seeking;
2. Helping and human service - interpersonal understanding, customer service orientation;
3. Impact and influence - impact and influence, organizational awareness, relationship building;
4. Managerial - developing others, directiveness, teamwork and cooperation, team leadership;
5. Cognitive - analytical thinking, conceptual thinking, technical/professional expertise (job related knowledge); and
6. Personal effectiveness - self-control, self-confidence, flexibility, organizational commitment; other personal characteristics and competencies.

One example of the generic models developed by Spencer and Spencer’s research is for the helping and human service profession. Competencies of superior helping and human service workers in descending order included: impact and influence, developing others, interpersonal understanding, self-confidence, self-control, other personal effectiveness competencies, professional expertise, customer service orientation, teamwork and cooperation, analytical thinking, conceptual thinking, initiative, flexibility, and directiveness/assertiveness. The authors noted that the personal effectiveness cluster contained one quarter of the behavioral indicators, the managerial cluster was important even though none of the sample involved formal managerial roles, and the achievement in action cluster was observed less frequently than in other types of work.
**Private Sector**

In addition to governmental efforts, professional associations, and generic models developed by researchers, numerous corporations have developed competency models including 3M, Sharp Electronics, Allstate, Sony, AT&T, Burger King, Canadian Imperial Bank, Chase Manhattan Bank, and Geon (Dauphinee, 2001; Dewey, 1997; Lucia & Lepsinger, 1999; Montier, Alai, & Kramer, 2006). Although there is considerable variation in how these models were developed and their intended audience, some examples are helpful to illustrate how competency models are being developed and described in the business world.

3M has created an executive-level competency model (Alldredge & Nilan, 2000). The research process at 3M was led by an in-house team and included: (a) an internal process to review the literature and learn about competencies, (b) internal groups used to coalesce around current expectations and future needs, (c) a team representing HR practitioners from the area of leadership development and assessment, and (d) critical incident interviews to collect data and develop behavioral expectations. The resulting model included competency labels, descriptions, and behavioral anchors for 12 competencies clustered by how they are expected to develop throughout an executive’s career. Listed by cluster, they include:

1. **Fundamental** – ethics and integrity, intellectual capacity, and maturity and judgment;
2. **Essential** – customer orientation, developing people, inspiring others, and business health and results; and
3. **Visionary** – global perspective, vision and strategy, nurturing innovation, building alliances, and organizational agility.
A second example is Sharp Electronics, where a core competency model was developed initially and competency models specific to key job functions are being added (Montier et al., 2006). Sharp placed an emphasis on involving individuals at all levels in developing and validating a model that was customized for their organization. The Sharp research process included an examination of the business environment, interviews with senior executives, a review of other competency models and best practices, behavioral interviews with top performers, focus groups across functions and locations, validation meetings, and a final review with senior management. Themes emerging from the background data, interviews with executives, and behavioral interviews were used to construct an initial competency model. Focus groups then provided additional input, which helped create ownership in the process and further refine the model. Interview and focus group participants met to validate the model and senior management reviewed it for strategic alignment. The resulting core competency model included 14 competencies grouped into 4 themes. Each competency has a behavioral description and five stages of development. Sharp’s model included the following core competencies: demonstrates creativity, learns continuously, establishes high standards, uses information technology, communicates effectively, partners with others, understands the organization, drives change, focuses on the customer, knows the global business, thinks strategically, delegates authority, develops and coaches, and leads others.

**Competencies in Extension**

Competency identification, assessment, and modeling are not new to Extension organizations. Research has identified competencies for specific job groups, for program areas, and for entire state Extension organizations. Also, some state Extension systems
(e.g., Colorado) have identified organizational core competencies, defined earlier as strengths, capabilities, or expertise that sets an organization apart or defines a niche (Rothwell & Lindholm, 1999; Prahalad & Hamel, 1990). The following section will review and summarize competency studies in Extension organizations. Models developed and intended applications will be discussed where applicable.

Many studies have identified job requirements or competencies for Extension educators. Some of these studies were specific to a program or content area such as agriculture (Price, 1960; Maines, 1987), community development (Ayres et al., 2005), food stamp nutrition education (Cooperative State Research, Education, and Extension Service [CSREES], 2006) or 4-H (Borden & Harris, 1998; Garst et al., 2007; Harder & Dooley, 2007; Soobitsky, 1971; Stone & Rennekamp, 2004). Others have reported on competencies needed for the educator job role in general (Beeman, Cheek, McGhee, & Grygotis, 1979; Brown, Gibson, & Stewart, 2008; Gonzales, Howell, & Lindley, 1984; Peabody, 1968), or those working with specific audiences such as youth and families at-risk (Betts, Firth, Watters, & Shepherd, 1996; Soobitsky, 1971) and volunteers (Boyd, 2003). Several of these studies are reviewed below.

Nearly 50 years ago, Price (1960) surveyed county agricultural extension educators in Arkansas and reported competencies considered important by more than 80 percent of respondents. Ten were identified including these abilities: to analyze the county situation, to develop one's own leadership abilities, to identify leadership in the county, to organize effective program planning committees, to involve lay people in program development, to develop a long-term extension program, to identify problems and their priorities, to conduct effective farm and home visits, to use teaching methods
effectively, and to have an understanding of the duties and responsibilities of the extension educator at the county level.

A team representing community development professionals developed a set of competencies called Foundations of Practice (Ayres et al., 2005). Building on a set of core competencies identified by the Extension system (Maddy et al., 2002), the Foundations of Practice identifies three major components representing areas important for effective community development work. These include: understanding communities and their dynamics, developing successful community initiatives, and areas of specialization and emphasis. Within each component, competencies are identified and described such as basic understanding of community, organizational development, and leadership. A list of 10 core competencies was also developed for paraprofessional nutrition educators working in Food Stamp Nutrition Education (FSNE) (CSREES, 2006). The core competencies are: understand the organization, understand and respect diversity, achieve excellence in teaching, conduct program evaluation, maintain accurate records and reports, maintain effective internal and external partnerships, communicate program value, ensure productive interpersonal relationships, demonstrate technology literacy, and demonstrate personal accountability. Each core competency is described using 3 to 17 descriptors or key actions.

In 1971, Soobitsky conducted survey research to examine importance of competencies and perceived training needs for 4-H educators working with disadvantaged audiences. Nine competency areas identified by the National In-Service Training Task Force of the Extension Committee on Organization and Policy of the Land-Grant College Association were used: Extension organization and administration,
communications, social systems, effective thinking, human development, educational
process, program planning and development, technical knowledge, research and
evaluation (ECOP as cited in Soobitsky, 1971). Respondents, in a sample including
professionals from 12 states, ranked the importance of communications, social systems,
human development, program planning, and development highest. Effective thinking and
technical knowledge were near the middle and the educational process, research, and
Extension organization and administration were lowest in importance.

More recent research in the 4-H program area has resulted in a model called the
4-H Professional Research, Knowledge and Competencies (4-HPRKC) model (Stone &
Rennekamp, 2004). The 4-HPRKC model identified competencies, skills, and behaviors
people need to be effective in 4-H youth development, across six domains: youth
development; youth program development; volunteerism; equity, access, and
opportunity; partnerships; and organizational systems. In a qualitative study, Harder and
Dooley (2007) compared 4-H educators’ perceptions of important competencies to the
4-HPRKC model. Harder and Dooley (2007) found important competencies for 4-H
educators to be conflict management, communication, multi-tasking, managing
volunteers, and youth development. There were similarities with most competencies
identified by 4-H educators in the 4-HPRKC domain of organizational systems but fewer
were identified. Virginia Cooperative Extension recently developed a state-level
competency model for their 4-H Youth Development professionals (Garst et al., 2007).
Virginia used an internal process and the 4-HPRKC model to develop their own list of
core competencies for 4-H professionals.
Other studies have identified competencies for Extension educators across programmatic areas. Using the critical incident method, Peabody (1968) described job requirements perceived as critical by Michigan Cooperative Extension educators. Incidents were classified into six functional areas that, in order of frequency, were: teaching and communicating, organizing, conducting programs, administration, program planning, and evaluation. Beeman et al. (1979) conducted a study to identify professional competencies needed by Extension educators in Florida. Through survey research, state staff and educators identified a common set of top six competencies: maintaining professionalism, public relations, program planning, communication, program execution, and understanding human behavior. Using the list of competencies from Beeman et al., a study was conducted to identify professional competencies needed by educators in the Pennsylvania Cooperative Extension Service (Gonzales, Howell, & Lindley, 1984). Findings included a list of the three highest rated competencies in each of nine categories: administration, program planning, program execution, teaching, communication, understanding human behavior, maintaining professionalism, evaluation, and 4-H youth. Finally, a 2008 study (Brown, Gibson, & Stewart, 2008) in Virginia validated the importance of eight competencies (communication, educational processes, effective thinking, Extension organization and administration, human development, program planning, research, and social systems) originally outlined in the National Policy Statement on Staff Training and Development (ECOP, 1968).

A number of studies (Gunderson & Haynes, 2000; Ladewig & Rohs, 2000; Lindner, 2001; Moore & Rudd, 2004, 2005; Owen, 2004; Smith & Clark, 1987) have described competencies for Extension professionals serving in leadership or
administrative roles. For example, Ohio State University Extension identified dimensions or competencies needed to successfully perform as a county director. Through a review of the literature and a comprehensive process including job analysis, researchers identified 15 dimensions: oral communications, written communications, leadership, initiative, planning/organizing, decision-making/judgment, development of co-workers, behavioral flexibility, organizational sensitivity, assertiveness, objectivity, perception, sensitivity, management control, and collaborativeness (Gunderson & Haynes, 2000; Smith & Clark, 1987).

Research by Cooper and Graham (2001) examined competencies need for educators and for county supervisors. After developing a competency list through an open-ended questionnaire and data reduction process, a list of 57 core competencies was identified and grouped into seven areas used in the Arkansas evaluation system. Survey research was used to assess perceived importance of the competencies for both Extension educators and supervisors. Two competencies related to character traits - (a) dependable and (b) fair, honest, and trustworthy - were ranked in the top two for both groups of employees. Other skills ranked in the top six for educators or supervisors were related to management, group process, and communication (e.g., responds promptly, gives credit, teamwork). Cooper and Graham concluded that new roles to manage and train employees and volunteers, in addition to the need to work on interdisciplinary teams was the reason for the faculty/staff relations competency area being rated first for both educators and supervisors. Based on their findings, Cooper and Graham recommended a more balanced approach between process skills and subject matter training for field staff. The studies mentioned in Ohio (Gunderson & Haynes, 2000) and Arkansas (Cooper & Graham,
2001) as well as others (Lindner, 2001; Owen, 2004) have focused on those in roles as county directors in the Extension system. Others have reported using competencies for a wider range of administrative and leadership positions (Ladewig & Frederick, 2000) or have conducted research on competencies needed for upper level administrative positions (Moore & Rudd, 2004, 2005).

Ladewig and Rohs (2000) described how they adopted a competency model called MAP (Managerial Assessment of Proficiency) from Training House—a consulting company focused on learning and development—for use in the Southern Extension Leadership Development (SELD) program. Participants in SELD have included those in roles as county directors as well as vice-presidents, directors of Cooperative Extension and Experiment Stations, deans, center directors, department heads, district directors, county Extension educators, and faculty from the 13 states in the Southern Region and Delaware. As part of their participation in SELD, individuals were assessed using the MAP instrument, which includes twelve competencies, two leadership styles, and eight values or drives. Competencies included in the MAP used by SELD include: time management; setting goals; planning and scheduling work; training, coaching, and delegating; appraising people and performances; disciplining and counseling; listening and organizing; giving clear information; getting unbiased information; identifying and solving problems; making decisions and weighing risk; and thinking clearly and analytically.

Moore & Rudd (2004) investigated the leadership competencies needed by senior leaders in Extension organizations, that is, those serving as Extension directors or administrative heads. Using qualitative methodologies, they identified six major
leadership skill areas with 80 specific leadership competencies clustered under one of the areas. The skill areas used to cluster competencies were: human, conceptual, emotional intelligence, technical, industry knowledge, and communication skills. Based on interviews and qualitative analysis, study participants identified multiple competencies under each skill area as important to the success of Extension administrators. In a follow-up validation study (Moore & Rudd, 2005), leaders rated the importance of the competencies on a five-point scale. Five of the six skill areas listed above were rated between four (important) and five (very important) while the sixth (technical skills) was still rated between three (somewhat important) and four (important).

Over the last 15 years, challenges and issues facing Extension, implications related to those issues, and associated recommendations for practice have been the topic of several publications by the Extension Committee on Organization and Policy (ECOP, 1992, 1995, 2002, 2007). Each of these publications included some discussion of staffing and skills, qualities, or characteristics needed to meet future needs. In these publications, lists of competencies or core competencies have been identified for professionals working in the Extension system. These lists identified at the national level have changed and evolved over time. In 1968, ECOP identified eight general competency areas necessary for effective work as an Extension educator including Extension organization and administration, program planning and development, communication, research, human development, educational processes, social systems, and effective thinking.

In Development of Performance Evaluation and Selection Procedures for the Cooperative Extension Service, Hahn (1979) identified clusters of skills, abilities, and other characteristics important for Extension professionals. Hahn included seven clusters:
commitment to the job, communication skills, interpersonal skills, positive attitude, program development and direction, problem solving, and self-confidence.

Since 1969, ECOP has extended and updated their list of core competencies for Extension professionals (ECOP, 1993, as cited in Seevers et al., 1997; Maddy et al., 2002). In 1993, ECOP identified 16 core competencies for Extension professionals. The most recent set of core competencies published by ECOP was developed through a review of competencies being used in state Extension systems. Adapted from a model used by North Carolina Cooperative Extension, ECOP (Maddy et al., 2002) described 11 basic core competencies for the Cooperative Extension System as illustrated in Table 2.4.
Table 2.4
Eleven Basic Core Competencies for the Cooperative Extension System

<table>
<thead>
<tr>
<th>Competency</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Community and Social Action Processes</td>
<td>the ability to identify and monitor variables and issues important to community vitality (e.g., demographics, economics, human services, environmental, etc.), and the ability to use and apply these variables to program prioritization, planning, and delivery</td>
</tr>
<tr>
<td>Diversity/Pluralism/Multiculturalism</td>
<td>the awareness, commitment, and ability to include one’s own as well as the other’s [sic] different cultural perceptions, assumptions, norms, beliefs, and values</td>
</tr>
<tr>
<td>Educational Programming</td>
<td>the ability to plan, design, implement, evaluate, account for, and market significant Extension education programs that improve the quality of life for Extension learners</td>
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<tr>
<td>Engagement</td>
<td>the ability to recognize, understand, and facilitate opportunities and to broker the necessary resources that best respond to the needs of individuals and communities</td>
</tr>
<tr>
<td>Information and Education Delivery</td>
<td>the mastery of communication skills (such as written and verbal), application of technology, and delivery methods for supporting educational programs and guiding behavior change among Extension learners</td>
</tr>
<tr>
<td>Interpersonal Relations</td>
<td>the ability to successfully interact with diverse individuals and groups to create partnerships, networks, and dynamic human systems.</td>
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<tr>
<td>Knowledge of Organization</td>
<td>an understanding of the history, philosophy, and contemporary nature of Extension</td>
</tr>
<tr>
<td>Leadership</td>
<td>the ability to influence a wide range of diverse individuals and groups positively</td>
</tr>
<tr>
<td>Organizational Management</td>
<td>the ability to establish structure, organize processes, develop and monitor resources, and lead change to obtain educational outcomes effectively and efficiently</td>
</tr>
<tr>
<td>Professionalism</td>
<td>the demonstration of behaviors that reflect high levels of performance, a strong work ethic, and a commitment to continuing education and to the mission, vision, and goals of Extension</td>
</tr>
<tr>
<td>Subject Matter</td>
<td>the mastery of a scientific discipline, a research body of knowledge, or a technical proficiency that enhances individual and organizational effectiveness</td>
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Based on their review of how competencies were being used in the Extension system, Maddy et al. (2002) described strategies for success for using competencies; those strategies were focused on professional development.
A number of state Extension systems have developed their own set of competencies or core competencies. In a review of the Extension System’s North Central Region, 9 of the 13 states (University of Illinois, Iowa State University, Kansas State University, Michigan State University, University of Minnesota, University of Missouri, University of Nebraska, North Dakota State University, and Purdue University) appear to have developed or adopted a set of competencies. Table 2.5 describes competency models currently being used by these nine states.
Table 2.5
Competency Models of Nine North Central State Extension Organizations

<table>
<thead>
<tr>
<th>Extension System</th>
<th>Description of Competencies</th>
<th>Specific Competencies Included</th>
<th>Use or Proposed Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Illinois (Kuchinke, Correthers, &amp; Cecil, 2008)</td>
<td>Illinois adopted a performance management system in 2007 with individual competencies in five large groupings called critical skills clusters.</td>
<td>Critical skills clusters include: program accomplishments, professional competencies, interpersonal effectiveness, organizational development and leadership, and scholarship of engagement. These clusters and associated individual competencies are described with detailed behavioral objectives and operational definitions.</td>
<td>Monthly reporting, promotion and tenure, and performance management.</td>
</tr>
<tr>
<td>Iowa State University (Iowa State University Extension, 2007)</td>
<td>12 core competencies are named and defined.</td>
<td>Core competencies include: community and social action processes, diversity/pluralism/multiculturalism, educational programming, engagement, entrepreneurship, information and education delivery, interpersonal relations, knowledge of organization, leadership, organizational management, and professionalism.</td>
<td>No information given.</td>
</tr>
<tr>
<td>Kansas State University (Kansas State Research and Extension, 2007)</td>
<td>11 core competencies described as “the basic knowledge, attitudes, skills and behaviors that contribute to excellence in Extension education programs.”</td>
<td>Community and social action processes, diversity/pluralism/multiculturalism, educational programming, engagement, information and education delivery, interpersonal relations, knowledge of organization, leadership, organizational management, professionalism, and subject matter</td>
<td></td>
</tr>
<tr>
<td>Michigan State University (Michigan State University Extension, 2003)</td>
<td>10 core competencies described as “basic sets of knowledge, skills, attitudes and behaviors required to be an exemplary Extension Professional,” each with 3 to 7 sub-competencies.</td>
<td>Communication skills, diversity and multiculturalism, education and information technology, evaluation, applied research and reporting, external linkages, facilitative leadership, marketing and quality service, professionalism and career development, program implementation/delivery, program planning and development.</td>
<td>Self-assessment and staff development.</td>
</tr>
<tr>
<td>University of Minnesota (University of Minnesota Extension, 2006)</td>
<td>Competencies, described as meta-skills, that underlie the work of Extension beyond content/expertise competencies.</td>
<td>Competencies include: program leadership, Extension teaching, scholarship, engagement, program management, service, diversity and inclusion, and professional development.</td>
<td>Professional development including self-assessment and planning.</td>
</tr>
<tr>
<td>University of Missouri (University of Missouri, 2007)</td>
<td>20 core competencies in 4 categories; specifically for employees in a faculty role.</td>
<td>Academic specialty, capabilities as an educator, information technology, and individual capabilities</td>
<td>Professional development, including individual development planning.</td>
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<tr>
<th>Extension System</th>
<th>Description of Competencies</th>
<th>Specific Competencies Included</th>
<th>Use or Proposed Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Nebraska (University of Nebraska-Lincoln, 2005)</td>
<td>11 characteristics for 21st century Extension professionals described in two levels – core competencies and transformational skills – for three position categories</td>
<td>Successful teacher, subject matter competent, skilled communicator, leader, strong collaborator/team player, entrepreneurial, inclusive, change manager, balance, citizenship, and professionalism.</td>
<td>Professional development, including a diagnostic tool.</td>
</tr>
<tr>
<td>North Dakota State University (North Dakota State University Extension Service, n.d.)</td>
<td>Identified five competency areas</td>
<td>Subject matter, communication, information and educational technology, personal and organizational management, and program development and educational design.</td>
<td>Self-assessment and professional development.</td>
</tr>
<tr>
<td>Purdue University (Purdue University Extension, 2002)</td>
<td>A set of 10 core competencies that are important to Extension work and make Purdue Extension employees successful in their jobs.</td>
<td>Core competencies include: communications, diversity/pluralism/multiculturalism, educational programming, engagement, leadership, management/supervision, organizational knowledge, organizational management and professionalism, technology, and subject matter.</td>
<td>Part of a framework for professional development that includes self-assessment, career planning, and a tracking system.</td>
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</tbody>
</table>
There are also examples outside the Cooperative Extension System’s North Central Region. Arizona Cooperative Extension (2006) uses a list of 11 core competencies, each with statements describing them and web links to additional information. Arizona’s core competencies include professional and career development; educational and information technology; written and spoken communication and skills; program planning and evaluation; learning and subject matter expertise; program implementation; scholarship; organizational knowledge, leadership, and management; diversity and multiculturalism; marketing and public relations; and linkages with external audiences. Two other state Extension systems have developed competency models that have been described in journal articles and published reports—Texas (Stone, 1997; Stone & Coppernoll, 2004) and North Carolina Cooperative Extension (Liles, 1999; Liles & Mustian, 2004). North Carolina Cooperative Extension (NCCE) completed a 10-step process to identify core competencies critical to the success of all NCCE employees and volunteers. The NCCE competency model includes:

1. Knowledge of the organization—an understanding of the history, philosophy, and contemporary nature of NCCE.
2. Technical subject matter expertise—the mastery of a scientific discipline, a research body of knowledge or a technical proficiency that enhances individual and organizational effectiveness.
3. Programming—the ability to plan, design, implement, evaluate, and account for significant extension education programs that improve the quality of life for NCCE customers.
4. Professionalism—the demonstration of behaviors that reflect high levels of performance, a strong work ethic, a commitment to continuing education and to the mission and goals of NCCE.
5. Communications—the ability to effectively transfer and receive information.
6. Human Relations—the ability to successfully interact with diverse individuals and groups creating effective partnerships, networks, and dynamic human systems.
7. Leadership—the ability to positively influence a wide range of diverse individuals and groups. (Liles & Mustian, 2004, p. 438)
In addition to the seven core competencies, the NCCE model includes sub-competencies for six specific job groups: administrators/county extension directors, educators, program associates/assistants, administrative assistants/secretaries, specialists, and volunteers. For each job group, sub-competencies that more clearly defined each competency were described with three levels of proficiency. Liles (1999) described NCCE’s model as competency-based and aligning individual performance standards with strategic directions of the organization. Although training and organizational development was the focus for NCCE’s model, Liles described that the intent was to create linkages to other critical systems such as recruiting, hiring, and reward systems. The North Carolina competency model was extended through research on sub-competencies important for the success of administrative leaders (Owen, 2004).

Texas Extension developed a competency model using focus groups and interviews with Extension faculty (Stone & Coppernoll, 2004; Texas Extension, 2005). The Texas model described in detail by Coppernoll and Stone (2003) includes six core competencies:

1. Subject Matter Expertise - A thorough knowledge and skills in the performance of a given task or subject matter area, including skills in providing education and instruction, solving problems, and integrating technology. (p. 1)

2. Organizational Effectiveness - Accomplishes the mission of Extension through program development and evaluation efforts, as well as the ability to build relationships and act with accountability. (p. 2)

3. Develop & Involve Others - Maintains healthy relationships with other people in order to meet the needs of Extension’s clientele. Responsibilities include mentoring, delegation, teamwork, facilitating groups, and providing direction for volunteers. (p. 3)

4. Communications - The ability to communicate effectively in interpersonal and group situations, whether through written or oral means. (p. 4)
5. Action Orientation - Shows strong initiative, acts as a champion for change, creates a vision and working [sic] diligently toward that goal. (p. 5)

6. Personal Effectiveness - A commitment to the profession as well as the flexibility to balance all aspects of personal and professional life in order to work effectively. (p. 6)

The six core competencies were further defined by four to eight sub-competencies, each with behavioral descriptions (Coppernoll & Stone, 2003). The model also includes definitions of three proficiency levels – core (learning), intermediate (producer), and advanced (innovator/mentor) – used to describe an individual’s proficiency in a competency area (Coppernoll & Stone, 2003).

Stone (1997) described this competency model as the basis for Texas Extension’s professional development initiative that included orientation, core training, and management/leadership development as well as plans for using the model in performance appraisal systems. Current documentation on use of the Texas model describes it as one of five components in a systems approach to professional development called You, Extension, and Success (Stone & Coppernoll, 2004; Texas Extension, 2005). Competencies are integrated with professional development through communication, planning, learning opportunities, and accountability based on the competency model.

Competency Identification and Modeling – Approaches and Methods

In this section of the literature review, I will review approaches and methodologies currently being used to identify competencies and develop competency models for organizations. Practices regarding steps, methods, and other recommendations for competency modeling will also be discussed.
Major Approaches To Competency Modeling

A review of the literature reveals many approaches to identifying competencies and developing a model for an organization. In addition to there being many approaches, there is a lack of consistency in the terms used to describe approaches and how they are categorized. Dubois (1993) described three major approaches to identifying competencies: (a) modified task analysis approach (MTAA), (b) critical trait approach (CTA), and (c) situational approach (SA).

Modified task analysis is a variation of task analysis that has traditionally been used in human resource development (Dubois, 1993). Task analysis approaches to job or work analysis and subsequent competency development are most suited to concrete, less abstract jobs such as those in vocational and technical education. The critical trait approach (CTA) emphasizes underlying traits and other characteristics required for successful job performance. To use this approach, the researcher must identify critical traits, behaviors, and other characteristics distinguishing exemplary from average performers. Job competency assessment methodology is a critical trait research process that will be discussed later. CTA approaches fit with a growing trend of instability in job tasks and activities by identifying competencies that employees can acquire and are transferrable. CTA approaches can be applied to concrete or abstract jobs.

The third major approach described by Dubois is the situational approach (SA). Concepts and methodologies behind the SA were developed by McLagan (1988), who called her methodology flexible job design and competency modeling. According to Dubois, the SA brings an element of unity and eclecticism to the competency modeling
process where flexibility is a distinguishing feature. McLagan, interviewed by Zemke (1982), summarized the SA:

Our approach is somewhat anthropological in nature. We use a number of data-gathering methods and try to triangulate on the critical competencies....[Our associates] work with the people who determine the parameters of the job and who can tell us what the job produces that is of value to the organization....We are trying to communicate the key themes that explain excellence in behavior in the organization....So the terms we use create a language about performance for people to use in the organization. That language has to be acceptable and comfortable to users. The competency model has to be written with the users' scope of thinking. (pp. 30-31)

Another way of describing approaches to competency modeling is by the level of new research going into creating a model. Three categories have been described; the use different terms but represent similar concepts. The first approach involves simply borrowing or purchasing a competency model from another organization and applying it to a specific role or function. Called the borrowed approach (Rothwell & Lindholm, 1999) or generic overlay (Dubois, 1993), this is the easiest, least expensive, and least rigorous approach. A model is simply borrowed from another organization and little methodology is involved (Rothwell & Lindholm, 1999). Dubois described three initial steps before selecting a model for overlay: (a) conduct a needs assessment, (b) develop a draft model through focus groups of job experts, and (c) verify/modify the model with another group of exemplary performers. This final model is then used to search for an existing model that aligns as closely as possible.

The generic overlay method may be good if a well-aligned, research-based model can be located. However, there are several issues with this approach:

1. An externally developed model will seldom precisely describe attributes of high performers and other competencies required in the context of one’s own organization.
2. Assumptions must be made about the internal and external environment that may or may not be valid given the rapidly changing environment in many organizations.

3. It assumes language will be consistent with the host organization and culture.

4. Some competencies may not be detected or included, particularly technical competencies. (Dubois, 1993)

Before adopting this method, care has to be taken to be certain the model includes the full range of competencies needed for successful and exemplary performance as well as technical competencies for the host organization.

A second approach is the borrowed-and-tailored approach (Rothwell & Lindholm, 1999), also called the customized generic model method (Dubois, 1993) or competency menu method (Dubois et al., 2004). In a general sense, this might include tailoring or adopting an outside expert model such as those developed by professional associations, using generic lists developed for broad use, using existing lists identified through a literature review, or both. This approach builds on previous research because others have already conducted the research to create a generic model or another organization has developed a model for their organization. Tailoring or customizing involves modifying the model so it is suitable for use in a new and unique organizational culture and validating competencies with input of outstanding and average employees (Dubois, 1993; Lucia & Lepsinger, 1999; Rothwell & Lindholm, 1999). Tailoring methods will be discussed in detail below and may be done through card sorts, surveys, focus groups, BEIs, or some combination of these and other methods.

Dubois and Rothwell (2000) described advantages of using a borrowed-and-tailored approach. Depending on the rigor and credibility of the model or models adapted, benefits of using existing models to tailor might include: rapid results, represents state of
the art in a profession, results are widely recognized or have coat-tails credibility, and judicial systems may recognize validity more readily. Disadvantages might include: mismatch between model and organizational needs or context, may not be comprehensive for the organization, and might not be stated in the language of the organization. This approach can produce an organizationally defensible competency model if accepted research standards are utilized (Dubois, 1993).

The final, most comprehensive approach is described by Lucia and Lepsinger (1999) as creating a model from scratch and labeled by Rothwell & Lindholm (1999) as the tailored approach. Table 2.6 summarizes five approaches to creating a tailored competency model or starting from scratch.
<table>
<thead>
<tr>
<th>Name1</th>
<th>Description</th>
<th>Key Tool(s) or Steps</th>
<th>Advantages and Limitations</th>
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<tbody>
<tr>
<td><strong>Process-driven (Job Competency Assessment Methodology [JCAM], Modified JCAM)</strong></td>
<td>Attaches weight to the work process performed by exemplars. Isolates the characteristics unique to exemplary performers. Especially useful for defining the competencies for professional, managerial, and executive roles – jobs of a more abstract nature.</td>
<td>Critical trait research process using behavioral event interviews (BEIs). May be modified by using written accounts. Three key steps: research the job components and requirements; isolate the characteristic of exemplars and construct a model; validate the model.</td>
<td>Advantages: Rigorous, empirical research procedure; develops a highly valid and reliable model; investigates internal realities, not just opinions about requirements; criterion referenced rather than norm referenced; overcomes potential problems of panel methods Limitations: Time consuming and expensive; cannot identify competencies for future work</td>
</tr>
<tr>
<td><strong>Outputs-driven (Situational approach or flexible job competency model method)</strong></td>
<td>Focuses on key outputs, what successful performers produce, and competencies required. Key feature is the identification and use of future assumptions. Identifies roles, outputs, and competencies with behavioral indicators.</td>
<td>Multiple-step process including needs analysis, environmental scanning, model development with expert panels, and validation. Literature reviews, existing organizational data, surveys, expert panels, facilitated discussions, and brainstorming may be used.</td>
<td>Advantages: Flexibility; emphasizes outputs rather than positions; durable over time and easy to update; can be applied to jobs for an entire organization, work unit, or single job; can include future trends affecting work under analysis</td>
</tr>
<tr>
<td><strong>Invented (Guess)</strong></td>
<td>Decision-makers are guided through a process of developing a model by making it up.</td>
<td>Best approach when incumbents are not helpful or are not the most reliable source of information (e.g., jobs are expected to change dramatically).</td>
<td>Advantages: Faster than most other methods Limitations: Tend to identify too many competencies; very low in validity and reliability</td>
</tr>
<tr>
<td><strong>Trends-driven</strong></td>
<td>Focuses attention on future issues or trends affecting job, work, team, or occupation.</td>
<td>Isolate key trends or changes affecting the organization, job, or occupation then isolate when people should know, do, or feel to manage trends.</td>
<td>Advantages: Future oriented</td>
</tr>
<tr>
<td><strong>Rapid results assessment (work-responsibilities driven)</strong></td>
<td>Derives outputs, competencies, roles, and quality requirements from work responsibilities or activities.</td>
<td>Eighteen basic steps that include using a panel of exemplary performers and supervisors, survey research, and validation. Modified DACUM2 is extended to collect work activities, tasks, and competencies.</td>
<td>Advantages: Faster; high face validity from DACUM process; facilitates involvement and builds ownership Limitations: Less research rigor; relies on credibility of panelists</td>
</tr>
</tbody>
</table>

Sources include: Bernthal et al., 2004; Dubois, 1993; Dubois & Rothwell, 2000; Dubois et al., 2004); McLagan, 1988, 1989b; Rothwell, 1994; Rothwell & Kazanas, 2008; and Rothwell & Lindholm, 1999

1Other names are included in parentheses. 2Developing a Curriculum
The first two approaches in Table 2.6, process-driven and outputs-driven, are the classic competency modeling methodologies. Using the Job Competency Assessment Methodology (JCAM), the process-driven approach is an analytical, empirical method for determining the competencies used to construct a competency model. JCAM includes three general steps (Boyatzis, 1982; Dubois, 1993; Dubois et al., 2004). The first step of JCAM, researching job components and requirements for exemplary performance, is accomplished through a focus group or panel as well as a questionnaire sent to job incumbents. The result is an inventory representing a best estimate of characteristics of exemplary performers (Dubois, 1993). Then, exemplars can be identified through the focus group, nominations, or other data sources. Step two involves researching the attributes of exemplary performers and developing a model. Job observations or BEIs, a form of critical incident or critical behavior interviews, are used to collect data on exemplary and average performers. Data are coded, using themes generated from step one, and analyzed to identify two sets of competencies: (a) those held only by exemplary performers and (b) those shared by average and exemplary performers. The model is then validated using replication of original research, alternate procedures such as testing employees, and/or a panel of expert jurors.

The second classic approach described in Table 2.6 is the flexible job competency model method. This approach relies on a wide variety of information sources to build flexible models and includes eight key steps (Dubois, 1993; McLagan, 1988):

1. Assemble and review all available information that is pertinent to the project (e.g., strategic context, organizational context, information that already exists about jobs) and organize it for use by an expert panel.

2. Identify an expert panel that is highly respected. Composition and possible use of sub-panels will depend on the project.
3. Develop present and future assumptions using structured, facilitated discussions and brainstorming.

4. Develop job outputs menu that may include quality criteria through brainstorming and consensus building.

5. Construct job competencies menu and behavioral indicators for each competency using panel of experts and others as needed.

6. Determine menu of job roles through cluster analysis of the outputs identified. Roles and outputs are organized into logical and practical subsets. This is accomplished by an analyst with support from the expert panel.

7. Construct one or more competency models using materials from previous steps.

8. Share the results.

Other methodologies have emerged including those that focus on rapid development by key decision-makers, some focused on future trends, and others on work-responsibilities or activities. Each approach has advantages and limitations related to rigor, expense, time, future orientation, and other factors (see Table 2.6).

Byham and Moyer (2005) used two categories to describe approaches for identifying competencies: a job-driven approach and a vision-driven approach. Similar to the process-driven and work-responsibilities driven approaches (Table 2.6), the job-driven approach relies on jobs or roles as the source of information for constructing competencies. The process to identify competencies using a job-driven approach would typically include at least some of the following: background review, incumbent interviews, critical incident meetings, job/role-specific visioning, data integration, survey research to refine and verify competencies, and final modeling. The vision-driven approach, similar to the invented and trends-driven approaches (see Table 2.6), relies on individuals’ interpretation of the organization’s mission, vision, values, or strategic goals.
In this approach, researchers would use background review (e.g., strategic direction, initiatives, and critical success factors), executive interviews, data integration, executive review, and final modeling. Byham and Moyer (2005) described vision-driven approaches as top-down while job-driven approaches are bottom-up with both approaches often needed to build sets of core and specific competencies.

There are differing opinions regarding which approaches produce the best results. Some of these differences are because of differing views on what should be the basis of competencies. Some researchers focus on the characteristics of exemplars while others focus on outputs and key competencies needed in employees to produce outputs. Other approaches focus on the strategic direction of the organization and competencies needed to support organizational priorities. Parry (1996) described some studies working backward from results, attempting to see how behavior differs and to identify the competencies that explain the difference between high performers and those who are less successful. Spencer and Spencer (1993) described a grounded theory approach, working backward from a performance criterion to identify characteristics of people who perform at those levels. Contrast this with studies that begin with a comprehensive list of competencies and work forward from that list to select those most pertinent. An examination of current practices shows that everyone does not use the same methodology and many studies combine aspects of different approaches. Dubois and Rothwell (2000) stated: "To our knowledge, there are no universally understood, accepted, or acknowledged standards for researching and producing job competency models" (p. 2-11). The approach selected needs to reflect the organizational needs and culture (Dubois et al., 2004).
Methods and Key Steps Used For Competency Modeling

Regardless of the approach or approaches chosen (Table 2.6), specific methods or tools are needed to conduct a competency study. Table 2.7 summarizes a wide variety of methods described in the literature. Although some of these methods (Table 2.7) such as BEIs are aligned with a specific approach, others such as focus groups are used across many of the approaches to building a competency model. Each method is described along with advantages and limitations noted in the literature. Focus groups, interviews, and surveys were consistently mentioned by authors describing competency modeling tools.
**Table 2.7**

Methods and Tools Used for Identifying Competencies

<table>
<thead>
<tr>
<th>Name (Other names)</th>
<th>Author</th>
<th>Description</th>
<th>Advantages/ Limitations (when noted by author)</th>
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<tbody>
<tr>
<td>Behavioral event interview (BEI) or critical behavior interview (CBI)</td>
<td>Boyatzis, 1982 Dubois, 1993 McClelland, 1975 Hay Group, 2003 Spencer &amp; Spencer, 1993</td>
<td>Uses a rigorous interview process with exemplary and fully successful performers. Focus is on characteristics of the person, not work processes or content. Qualitative analysis using previously identified competencies for coding reveals characteristics that differentiate the groups. Quality of persons interviewed, not number is important. Eight to 12 individuals in each category is usually sufficient. Inferential statistics such as ANOVA used to identify differentiating characteristics.</td>
<td>Advantages: High face validity, methods reveal subtle/hidden competencies, dispel false hypotheses, high predictive validity so findings are highly useful for applying to all HRM subsystems, unbiased in terms of race, gender, or culture. Limitations: Time consuming and costly, requires trained interviewer, qualitative and statistical analysis, jobs must exist/be established, can’t be use for future conditions, impractical for analysis of many jobs.</td>
</tr>
<tr>
<td>Job task/function analysis</td>
<td>Spencer &amp; Spencer, 1993</td>
<td>Employees or observers list in detail each task, activity, function or action an job holder performs. Data may be collected through questionnaires, time logs, interviews, panels, or direct observation.</td>
<td>Advantages: complete descriptions, can validate or elaborate on data collected by other methods. Limitations: focus on characteristics of the job rather than people, too detailed.</td>
</tr>
<tr>
<td>Name (Other names)</td>
<td>Author</td>
<td>Description</td>
<td>Advantages/ Limitations (when noted by author)</td>
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<tr>
<td>Focus groups (Expert panels; key informant groups)</td>
<td>Dubois, 1993 McLagan, 1989b Rothwell &amp; Kazanas, 2008 Hay Group, 2003 Spencer &amp; Spencer, 1993</td>
<td>Practitioners use a variety of methods with groups or expert panels to identify competencies and develop models. Researchers have described group processes used such as brainstorming, facilitated discussion, and consensus-building. Extended DACUM method is another method used with groups. The quality of results varies. The way you use focus groups determines the quality of outcomes.</td>
<td>Advantages: short time period, participatory process encourages long-term support, provides communication and teambuilding opportunities, panel members become knowledgeable and can help with consensus and provide support, uncover performance roadblocks. Limitations: up to 40 or 50 percent of competencies are missed with traditional, unstructured focus group; may be improved with structured process, may require off site work for focus. Group dynamics can be challenging, may be expensive, may be difficult to reconcile differences if group represents wide variation in jobs, may identify folklore (items that sound good but do not predict performance).</td>
</tr>
<tr>
<td>Environmental scanning &amp; benchmarking</td>
<td>Yeung, 1996 Stone &amp; Rennekamp, 2004</td>
<td>Identify best practices and things that are intriguing. Identify omissions, useful language, and establish congruence with current research.</td>
<td>Advantages: think outside the box, learn what others are doing or saying. Limitation: will result in regression to the mean if benchmarked best practices are just applied.</td>
</tr>
<tr>
<td>Survey methods</td>
<td>Dubois, 1993 Spencer &amp; Spencer, 1993 Hay Group, 2005 Parry, 1996</td>
<td>Surveys collect information on competencies from individuals whose opinions are valued. For example, panel members and others in an organization may rate competency items according to importance and how often required. Can focus on one skill at a time and ask how it differentiates, if failure is likely without skill, etc.</td>
<td>Advantages: less costly, quick and efficient data collection from a large population, participatory (many employees have meaningful input so they have buy-in, builds consensus). Limitations: master list may be incomplete, limited to questions asked - emergent competencies cannot be identified if survey is based on a fixed list, respondents may rate competencies based on beliefs or preferences not reality (BEI data would address this issue), rating large numbers of survey items may introduce error.</td>
</tr>
<tr>
<td>Evaluation by self or others (360) or performance appraisal</td>
<td>Lucia &amp; Lepsinger, 1999 Parry, 1996</td>
<td>Appraisal against a description of competencies, multi-rater feedback from a 360-degree instrument, self-inventories. Could be more qualitative descriptions of behavioral strengths or weaknesses by manger, peers, clients, etc.</td>
<td>Advantages: may add validity to competencies; self-assessments can assess baseline competencies. Limitations: time consuming, costly, may require valid instruments.</td>
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Table 2.7 continued

<table>
<thead>
<tr>
<th>Name (Other names)</th>
<th>Author</th>
<th>Description</th>
<th>Advantages/ Limitations (when noted by author)</th>
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<tbody>
<tr>
<td>Nominal group techniques</td>
<td>Rothwell &amp; Kazanas, 2008 Schippmann, 1999</td>
<td>A group is formed but members do not interact in early stages. A panel records some information privately before proceeding to group discussions.</td>
<td>Advantages: participatory, may miss fewer competencies than with unstructured focus group, keeps participants focused, avoids one person dominating. Limitations: time-consuming, cost.</td>
</tr>
<tr>
<td>Delphi procedure</td>
<td>Rothwell &amp; Kazanas, 2008</td>
<td>Similar to nominal group techniques, this method substitutes written questionnaires for small-group interaction to collect information about competencies.</td>
<td>Advantages: relatively fast, does not require fact-to-face sessions, seeks convergence of opinions, anonymity, time for participants to think about opinions. Limitations: time and cost.</td>
</tr>
<tr>
<td>Card sort</td>
<td>Dubois, 1993</td>
<td>Individual participants sort a group of competencies using a predetermined set of sorting criteria. May be done individually, in groups, or some combination. For example, participants might be asked to select competencies they use the most and add cards for any missing.</td>
<td>Advantages: useful for reducing a larger set, easily modified to all adding new/missing items, rapid results, flexible in how it is administered (e.g., can be at a distance), minimal time for participants, can be used for team-building with participants, shared ownership, help identify differences between competency statements and organizational context/language. Limitations: time consuming to prepare, planning can be difficult and sorting must be conducted with a disciplined, established set of instructions, have to start with a comprehensive universe of competencies.</td>
</tr>
<tr>
<td>Use generic lists, existing lists, or competency dictionary</td>
<td>Dubois, 1993</td>
<td>Using a competency dictionary or existing competency lists from conference, books, or literature reviews.</td>
<td>Advantages: rapid results and can claim benchmarking, credibility for other organizations. Limitations: language tends to be too general or specific to other organizations, may need translated for organization, lists may be incomplete or have extraneous items, may be costly if purchasing.</td>
</tr>
<tr>
<td>Expert system (computer-based)</td>
<td>Spencer &amp; Spencer, 1993</td>
<td>A computer-based system asks the researcher questions. Responses are keyed into a database of competencies identified by previous studies. System manages analysis and provides description of adequate and superior performance for each competency.</td>
<td>Advantages: access to data (e.g., hundreds of studies may be in a database), efficiency, productivity. Limitations: quality of data entered, may overlook some and not discover new competencies, may be expensive.</td>
</tr>
</tbody>
</table>
The degree of use for each method has been the topic of research. Two studies have examined methods used by organizations conducting competency studies (Cook & Bernthal, 1998; Rahbar-Daniels et al., 2001). In research using the HR Benchmark Group, Cook and Bernthal reported that most organizations are using interviews (80%) to collect competency data; they are also using focus groups (68%) and surveys (61%). In addition, 75 percent of organizations surveyed relied on some type of analysis of organizational values with 30 percent using them extensively to identify competencies. Research by Mercer Consultants (Rahbar-Daniels et al., 2001) also found that organizations are using a variety of methods including expert panels/focus groups (68%); BEIs (58%); surveys (25%); and benchmarking, generic database, card sorts, and competency menus (all below 20%). Mercer consultants concluded that the most effective models were organic models that were developed in a rigorous fashion – using techniques like BEIs or expert panels – and have undergone formal validation. Combining methods was supported by Parry (1996), who stated that “as with many forms of behavioral science research, the safest approach is to use two or more of these methods to cross-check and validate results” (p. 52).

**Trends, Recommended Practices, and Guidelines for Competency Studies**

Before reviewing general suggestions and recommendations, it is important to understand some of the challenges that are key drivers behind decisions that are made in planning and conducting competency studies. Dubois et al. (2004) described challenges including a balance between speed and rigor (validity and reliability), resources needed versus those available, convincing decision-makers, and time and resources for organization-specific competencies versus using models from other sources. Others
(Cook & Bernthal, 1998; Cooper, 2000; Green, 1999; Pickett, 1998; Rahbar-Daniels et al., 2001; Schoonover, 2002) have described challenges that include: participation; difficulty identifying competencies; lack of time and resources; lack of commitment and support from management and/or the organization; resistance from staff; a culture that does not support competency practices; providing clear, accurate definitions; and linking competencies to organizational strategy.

Several authors (Cook & Bernthal, 1998; Cooper, 2000; Pickett, 1998; Rahbar-Daniels et al., 2001) mentioned lack of commitment and support from management, or throughout the organization, as a challenge. Reasons for lack of commitment might include a failure to clearly articulate the purpose of the project, not enough stakeholders involved, fear of changes, limited choices, and extra work (Lucia & Lepsinger, 1999). Green (1999) concluded that “a competency system can be sunk if you don’t consider the challenges associated with developing and installing it” (p. 11).

Based on the challenges identified and other factors, a number of authors have described trends and recommended practices for competency modeling, summarized by Athey and Orth (1999) as five trends. One trend is an increased demand for more participatory approaches (Athey & Orth, 1999; Liles & Mustian, 2004). The competency modeling process grew out of an empirical method where groups of performers are compared. This approach is less and less feasible as organizations move to more open and participative environments. Secondly, there is a shift toward short cycle methods (Athey & Orth, 1999; Mirabile, 1997). Traditional approaches to competency modeling provide statistical validity but are time and cost intensive, which is not a good fit for
organizations with rapidly changing jobs and environments. Flexible systems are needed that can change quickly in response to changing needs and skill requirements.

A third trend is toward at least some emphasis on emerging or future competencies. This practice helps with two potential problems: (a) a focus on the past that lends little insight on future needs, and (b) influences of existing norms and values that model what is culturally correct performance, but not what is needed in the future (Athey & Orth, 1999). Fourth is a focus on team and process competencies, driven by flatter, more process-driven work arrangements and a growing need to utilize people with critical skills regardless of physical location. Finally, Athey and Orth describe an organizational learning perspective. From this perspective, there are future benefits and value of competencies within a broader concept of organizational learning benefits, not solely the HR function. Application of competency methods to organizational learning suggests a shift away from detailed analysis of jobs and skills to focus on higher level capabilities such as problem solving.

**Recommendations for Practice**

Many of the publications on competency modeling include broad recommendations for practice. For example, two papers from the Society for Human Resource Management (Moulton et al., 2006; Tabet, 2003) described key factors or recommendations for developing and implementing competency models, including:

1. linking generic competencies to the organization’s strategic goals;
2. using competencies that satisfy a broad definition (i.e., not just knowledge or skills but a cluster of skills, knowledge, and attributes);
3. developing competencies that are specific and behaviorally defined if they are to be applied to the work environment;
4. keeping the number of competencies small; and

5. using a methodology that includes structure, balance, participation, organizational context, job content, linkage, and validation.

Table 2.8 summarizes general recommendations for competency modeling that have been described in the literature.

The sources of information used for competency modeling are important (Dubois et al., 2004) and have been discussed by several authors (Table 2.8). Regardless of method, data about competencies are dependent on the sources of the data. American Compensation Association (ACA) research found that competency information coming from multiple sources and organizational strategy play a key role in development (Thompson et al., 1996). Senior management and strategic plans were the most frequent source of information with high performers and experts next. Both sources were often used in combination. Research with the HR Benchmark Group (Cook & Bernthal, 1998) found that sources for competency identification most often included managers and job incumbents (85%) as well as HR staff and senior leaders (70%), with most studies using multiple sources, averaging five separate sources to identify competencies. According the Byham and Moyer (2005), the key is getting the appropriate information from the appropriate sources (see Table 2.8 for a description of sources). Thus, gathering data from the right sources and from a variety of sources ensures buy-in and makes the process more accurate and comprehensive (Dubois et al., 2004).
<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alignment/ linkage</td>
<td>Make sure competencies are aligned with organizational strategy (i.e., organizational strategy contributes to identification of competencies). It is also important to link competencies to the organization’s purpose, goals, and values.</td>
</tr>
<tr>
<td>Focus on core competencies</td>
<td>Focus on a generic list of broad competencies that will have greater acceptance. Performance criteria may differ but the competency itself should be broad and generic.</td>
</tr>
<tr>
<td>Defining competencies</td>
<td>Clear definitions are important for the human resource systems based on them to succeed. Problems occur when competencies overlap too much, are defined too broadly, or are not clearly defined. Successful application lies in how they are defined and described behaviorally.</td>
</tr>
<tr>
<td>Use behavioral definitions</td>
<td>Behavioral definitions can be translated into measurable actions, are easy to understand, and individuals can observe then agree on what they see or hear. Behavior should be observable and measurable, and it can be described with proficiency levels. Green (1999) described this concept as operationalizing a competency by describing actions or performance skills that illustrate what it looks like in action.</td>
</tr>
<tr>
<td>Customized to the organization</td>
<td>Successful competency applications are customized to the organization.</td>
</tr>
<tr>
<td>Sources of information and triangulation</td>
<td>Sources may include job experts, incumbents, managers, change teams, human resources, and top management. Incumbents should be at least fully successful; may use exemplary performers or both. Types of information could include vision, values and strategy, structure and culture, best practice, current job activities, and anticipated job changes. Authors recommend using multiple sources to triangulate and getting the right information from the right sources.</td>
</tr>
<tr>
<td>Identifying individuals at various performance levels</td>
<td>The organization must define what it means to be exemplary or fully successful. Performers can be identified through supervisory nomination or peer nominations.</td>
</tr>
<tr>
<td>Communication</td>
<td>Develop a common language and be consistent in communicating and teaching about competencies throughout the organization.</td>
</tr>
<tr>
<td>Participation</td>
<td>Involve those who will be affected (incumbents, customers, managers, and HR people who will have to apply the model). Need to involve employees at all levels. Participation helps with quality of data as well as later acceptance, understanding, and use.</td>
</tr>
</tbody>
</table>

Sources include: Athey & Orth, 1999; Brown, 2006; Byham & Moyer, 2005; Cook & Bernthal, 1998; Cooper, 2000; Dewey, 1997; Dubois, 1993; Dubois et al., 2004; Dubois & Rothwell, 2000; Green, 1999; Lewin & Zwan, 1976; Liles & Mustian, 2004; Lucia & Lepsinger, 1999; Maddy et al., 2002; McLagan, 1980; Moulton et al., 2006; Parry, 1996; Pickett, 1998; Public Service Commission of Canada, 1998; Rahbar-Daniels et al., 2001; Rothwell & Lindholm, 1999; Schoonover, 2002; Spencer & Spencer, 1993; Tabet, 2003, Thompson et al., 1996; and Zingheim, Ledford, & Shuster, 1996.
When job incumbents are used as an information source, researchers need to understand the implications of how individuals are identified. Dubois and Rothwell (2000) suggested identifying fully successful or exemplary individuals that the organization’s formal and informal leaders respect for quality of job performance, judgment, and allegiance. Recognized, credible, and reputable participants will mean results will be accepted. Furthermore, one should not include any respondent group that is less than fully successful. Spencer and Spencer (1993) extended this concept by suggesting that organizations should use the characteristics of superior performers when generating data for competencies; “failure to do so is essentially to select and train to mediocrity” (p. 15).

A number of authors describe the importance of participation (see Table 2.8). Green (1999) suggested three ways to use participation to improve the quality of the competencies developed:

1. Have members of an executive team contribute to a first draft of the competencies for the organization.

2. Utilize a leadership council that involves representatives from the organization in a series of meetings to link human resources to organizational planning and develop competences that reflect skills needed in the future.

3. Provide opportunities for every person in the organization to contribute ideas.

In describing a process for competency development that needs to be highly participatory, Liles and Mustian (2004) involved employees in every step of their competency modeling process including competency identification and validation.

**Decisions and Guidelines for Competency Studies**

When designing a competency study, there are decisions to make such as what is included, the focus for the model, and the length of the model. Parry (1996) provided a
list of guidelines, many of which align with the recommendations summarized in Table 2.9, including: focus on generic (i.e., core) competencies, avoid the obvious, describe observable behaviors, illustrate with examples, use familiar language, keep it short, keep them mutually exclusive, focus on future needs, work backwards from results to behavior to competencies, define levels of excellence, avoid personality traits, and cluster similar competencies. Key decisions to be made and guidelines that were identified in the literature are summarized in Table 2.9.

Table 2.9
Competency Modeling: Decisions and Guidelines

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description and Guidelines</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope/focus</td>
<td>Decision needs to be made about whether the model will be for an entire organization, bands of jobs, specific job groups, or some combination. Focus affects methodology and other decisions. Each competency may not apply to each position equally. Many organizations use a combination of both core competencies and some specific to a job or group of jobs.</td>
<td>Byham &amp; Moyer, 2005; Moulton et al., 2006; Rothwell &amp; Kazanas, 2008; Schoonover, 2002</td>
</tr>
<tr>
<td>What is included</td>
<td>A major difference between competency studies is whether or not they include personality traits, values, and styles. There is disagreement in the literature on whether or not traits, values, and styles should be included.</td>
<td>Byham &amp; Moyer, 2005; Cooper, 2000; Moulton et al., 2006; Parry, 1998</td>
</tr>
<tr>
<td>Model length</td>
<td>Keep the number of core competencies small. Parry recommended between 12 and 14. Some suggest 10 or less, or as few as six. Provide a simple framework with a few competencies that describe most of the behavior needed for excellence.</td>
<td>Brown, 2006; Parry, 1996, 1998; Pickett, 1998; Schoonover, 2002; Tabet, 2003</td>
</tr>
<tr>
<td>Structure/ model detail</td>
<td>Models typically include competencies, definitions, behaviors, and some type of proficiency levels. Include one to five behavioral indicators that bring the competency to life. The narrower the focus of behavioral descriptions, the more specific the examples can be.</td>
<td>Byham &amp; Moyer, 2005; Dubois &amp; Rothwell, 2000; Mirabile, 1997; Tabet, 2003</td>
</tr>
<tr>
<td>Future orientation</td>
<td>Focus on future needs depends on how the organization plans to use the model and nature of changes occurring. Some methods focus on historical data (e.g., BEI). Implicit in these methods is an assumption that how top performers succeeded in the past will provide evidence for future success.</td>
<td>Cooper, 2000; Parry, 1996; Schoonover, 2002</td>
</tr>
<tr>
<td>Validation</td>
<td>Processes used for identifying competencies should be well documented. Decisions need to be made on how models will be validated (job content and criterion are frequently used).</td>
<td>Moulton et al., 2006</td>
</tr>
</tbody>
</table>
Two of the decisions—what is included and future orientation—are discussed elsewhere (e.g., operational definitions in Chapter 1 and methodology in Chapter 3). Four of the six decisions—focus, length, model structure, and validation—described in Table 2.9 are discussed further below.

**Scope and focus.** Some competency models are designed as core models for the entire organization, others focus on specific job groups, and some include both core competencies and more specific models for job groups within the organization (Byham & Moyer, 2005; Lucia & Lepsinger, 1999; Schoonover, 2002). Organizations that focus their competencies more broadly call them *core competencies* or use terms such as generic or general competency model (Schoonover, 2002). Specific competencies, sometimes called dimensions, relate more to specific jobs or roles and provide greater precision. The decision on which approach, or combination thereof, depends on what the model will be used for in practice.

Some authors have suggested that the core competency approach, creating a model for all jobs at one time, is not possible (Dubois & Rothwell, 2000) or cannot be substituted for individual position competencies (Cooper, 2000). Dubois & Rothwell (2000) further suggested that competency identification work should begin with individual jobs where that impact is more immediate rather than using an organization-wide list, having minimal impact. These recommendations differ from others (Byham & Moyer, 2005; Lucia & Lepsinger, 1999; Moulton et al., 2006; Parry, 1996) who suggest that a set of core competencies can be developed and used successfully. Parry (1996) recommended a focus on a generic list of broad competencies that will have greater acceptance. Performance criteria may differ from position to position but the competency
itself should be broad and generic. Lucia and Lepsinger (1999) addressed this concern, specifically mentioning two questions or issues that commonly are raised.

The first question Lucia and Lepsinger (1999) address is how can a competency model work for everyone? According to Lucia and Lepsinger, this first question is based on a misunderstanding that competencies define all skills for performing all jobs. Even when a model is couched in terms of core competencies relevant across an organization, the behaviors may vary depending on the role. Thus when the model is delineated in behavioral terms, it can be measured differently based on the role or job. Secondly, issues are raised about people not agreeing on one model. Lucia and Lepsinger suggest that seeing a competency model as an attempt to fit diverse individuals into a common mold is a failure to see the forest for the trees. The focus is on underlying links, traits, and behaviors just as essential for one position as another that help clarify culture and values.

Research conducted from 1999-2000 provides data suggesting that organizations are making the decision that one set of competencies can work for everyone. Mercer Consultants conducted research with human resource executives of large organizations (Rahbar-Daniels et al., 2001), including the scope of competency models. More than one half of companies surveyed used organizational-wide competencies (i.e., the same set was used for the entire organization), approximately one fourth used functional models for specific roles, and one fifth used both core competencies and some specific to roles.

**Length and structure.** Some competency models identify long lists of competencies. For example, ASTD’s 1989 study (McLagan, 1989b) identified 35 competencies and Spencer and Spencer’s (1993) included 21 competencies. Cooper (2000) suggested that competency studies should not worry about number but capture all
the necessary competencies with some organizations implementing effective systems with 70 or more.

However, as described in Table 2.9, many authors recommend smaller lists of competencies. Examples of smaller lists include 3M’s model (Alldredge & Nilan, 2000) with 12 competencies, ASTD’s current model (Bernthal et al., 2004) with 12 competencies, and North Carolina Cooperative Extension (Liles & Mustian, 2004) with 7. Pickett (1998) found most organizations in the United Kingdom typically used 10 or fewer. Tabet (2003) recommended a short, simple framework. Schoonover (2002) suggested that competency initiatives fail because models are too long and detailed or that organizations spend too much time on the process. McLagan (1980) and Schoonover (2002) suggested applying the 80-20 rule: provide 20 percent of the behaviors that drive 80 percent of excellent performance. McLagan summarized by saying “a competency model doesn’t have to be complete. It should…be high leverage” (p. 24). Several authors (Brown, 2006; Parry, 1996; Pickett, 1998; Tabet, 2003) strongly recommend capturing the top portion of behaviors, focusing on critical areas that will really have an impact as opposed to covering all the possible competencies needed.

The framework, or how competencies are structured, including the level of detail, is another decision in competency modeling. Mirabile (1997) described several formats for competency models including:

1. a competency identified with a behavioral description for each and the accompanying proficiency levels;
2. a cluster-type model where behavioral descriptors are listed under broad categories or themes;
3. competencies listed with definitions and performance behaviors for levels of proficiency; and
4. competencies listed with definitions and behavioral anchors to describe specific levels of expected performance behavior.

Byham and Moyer (2005) outlined three common approaches: (a) a paragraph; (b) a behaviorally anchored rating scale; and (c) a comprehensive three-part definition including a paragraph, key actions, and representative examples. These key actions could be tailored to a specific job or job group, knowing that the narrower the focus, the more specific examples can be. Moulton (2003) recommended using activity statements that are sub-sets of competencies.

Several authors (Bernthal et al., 2004; Spencer and Spencer, 1993) utilize the cluster approach described above where competencies are presented in clusters. For example, ASTD (Bernthal et al., 2004) presented their competency model using three clusters: interpersonal, business/management, and personal. The SCANS (1991) model is described using performance and technical skills as clusters. The common components of competency models are competencies, behavioral indicators, and some type of mastery or proficiency levels (Moulton et al., 2006). Regardless of the exact structure, as summarized in Table 2.9, many authors (Dubois & Rothwell, 2000; Lucia & Lepsinger, 1999; Moulton et al., 2006; Tabet, 2003) strongly recommend describing competencies in behavioral terms.

Also, a model can be mostly verbal, mostly graphic, or some combination thereof (Green, 1999). For mostly verbal models, the level of detail is controversial. According to Mirabile (1997), models often have too little or too much. Mirabile (1997) described a rule of thumb, suggesting that the more detail you create:

- the longer it takes to complete the model
- the more money it requires
- the less you can generalize the results
• the less you can compare information across jobs or people
• the more you restrict the possible range of acceptable performance
• the more you inhibit creative, alternative ways to achieve the same results
• the faster information becomes obsolete
• the more you can articulate specific expected outcomes
• the more specific the performance management can become
• the more you can differentiate between performance levels and between people. (p. 76)

Several authors raised points about not being able to prescribe one look for competency models because a model’s form, or the way it is expressed, depends on how it will be used as well as on organizational preferences, practices, values, and objectives (Dubois et al., 2004; Hay Group, 2003; Zemke, 1982). According to Dubois et al. (2004), the structure of a competency model and the way it is communicated and used reflects the values of an organization. Mirabile (1997) concluded that “the most important point about competency models is that the formats must be governed by the collective wisdom of the people that need and build them” (p. 76).

Validation. In the context of competency modeling, reliability relates to how stable the contents of the competency model are over time whereas validity is about how precisely and accurately the model portrays the job performance elements (Dubois & Rothwell, 2000). In other words, are the competencies identified in the model those that job incumbents need in order to perform, producing the outputs expected of them? Lucia and Lepsinger (1999) stressed validation of models no matter what methods are used to develop them. Specifically, this means including a step to ensure the behaviors described in the model correlate with effectiveness on the job. The importance of reliability and validity depends on how the model will be used.
According to Dubois and Rothwell (2000), models used for training and development must have credibility and the endorsement of those directly affected. Here, face validity is important, meaning that the competencies make sense to those doing the job. Content validity is also frequently assessed. One way of establishing content validity is having incumbents or experts rate the level of importance of behavioral statements to get a better picture of which competencies are essential. If models will be used for performance appraisal, compensation, recruitment, and selection they should also have predictive validity (Dubois, 1993; Dubois & Rothwell, 2000; Lucia & Lepsinger, 1999). The authors suggest statistical correlation studies that show the strength of association between use of competencies and successful performance.

Dubois (1993) described three approaches to establishing validity: replication of original research, alternative research procedures (e.g., survey a panel of experts to provide opinions on the model or test employees on competencies), and using an expert panel of jurors. Spencer and Spencer (1993) included testing, gathering BEI data on a second criterion sample, or selecting and training using the competency model and then comparing performance. A quick method also suggested was validation by rating or ranking a criterion sample of superior and average performers, thereby confirming that superior performers are rated higher than average performers. Finally, Lucia and Lepsinger (1999) suggested four specific steps to establish face validity and predictive (i.e., concurrent) validity:

1. Test the model for accuracy and relevance with a broad section of incumbents. This increases the likelihood that all relevant competencies have been captured and develops ownership. This can be done with focus groups, a survey, or both.

2. Analyze qualitative and quantitative data gathered and refine the model.
3. Validate the model using a 360 degree feedback questionnaire given to a cross section of incumbents in each of three performance groups. Analyze data for strength of relationships between competencies and performance and significant difference between high and low performer groups.

4. Finalize the model, using the results of the 360 degree questionnaire.

**Common Steps**

Conducting a competency study and developing a competency model for an organization is a multi-step process. Major approaches to competency modeling and the steps unique to those approaches were discussed previously. What steps are taken, and in what order, relies to a large degree on the methodology selected and the specific data collection methods used. However, there were steps in developing a competency model that appeared across authors and methods; these steps were synthesized and are presented in Table 2.10.
Table 2.10  
Steps Used in Competency Modeling by Researchers

<table>
<thead>
<tr>
<th>Source</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernthal et al., 2004</td>
<td>(1) needs assessment and data collection (literature review, expert interviews, focus groups), (2) new model development (data integration and model draft, expert group review and model revision, final expert review and model revision), (3) model validation, (4) final refinement and confirmation</td>
</tr>
<tr>
<td>Byham &amp; Moyer, 2005</td>
<td>(1) background review, (2) data collection, (3) data integration, (4) validation, (5) finalization</td>
</tr>
<tr>
<td>Draganidis &amp; Mentzas, 2006</td>
<td>Summarized key steps based in competency modeling based on a literature review: (1) creating of a competency systems team (CST), (2) identification of performance metrics and validation sample, (3) development of a tentative competencies list, (4) definition of competencies and behavioral indicators, (5) development of an initial model, (6) cross-check of initial model, (7) model refinement, (8) validation of the model, (9) finalize the model</td>
</tr>
<tr>
<td>Hay Group, 2003</td>
<td>(1) establish performance criteria and sample, (2) collect data, (3) analyze data and define competencies, (4) validate the model and revise, (5) Final model for HR system</td>
</tr>
<tr>
<td>Lucia &amp; Lepsinger, 1999</td>
<td>(1) determine data collection methodology, (2) conduct interviews and focus groups, (3) perform job observations, (4) analyze data and develop interim model Next, or steps used if adapting an existing model – (1) test the model for accuracy and relevance, (2) analyze data and refine, (3) validate the model, (4) finalize</td>
</tr>
<tr>
<td>Naquin &amp; Holton, 2006</td>
<td>(1) select previously identified model as a foundation, (2) tailor language to organization, (3) pilot test and validate, (4) revise and finalize model</td>
</tr>
<tr>
<td>Schoonover, 2002</td>
<td>(1) clarify organizational context and challenges, (2) design study, (3) develop initial model (using existing data, other models, benchmarking), (4) test models (validation survey and/or focus groups), (5) final model</td>
</tr>
<tr>
<td>Spencer &amp; Spencer, 1993</td>
<td>(1) define performance criteria and criterion sample, (2) collect data, (3) analyze data and develop a model, (4) validate a model, (5) finalize and apply</td>
</tr>
</tbody>
</table>

Based the steps used by researchers in Table 2.10 as well as the literature review for this research, common steps in competency modeling include:

1. Identifying performance metrics and validation sample – if methodology calls for this in selecting participants and conducting validation step;

2. Creating a team, expert group, or panel;

3. Needs assessment, background data, and benchmarking;

4. Data collection and development of initial model;

5. Cross-check and model refinement (may occur in several steps);
6. Validation – face, content, and/or predictive (may occur as part of several steps); and

7. Finalization.

A decision about each of these steps is influenced by the trends, recommendations, and guidelines described above. For example, several authors have suggested that alignment with organizational strategy (Cook & Bernthal, 1998; Dewey, 1997; Dubois, 1993; Green, 1999; Moulton et al., 2006; Rahbar-Daniels et al., 2001; Schoonover, 2002; Tabet, 2003) and use of participatory approaches (Athey & Orth, 1999; Dewey, 1997; Dubois, 1993; Green, 1999; Liles & Mustian, 2004; Public Service Commission of Canada, 1998) are important for successful competency modeling. Authors who utilize some type of a team or expert group in one or more steps of their competency modeling are providing one opportunity for participation. Sometimes participation and alignment fit together.

Dubois (1993) described one step of identifying a representative group that included key stakeholders, those most affected, those responsible for implementing, and customers. This group then looks at existing data (needs analysis, assessments, background, strategic goals) to generate information on organizational context, competence needs, current and future outputs, major tasks, and so forth (Dubois, 1993). Others have described using a steering committee or project team (Dubois & Rothwell, 2000; Liles & Mustian, 2004; Naquin & Holton, 2006) through many of the competency modeling steps.

Approaches and Methods in Extension Organizations

After having reviewed approaches taken and methods used for competency studies, let us focus again on Extension organizations. A number of studies described
previously had a purpose of identifying competencies for specific positions or job groups.

The following approaches or methods were used in these studies:

1. Generic overlay (Ladewig & Rohs, 2000)
2. Critical incident method (Peabody, 1968)
3. Job analysis or DACUM (Borden & Harris, 1998; CSREES, 2006; Smith & Clark, 1987)
4. Survey research with incumbents, supervisors and job experts (Beeman et al., 1979; Cooper & Graham, 2001; Gonzales et al., 1984; Moore & Rudd, 2005; Price, 1960; Soobitsky, 1971)
5. Delphi (Boyd, 2004)
6. Interviews with qualitative analysis (Harder & Dooley, 2007; Moore & Rudd, 2004)

Although not developing competency models for an entire organization as is the focus of this study, the methods mentioned were used to identify competencies for specific jobs or job groups in Extension organizations.

For studies with some emphasis on developing a competency model, a variety of methods have been used in Extension. Earlier in theChapter, Table 2.5 summarized nine competency models used by states in the North Central region. Although limited information is available on approaches and methods used for some of the models, there appears to be several approaches used. One state (Michigan State University Extension, 2003) used a team or task force to review information and develop a model. Another state used more of an invented approach with a dean describing a list of competencies that were then further developed with input from Extension professionals (University of Nebraska-Lincoln, 2005). Minnesota (Charland, n.d.) used a combination of
benchmarking using both Extension and outside organizations, a literature review, and focus groups.

Outside the North Central region, Texas Extension and North Carolina Cooperative Extension have developed competency models that were described previously. Texas used focus groups and interviews with Extension faculty to develop their competency model (Stone & Coppernoll, 2004). North Carolina Cooperative Extension used multiple steps guided by a team, called the Blue Ribbon Commission (Liles, 1999; Liles & Mustian, 2004). First, a list of competencies was developed by the Blue Ribbon Commission through a comprehensive review of data on North Carolina Cooperative Extension (environmental scan and data on customer expectations), benchmarking with peer institutions and other organizations, and data from an internal audit (collected by various methods including surveys with job groups). A second major step in the NCCE study was to bring in a larger group of job incumbents for a summit where they validated and refined the initial set of core competencies and began the process of developing sub-competencies for each job group. Subsequent survey research (Owen, 2004) was conducted to validate the level of importance for sub-competencies identified for the administrative leader job group.

Two studies were conducted to develop competency models intended for national-level use. For professionals in 4-H Youth Development, a model called the 4-HPRKC was developed (Stone & Rennekamp, 2004). The researchers in this study used environmental scanning, feedback from stakeholders, and a task force to assemble their model. The environmental scanning in this study included looking at current data, examining current trends, reviewing internal and external documents, and conducting
interviews with key informants. Key stakeholder groups provided feedback on an interim model and a task force was used to guide the entire process and assemble the final model. The recent set of core competences identified by ECOP (Maddy et al., 2002) was created through a literature review, then adapting the model created by North Carolina Cooperative Extension. Looking outside the United States, a 2007 competency study identified competencies for Iranian Agricultural Extension Instructors (Karbasioun, 2007; Karbasioun, Mulder, & Biemans, 2007). Methodology for this research was based on ASTD studies (McLagan, 1989b; Berthal et al., 2004), including a literature review, data collection from key informants and experts, surveying large groups of experts and job incumbents, and integrating data.

Summary

Research over the last 20 years, particularly an influx of data in the last five years, has raised issues about the changing nature of work, skills needed for success, and a gap between skills needed and the skills new entrants and incumbents possess. Research has documented consensus on a general set of skills important for success in the 21st century knowledge economy. These data, combined with information on trends and issues affecting organizations and their human capital, suggests that a broad set skills or competencies is more relevant than ever. The trends noted in the literature for organizations in general such as increased use of technology, globalization, diversity, drives toward efficiency and quality service, increased rates of change, and flatter organizations are similar to those described for Extension organizations. A number of authors have suggested that the interrelated issues of the changing nature of work and organizational trends or issues have converged, suggesting a competency-based approach
to human resources as a strategy for organizations to successfully leverage their human capital.

The literature on competency-based human resource management provides a strong case for moving from a jobs-based to a competency-based approach as a strategy for organizations to proactively address their human resource needs in the 21st century. There is agreement in the literature on the benefits of using competencies throughout human resource management systems and the impact of doing so has been documented through research with organizations using competencies.

This review examined the competency movement, key terms and definitions, and examples of models developed for jobs, organizations, or associations, and specific models used in Extension organizations. While there is disagreement on how to define competency, those definitions most frequently used in human resources and the human resource development field tend to emphasize a focus on competencies that can be described behaviorally and tend to avoid abstract concepts like underlying characteristics or personality traits. An examination of competency models developed for governmental organizations, professional associations, similar types of jobs (e.g., managers or human service workers), and large corporations shows both differences and similarities in the competencies identified and the models developed.

There are major differences in how studies were conducted, specific methods used, and the level of validation. Differences are also seen in the detail of the models, how they are structured and presented, and their intended use. On the other hand, there are many similarities in the competencies identified by all the studies reviewed. Also, the models reviewed in Extension organizations differ in some ways (e.g., model length,
structure, and exact list of competencies) but share many of the same competencies or descriptions of behaviors needed for success among each other and the studies outside Extension. In general, there is a sense of agreement on core competencies needed for Extension professionals.

Approaches or general methodologies, methods, challenges, and recommendations for developing competency models were also described. A number of different approaches have been recommended to identify competencies and develop a model for an organization, with conflicting views on which methodology produces the best results. However, authors such as Dubois et al. (2004) suggest that both the methodology and specific methods depend on a variety of factors and should reflect organizational needs and culture. Furthermore, there is consensus on some recommended practices such as using participatory methods. A number of decisions to be made with regards to competency modeling were reviewed, providing some direction for making choices about scope and focus, model length, and structure. Also, the issue of validity and reliability surfaced throughout the literature and is a major decision that affects methodology and accepted use of a competency model once it is developed.

Existing research in Extension organizations has identified competencies and competency models for use within human resource management systems. Based on this review, I have identified several gaps in the literature suggesting a need for further research. First is the issue of validity mentioned in the previous paragraph and discussed at length earlier in the literature review. Face, content, and predictive validity are all important aspects of creating a valid competency model. Methodologies used in previous
competency modeling with Extension organizations have not identified a criterion group to develop and/or validate model content.

Secondly, approximately 10 years has elapsed since the two comprehensive Extension competency models published in the literature were developed. Texas Agricultural Extension Service introduced their model in 1996 (Stone, 1997) and North Carolina Cooperative Extension developed a model in 1999 (Liles, 2004). Based on the rapid rate of change facing organizations as described in the literature, this gap in time could be significant. Finally, research has not been conducted to create or tailor a competency model for Ohio State University Extension. Experts in the competency modeling field tend to agree that models, especially those designed as core models for the entire organization, need to be tailored to the unique needs and context of an organization.

Based on the literature reviewed, methodology chosen for my research utilizes some aspects of the borrowed-and-tailored approach described by Rothwell and Lindholm (1999), a process of modifying an existing model drawing from previous research. This research will also draw from McLagan’s (1988) flexible approach with a focus on context, future trends, and using panels, and survey methods. The flexible approach uses multiple data gathering methods to triangulate on critical competencies and develop a model using language that is acceptable and comfortable for the organization (Zemke, 1982). My approach will begin with existing data (external environment, internal context, strategic issues, initiatives, trends, and existing competency research) and new data from incumbents, then work forward to select, refine,
and add to the most pertinent competencies using high performers and key internal stakeholders in the organization.
CHAPTER 3
METHODOLOGY

Using the literature on competencies and competency modeling as a foundation, this chapter explains the methods used in the study. Attention is paid to the type of study, research context, and participants. Research design, data collection, data analysis, and integration for competency modeling are discussed in chronological order. It should be noted that methods did evolve as the research took place, taking final shape as the study progressed. The final section of this chapter addresses trustworthiness and validity issues as well as my role as a researcher.

Type of Study

Traditional research in the human sciences has been grounded in the positivist paradigm, only valuing experimental design and what could be observed, tested, and measured (Garratt & Li, 2005). Under this paradigm, research findings have been evaluated based on internal validity, external validity, reliability and generalizability, and objectivity (Crook & Garratt, 2005; Lather, 1986; Lincoln, 1995). When evaluating research in this way, controlling all aspects of the research and following a linear work flow—from theory to hypothesis to data collection to analysis to conclusions—is important (Bashi, 2004; Blee, 2004; Garratt & Li, 2005). According to Crook and Garratt (2005), social science researchers need to make serious modifications to the old
empiricist model and embrace a new model that is less naïve and allows for more subtle approximations of the truth.

I appreciate Garratt and Li’s (2005) assertion that the traditional approach to evaluating research findings, as described above, has not been especially efficient in the human sciences. The need to take context into account is aligned with my review of the literature on competencies and competency modeling. Jones (2005) argued that there are no universal laws in social science that are independent of the context. This argument makes sense to me and supports my belief that, while traditional criteria to evaluate research findings may have produced “truthful” findings, those findings are often of limited use. According to Jones, place, and people creating structure in the context of places, is critical. Understanding the importance of context, I see a post-positivist research paradigm as having more promise for both truthfulness and usefulness.

Furthermore, I appreciate the description shared by Somekh, Burman, Delamont, Meyer, and Payne (2005) characterizing the human experience as complex and thus suggesting that social science researchers need to resist the temptation to impose order and strictly apply one particular paradigm or another.

In research, objectivity refers to removing the persona (subjective information) of the researcher from the research process (Somekh & Lewin, 2005). Objectivity is central to doing quality research based on assumptions that knowledge can be determined from truth that is in existence, independent of context or individuals (Somekh & Lewin, 2005). On the other hand, subjectivity, referring to the human persona and the researcher as an instrument, is important to the quality of research based on the epistemological assumption that truth cannot be separated from a particular context or group of
individuals (Somekh & Lewin, 2005). Situated in the post-positivist paradigm, my research took a constructivist approach with the understanding that reality is constructed by the researcher and participants working together.

The concept of action research, with its ability to address the problem of the gap between theory and practice, was used in this study.

Action research explicitly and purposefully becomes part of the change process by engaging the people in...the organization....As a result, the distinction between research and action become quite blurred and the research methods tend to be less systematic, more informal, and quite specific to the program, people, and organization for which the research is undertaken. (Patton, 1990, p. 157)

Patton’s description makes sense in the context of this study. According to Noffke and Somekh (2005), projects following this approach do not engage in a linear fashion from research questions that are academic in nature. Action research integrates the development of practice with construction of knowledge in a cyclical process (Noffke & Somekh, 2005), an approach that I found valuable in constructing and validating a competency model.

Mixed methods were used in this study. Using mixed methods, it is appropriate to create a model using a constructivist perspective and then test a model using quantitative methods (Jones, Torres, & Arminio, 2006). Such approaches respect both traditions because a model emerges from the data and then is tested, rather than manipulated.

**Research Context**

The study took place in Ohio State University Extension (OSU Extension), a statewide organization which is part of The Ohio State University and the Cooperative Extension System. A brief history and background is an important part of understanding the organizational context of this research. The Ohio State University is Ohio’s land-
grant college, established through the Morrill Act of 1862. Agricultural research was added as a second part of the land-grant mission through the Hatch Act of 1887 that established agricultural experiment stations as part of land-grant colleges. The Cooperative Extension System was established in 1914 with the Smith-Lever Act. Smith-Lever created a third mission of the land-grant colleges, that of extending education to the people of the state, and created Cooperative Extension Services (called Extension in Ohio) in every state (Bertrand, 1980; Graham, 1994). The national Cooperative Extension System consists of federal, state, and local partners cooperating to support and fund Extension systems in each state.

Ohio State University Extension, Ohio’s Extension system, has roots in the early 1900s when Extension work began before passage of the Smith-Lever Act in 1914. Early goals were focused on elevating the standard of living in rural communities through a hands-on approach to education that involved working with individuals, families, and communities. Today, with a mission of “engaging people to strengthen their lives and communities through research-based educational programming” (OSU Extension, 2008, p. 3), OSU Extension delivers educational programs based on current issues and identified needs of youth, families, and communities. Current Extension educational programs are focused on addressing three issues identified as important to Ohioans: the economy, education, and health (OSU Extension, 2008).

The research activities described here covered a 9-month time period from July 1, 2008, to April 10, 2009. At the beginning of this study, approximately 1,000 individuals were employed by OSU Extension working on campus at The Ohio State University and across the state of Ohio. In addition to a large number of employees with some type of a
teaching function, a variety of job roles are part of the organization’s function including support staff, research staff, technical support, administrators, and others.

Another important topic related to context is significant organizational change that was anticipated and but initiated more quickly than expected—part way through this research. Reorganization to increase operational efficiencies was part of OSU Extension’s strategic plan (OSU Extension, 2008). As a result of state budget reductions, OSU Extension went through a planning process to reorganize operations more quickly than had been anticipated and to reduce its workforce. Planning occurred from December 2008 through February 2009 with a restructuring plan (OSU Extension, 2009) that was launched in early March. The restructuring plan and initial implementation affected the context of the study in a number of ways. Some employees were directly impacted through a reduction in force and others were in the process of planning to accommodate changes in their unit where a reduction in force occurred. In addition, while much of the restructuring plan was not implemented during the study, employees were anticipating and beginning to plan for changes that might occur in their work duties, work location, or both. Finally, the possibility of additional reductions in force was announced as part of the restructuring plan.

Participants and Sampling Strategies

The general population for this study was employees of Ohio State University Extension as of November 14, 2008. The Director of OSU Extension supported the research with Extension employees and approval for this research was granted by The Ohio State University’s Behavioral and Social Sciences Review Board under protocol number 2008B0312 (see Appendix A for copies of these letters). The population included
all employees who receive Extension funding, except temporary employees. Purposeful sampling was used for this research. Several types and combinations of purposeful sampling, described by Patton (1990) as mixed purposeful sampling, were used. Sampling drew from aspects of Patton’s criterion sampling, maximum variation sampling, and sampling politically important cases. Patton (1990) made the case for purposeful sampling by stating that “the logic and power of purposeful sampling lies in selecting information-rich cases for study in depth” (p. 169). Patton’s argument makes sense in the context of this research.

Purposeful sampling assured data were collected from key informants throughout the organization. The rationale for selection at each step will be described. Sampling included selection of a Competency Project Team and involvement of OSU Extension’s Administrative Cabinet, in addition to focus groups and a survey with a criterion group of exemplary performers representing different job groups, locations, and demographics. This sampling allowed me to triangulate findings across sources and address issues of validity and reliability (Marshall & Rossman, 1989). Sampling strategies will be described below. A more detailed description of participant demographics is presented in Chapter 4.

Procedures, Data Analysis, and Integration

Four phases, each with multiple steps, were used to accomplish the objectives of this study. These phases, illustrated in Figure 3.1 are described in detail below, including the selection of participants, instrumentation, data collection techniques, data analysis, and integration processes where appropriate.
Figure 3.1
Methodology Overview and Summary of Key Steps
Some steps occurred concurrently within a phase while others required stepwise progression. Peer review and debriefing was used as a strategy to improve the research and address validity throughout the study (see Figure 3.1). Peer review is mentioned as it occurred during the research process and then is discussed in detail at the end of this chapter in a section on *Trustworthiness and Validity*. The research process is described here and the results of these steps are described in Chapter 4.

**Phase I - Background Review and Initial Data Collection**

**Reviewing and Assembling Pertinent Information**

This step included a literature review, identifying existing information to be reviewed and used as part of the research process. Literature reviewed included:

1. Competency-based HR management – existing research on competency-based HR management in general, benefits, and specific options for competency modeling, model format, structure, and level of detail.

2. External forces and internal context – existing data on external forces and internal context including strategic direction, initiatives, and demands of jobs.

3. Existing competency data - competency lists or models in Extension organizations and other competency research relevant to this study.

Information on these topics was reviewed by the researcher and prepared for use with various groups and for data integration during the research process. A concept paper, teaching handouts, and presentation materials were prepared for use in later steps.

**Obtaining Organizational Alignment**

The focus of this step was to gather opinions from OSU Extension’s HR Leader that would help align initial research decisions with organizational language, culture, and needs. As part of this step, I asked OSU Extension’s HR Leader to review and provide feedback on the definitions I proposed to use to ensure they were aligned with
organizational philosophy and language. Also included in this step was a review of options for model structure, framework, and level of detail, with the HR Leader and researcher judgments used to inform initial modeling decisions that would align with organizational culture and needs. Finally, input from the HR Leader in early stages guided definitions of the job groups used for this research and provided one source of data for developing a list of trends and implications and competencies.

To prepare for the interview, the HR Leader was asked to review information that I provided including: (a) current operational definitions, (b) recommendations for practice in competency modeling summarized from the literature, and (c) key decisions in competency modeling and examples of existing models from the literature. My interview with the HR Leader, was a discussion guided by a series of questions about definitions, organizational alignment, and competency modeling (see Appendix B for guiding questions). The interview was recorded and transcribed. Follow up e-mails or discussions were used to clarify and conduct member checks. Operational definitions were revised and edited based on suggestions from the HR Leader. Finally, I read the interview transcript several times to identify themes and supporting comments related to trends and implications and competencies. Notes from this review were kept for use in later data integration steps.

**Identifying a Criterion Group of Exemplary Performers**

The goal of this step was to identify a pool of exemplary performers representing job groups across the organization. First, it is important to note that the degree of confidence one has in the validity and utility of competencies identified is a direct function of the degree of confidence one has in the criterion measure. Work output
measures are the most direct performance measure. When output measures are not available, supervisory and peer judgments are recommended as valid methods for identifying performance groups (Boyatzis, 1982; Spencer & Spencer, 1993). Research has documented the utility of peer and supervisory ratings and nominations as having high criterion validity (Lewin & Zwany, 1976). Finally, peer and supervisory judgments such as nominations are more effective than ratings, a respondent measure where issues of personal attraction and concern over feelings may confound judgments (Boyatzis, 1982; Klemp, 1979; Lewin & Zwany, 1976). Since nominations are an operant measure—individuals are asked to identify people who have performed in a superior manner—people nominated are more likely to have demonstrated excellent performance.

Because hard data, such as performance ratings, were not available for many OSU Extension employees, supervisory and peer nominations were primarily used. All OSU Extension employees (except temporary employees) and other University employees providing supervision to Extension-funded employees received an invitation to provide nominations. Nominations were solicited in two ways:

1. Peer nominations – all employees in the population identified above were asked to provide nominations.

2. Supervisory nominations – nominations were requested from unit directors, regional directors, assistant directors, Administrative Cabinet, and administrative support job groups. For unit directors and administrative support job groups, supervisory nominations were for those they supervised. For other supervisory groups (regional directors, assistant directors, and Administrative Cabinet), I requested nominations for those they supervised directly as well as any individuals in their region, program area, or the organization that they would place in the exemplary category based on their awareness and experience.

Drawing from Rothwell and Lindholm’s (1999) definition, nominators were asked to identify exemplary performers, individuals whose performance would be described as
best-in-class. Exemplary performers were defined as those who: (a) stand out and far exceed what is expected of them, (b) are highly motivated to achieve whatever it is they believe is worthy of achievement, and (c) people whose contributions extend or add value to the organization’s operation or product (Dubois & Rothwell, 2000).

To collect nominations, I sent an initial e-mail that included the request and details about participation, including information on the optional nature of participation and confidentiality. Nominations were collected using Zoomerang, a web-based data collection tool. The questionnaire included information to review regarding the nomination process and asked for names of individuals being nominated. The questionnaire for supervisory nominations also included a section to recommend individuals for participation in subsequent group activities that would be part of the competency study. Here I asked for recommendations for individuals who should be considered for participation on a team that would learn about competency-based human resources and serve as an expert group providing ideas and feedback throughout the project or in focus group interviews. Specifically, I asked for individuals who (a) are knowledgeable of their work and the larger organization and (b) are articulate, likely able to discuss and describe competencies needed for their Extension work now and in the future. Appendix C provides examples of the e-mail invitations and Zoomerang questionnaires used to request nominations (i.e., examples from the peer-only nominator group and for supervisory nominations from unit directors). Similar requests were also sent to other the supervisory job groups listed above. Peer and supervisory nominations were confidential; as the researcher, I was the only one who reviewed and used this information. Basic demographic data were collected in order to describe the group of
peers providing the nominations. A window of three weeks was provided and three reminder e-mails were sent, following recommendations from Dillman (2000).

Performance ratings, which were existing data available for employees in the educator job group, were used as a third data source (along with peer nominations and supervisory nominations) for employees with the title educator. For this group OSU Extension’s HR Leader provided a list of names of educators identified through the performance appraisal process as excellent.

Nomination and performance data were compiled and analyzed using Excel. I used the literature and my reasoning as a researcher to set cutoff rules for inclusion based on number of sources (e.g., peer nominations, unit director nomination, and Administrative Cabinet nomination) and number of nominations. The data collected, subsequent decisions made to set rules for inclusion, and resulting criterion group are described in Chapter 4. My decisions and supporting rationale were reviewed by my peer debriefer before the final pool was identified. Overall, the result of this step was a list of employees identified as exemplary who served as the criterion group for this study; some were specifically recommended for participation in group processes.

**Establishing a Competency Project Team**

The goal of this step was to form a Competency Project Team (CPT) that would (a) read key literature on competency-based human resource management, learn about competency modeling, and apply this information to human resource functions; and (b) serve as an expert group, supporting this competency study through their participation at various stages. Purposeful sampling was used to recruit a team of 17 employees representing job groups and key internal stakeholders across the organization (i.e.,
individuals who would be responsible for implementing and using the competency model in the future). Job groups represented by exemplary performers included: educators, unit directors, office support, program support, program management, specialists, and technical support. Not included in a job group but as key internal stakeholders were two representatives from Extension’s Administrative Cabinet (one assistant director and one regional director), a faculty member in the Agricultural and Extension Education program at The Ohio State University, and a member of the OSU Extension human resources team. Adapted from Naquin and Holton (2006), criteria for selection included:

1. Knowledgeable of work and the larger organization;
2. Considered high performers (sample drawn from the exemplary performer criterion group, with exceptions as noted above); and
3. Perceived by supervisors, the researcher and/or the HR Leader as articulate, likely able to articulate necessary competencies.

Data from nominations, additional input from the HR Leader and supervisors, and my judgment as a researcher were used to identify and recruit the individual team members. In addition to the criteria described above, an effort was made to select a representative group in terms of work location, program area, and demographics. I used initial phone contacts and e-mail to recruit CPT members, confirm participation, and obtain written consent. See Appendix D for the official recruitment letter CPT members were sent via e-mail.

**CPT and Administrative Cabinet Learning About Competency-Based HR Management**

To prepare these two groups (CPT and Administrative Cabinet) for participation in this research, each was guided through reading and discussion to learn about competency-based HR management and to operationalize definitions that were used
throughout the research. Once formed, the CPT participated in a professional development experience to learn about competencies, competency modeling, and competency-based HR management. I facilitated the learning experience using blended e-learning methods of teaching that included a web-based meeting, independent reading, and asynchronous electronic discussion. In the web-based meeting, I guided CPT members through (a) an overview of the study and their role; and (b) a PowerPoint presentation and discussion about competencies, competency identification, and competency-based HR management. Then, CPT members were asked to read a concept paper (a six-page synthesis of the literature in Chapter 2 on why organizations use a competency-based approach to HR management, how competencies are used in HR systems, and what the benefits are), an article (Tabet, 2003), and a handout with definitions for this research (see Chapter 1) and illustrations of competencies (drawn from the literature reviewed in Chapter 2). This step built a foundation for the competency project team to serve as an expert group, becoming knowledgeable about competency-based HR management in addition to Extension work. A shortened process using the concept paper, a handout with definitions for this research and illustrations of competencies, a presentation, and group discussion was used with Administrative Cabinet prior to their involvement in subsequent steps.

**CPT Review of Context Information and Session #1**

CPT members were asked to review information (identified in Phase I - Review and assemble pertinent information) on the current context for OSU Extension (Batte, Diekmann, & Loibl, 2007; Fisher Professional Services, 2007; OSU Extension, 2008) and the Extension system (ECOP 2002, 2007; Ladewig & Rohs, 2000). After their review
of the background information, CPT members were asked to participate in a face-to-face session (Session #1). The purpose of this session was to (a) generate ideas and initial prioritization of trends affecting OSU Extension and implications for Extension work and (b) generate ideas on competencies needed now and in the future, share opinions on lists from other studies, and provide initial prioritization of the competencies identified.

During a four-hour session, I used a modified nominal group technique (Delbecq & Van de Ven, 1971; Delbecq, Van de Ven, & Gustafson, 1975; Witkin & Altschuld, 1995) to guide CPT members through idea generation and prioritization in three rounds:

1. Round 1 - Trends and implications – Based on their review of background material mentioned above and their experience as employees, CPT members were asked to generate ideas about key trends affecting their job or Extension work in general over the next few years as well as the associated implications of these trends. Participants generated ideas silently using a worksheet then ideas were shared in round-robin fashion and recorded on flip charts. This was followed by group discussion to clarify meanings, provide illustrations, discuss, and combine duplicates or similar ideas. Finally, participants were asked to prioritize the ideas generated by the group by identifying the five most important trends.

2. Round 2 - Competency idea generation – I reviewed with participants the definitions used in this research for the terms competency, core competency and competency modeling and then asked them to think about competencies that predict success and drive organizational and individual performance. Specifically, I asked about competencies that contribute to organizational
success and constitute top performance. Participants generated ideas silently using worksheets and then ideas were shared in round-robin fashion and recorded on flip charts. This was followed by group discussion to clarify meanings, provide illustrations, discuss, and combine duplicates or similar ideas. Finally, participants were asked to prioritize by identifying the 10 most important competencies.

3. Round 3 - Competency idea generation drawing from existing models – to begin this round, participants were given examples of lists of competencies or models to use as menus for ideas and asked the same questions as in Round 2. Participants generated ideas silently using worksheets and then ideas were shared in round-robin fashion and recorded on flip charts. This was followed by group discussion to clarify meanings, provide illustrations, discuss, and combine duplicates or similar ideas. Finally, participants were asked to prioritize by identifying the 10 most important competencies.

All idea generation and priority voting were recorded on flip charts and were transcribed for later review. Idea generation and discussion portions were also recorded using a digital recorder and transcribed for later review. See Appendix E for an agenda and detailed plans for this session.

Phase II – Model Development

Data Analysis and Integration 1 – Creating Draft 1

For this and later data analysis and integration steps, I used the process traditionally described by qualitative researchers (Glesne, 2006; Patton, 1990) of going through the data to identify themes and then using those groupings to name and further
develop a concept. Lucia and Lepsinger (1999) described a similar process of qualitative data analysis with competency data. Initial analysis was done by hand through notes and coding on documents and transcripts. For further analysis and integration I used a spreadsheet to group themes and emerging concepts across sources, summarized supporting ideas and quotes, and then named and further developed them. As suggested by Lucia and Lepsinger (1999), I found that often themes and patterns emerged only after sifting through the data multiple times. Once themes and supporting ideas were clustered, I moved to writing a draft document reflecting my analysis and synthesis across data sources.

For this first data integration step, I reviewed, analyzed, and integrated data to develop a first draft of two documents – *Trends and Implications Draft 1* and *OSUE Competency Model Draft 1*. In general, data analysis and integration included three key sources of information: (a) literature review, including future trends and implications, and existing competency research in Extension and related fields, (b) data from CPT Session #1 (opinions of CPT members as high performing employees at all levels of the organization), and (c) the interview with the HR Leader. Specific data analysis and integration to develop each document is summarized in the following paragraphs.

For trends and implications I utilized the following data sources: (a) HR Leader interview transcript, (b) CPT Session #1 transcripts, (c) literature review of trends and implications for organizations in general and Extension organizations, and (d) OSU Extension context information including the organization’s strategic plan (OSU Extension, 2008) and supporting research (Batte et al., 2007; Fisher Professional Services, 2007) as well as an external review of OSU Extension (Battelle Memorial
Institute, 2005; Review Committee of OSU Extension, 2005). I read through each data source, looking for themes or comments that reflected specific concepts. Coding from each data source was used to develop a spreadsheet to organize concepts and cluster similar ideas. I identified major themes and used the data to write *Trends and Implications Draft 1*.

For developing the initial draft competency model, I utilized the following data sources: (a) HR Leader interview transcript, (b) CPT Session #1 transcripts (idea generation and prioritization), and (c) OSU Extension context information (Batte et al., 2007; Battelle Memorial Institute, 2005; Fisher Professional Services, 2007; OSU Extension, 2008; Review Committee of OSU Extension, 2005). Initially, I had planned to draw from existing competency literature in this step to develop a more refined model. But after looking at the data and reflecting on my interactions with participants, I decided that it would be more effective to continue developing a draft at this stage that drew primarily from internal sources so that the final model would be more likely to reflect organizational needs and culture. I read through each data source, looking for themes or comments that reflected specific concepts. Coding from each data source was used to develop a spreadsheet to organize concepts and cluster similar ideas. I identified major themes and used the data to write a simple list of competencies. I reviewed CPT Session #1 data and the HR Leader interview transcript to make sure key concepts were in the draft model, added supporting detail from CPT Session #1 transcripts and individual participant worksheets, and combined major themes where appropriate based on similarity of ideas and supporting concepts. The list of competencies was developed into a table that included potential competencies and supporting concepts.
**Administrative Cabinet Review and Input on Draft 1**

This step was an initial opportunity to collect ideas and feedback from upper-level administrators of OSU Extension who provide leadership for the strategic direction of the organization. The purpose of this step was to refine the draft competency model and to begin aligning with the strategic direction of the organization using (a) opinions and ideas about draft trends and implications and (b) opinions and ideas to refine and add detail to draft competency model. To collect data, I sent the *Trends and Implications Draft 1* and *OSUE Competency Model Draft 1* developed in the previous data integration step to Administrative Cabinet members for review. Cabinet members then participated in a group interview. In a semi-structured interview, the group was asked to review *Trends and Implications Draft 1* and *OSUE Competency Model Draft 1* and to respond to a series of questions to guide the group in discussion about trends, implications, and competencies. See Appendix F for the group interview plan and guiding questions. After the interview, participants were asked to submit additional thoughts or ideas via e-mail. The interview was recorded and transcribed for later analysis.

**CPT Session #2 – Reviewing and Refining Competencies**

This Session #2 with the CPT was used to gather data to further refine and expand the list of trends and implications as well as the competency model. CPT members were sent *Trends and Implications Draft 1* and the *OSUE Competency Model Draft 1* to review in preparing for a face-to-face session. During a four-hour session, using group interview and modified nominal group technique (for idea generation), CPT members were asked to participate in three rounds:

1. Round 1 - Discuss and provide feedback on *Trends and Implications Draft 1* (group interview).
2. Round 2 - Discuss and refine OSUE Competency Model Draft 1 developed from CPT Session #1 and other data (group interview).

3. Round 3 - Using list of competencies (i.e., major themes or categories that the group refined in Round 2), generate ideas on definitions, statements, or actions to illustrate each competency.

Group discussions and ideas to refine or add to major themes were recorded using audio recording, notes on flip charts, and handwritten individual notes from participants. Notes and audio recordings were transcribed for later analysis. See Appendix G for detail on CPT Session #2 including an agenda and questions.

**Peer Review and Debriefing - Draft 1**

My peer debriefer reviewed data, integration spreadsheets, Trends and Implications Draft 1, and the OSUE Competency Model Draft 1. This step was used to validate the process and decisions I was making. I also received feedback and suggestions on content for the model as well as for the research process as it evolved.

**Data Analysis and Integration 2 – Creating Draft 2**

The general process used for analysis and integration was similar to that described above for the first analysis and integration step. For this integration step, I reviewed, analyzed, and integrated data to develop Trends and Implications Draft 2 and the OSUE Competency Model Draft 2.

For trends and implications, I reviewed and made notes on the Administrative Cabinet group interview transcript and CPT Session #2 transcript, looking for themes or comments that clustered together. Themes, concepts, and supporting comments were moved into a table to organize and identify sources. I also added suggestions from peer review and used additional sources (Ohio Department of Development 2007, 2008a, 2008b; Partridge, Sharp, & Clark, 2007) to clarify concepts related to demographics.
Using *Trends and Implications Draft 1* as a starting point, data from the integration table were used to write *Trends and Implications Draft 2*. I referred back to data from Integration 1 as needed to assist with decision making on how to address a question or comment raised by Administrative Cabinet or the CPT.

For competencies, the goal in this integration step was to develop model content that was as fully formed as possible for focus group review. Before integration in this step, decisions were made about the competency model format and structure using feedback from the HR Leader to support my judgments as a researcher. For developing the *OSUE Competency Model Draft 2*, I drew from the following data sources: (a) *OSUE Competency Model Draft 1* and supporting data; (b) Administrative Cabinet group interview transcript, CPT Session #2 data including Round 2 (discussion and refined competency list) and Round 3 (idea generation for competency statements); (c) Ohio State University core competencies (OSU Office of Human Resources, 2004); (d) existing models and competency lists from Extension organizations; and (e) competency models and literature in general. Suggestions and comments from the Administrative Cabinet group interview and CPT Session #2 were compiled, sorted, and reviewed. A data integration table was developed, using themes identified in CPT Session #2 as organizing factors. The data integration table included competencies (major themes identified in CPT Session #2) and minor themes or concepts from review of the Administrative Cabinet and CPT Session #2 transcripts.

In order to draw from existing models and competency lists, I asked the Director of OSU Extension to identify peer institutions. Ten were identified including those in Texas, North Carolina, Michigan, Illinois, Iowa, Indiana, Pennsylvania, Arizona,
Nebraska, and Utah. I then reviewed competency models, if available, from those institutions. An online search yielded no data for Indiana, Pennsylvania, and Utah. The eight other states identified by the Director had existing competency lists or models, which were described in Chapter 2 (see Table 2.5, p.73 and subsequent discussion of the literature). Coding was used to identify concepts in existing state Extension organization’s competency lists that aligned with ideas in the OSUE Competency Model Draft 1 and I added these concepts to the data integration table. The same process was used with competency literature outside Extension (reviewing, identifying concepts that aligned with ideas generated internally, and adding key concepts to a data integration table). At this point, competencies were added, deleted, or redefined using the data integration table, earlier CPT prioritization, and my judgment as a researcher. Key actions for each competency were written using idea generation from CPT Session #2 as a primary source and existing literature to supplement it. The result of this step was the OSUE Competency Model Draft 2.

The OSUE Competency Model Draft 2 was circulated to Administrative Cabinet and the CPT for comments and suggestions as a form of member check. Their feedback was submitted electronically and was incorporated with the focus group data described below and used for Data Integration 3.

**Conducting Focus Groups with Incumbents (with Draft 2)**

The purpose of this step was to move the draft competency model to a wider group of exemplary incumbents for opinions on the current draft and for ideas to further define key actions. Focus group participants were selected by the researcher in conjunction with HR Leader input and input from supervisors collected as part of the
supervisory nomination process described in Phase I – Identifying a Criterion Group of High Performers. Criteria for selection included:

1. Are knowledgeable of Extension work and the larger organization;
2. Are considered high performers (from criterion group identified in Phase I - Identify Criterion Group of High Performers); and
3. Perceived by supervisors, researcher, and/or HR Leader as articulate and likely able to articulate the necessary competencies.

Twenty-five participants were intentionally selected and placed in one of three focus groups so that each focus group represented a cross-section of job groups.

After agreeing to participate, employees were sent a confirmation and asked to complete a consent form. In a follow-up message, participants were asked to review a concept paper on competencies and competency-based HR management, a handout with definitions and illustrations of competencies, and *Trends and Implications Draft 2*. In half-day sessions, participants reviewed and discussed competency-based HR management based on the information sent to them prior to the meeting. It was important for participants to understand key concepts related to competency-based HR management and to operationalize definitions to be used during their participation. They then participated in two rounds of group activity. In Round 1, participants had an opportunity to critique the content of the competency model through a series of questions including:

1. What are your initial reactions to how well the model describes the most important aspects of your work? Or, do you think these are representative of what exemplary performers in OSUE exhibit?
2. As you looked at the definitions and key actions, to what extent did they accurately describe your work?
3. To what extent are the competencies clear and does the name or label used make sense for what is described?
4. Are there competencies that should be added? (What is missing? What should be changed? Why?) What other ideas do you have about competencies that should be added to make the model more applicable to your work? Why?

5. Are there competencies included on this list that should be eliminated? Why?

6. It is important for this list to make sense for OSU Extension (the language, how it is organized, etc.). Are there other suggestions for specific edits or formatting that you have?

Round 2 used a modified nominal group technique. Participants were asked to generate ideas about key actions, behaviors, or stories that illustrate how the competencies are demonstrated in the workplace. Participants worked independently, recording ideas in writing. Then participants were asked to share their key actions, behaviors, or stories that helped to clarify and describe the competencies. Responses were recorded via written notes and audio recording then transcribed for later analysis. See Appendix H for additional detail on focus groups with incumbents including an agenda, plans, and questions.

**Peer Review and Debriefing - Draft 2**

My peer debriefer reviewed data integration tables, *Trends and Implications Draft 2*, and the *OSUE Competency Model Draft 2*. This step was used to validate the process and decisions I was making. I also received feedback and suggestions from her on content for the model as well as for the research process as it evolved.

**Data Synthesis and Integration 3 – Creating Draft 3**

The goal of this step was to revise the *OSUE Competency Model Draft 2* based on data collected and to develop *Draft 3* for later use in the validation survey. Focus group transcripts were reviewed and coded for overall feedback, model format or structure, specific comments related to current competencies, and other suggestions (e.g., missing
competencies). Suggestions and comments from member checks with Administrative Cabinet and the CPT were compiled, reviewed, and coded using the same general categories. A data integration table was developed, using overall feedback, model format or structure, specific comments related to current competencies, and other suggestions (e.g., missing competencies) as organizing factors. For each competency, data were further organized as supporting comments, concerns, questions, or suggestions for changes related to (a) title, (b) competency definition, or (c) specific suggestions for behavioral descriptions.

Data were analyzed for common themes and for alignment by looking across focus group and member check data and using the literature where appropriate to help with decisions and language that would fit with suggestions from participants. At this point, competency titles and definitions were refined. Focus group data and the literature were used to expand and refine key actions for each competency. The result of this step was the OSUE Competency Model Draft 3.

Peer Review and Debriefing – Draft 3

My peer debriefer reviewed data integration tables and the OSUE Competency Model Draft 3. This step was used to validate the process and decisions I was making. I also received feedback and suggestions from her on the content for the model as well as for the research process as it evolved.

Phase III – Model Refinement and Validation

Conducting a Validation Survey

The purpose of this step was to circulate the OSUE Competency Model Draft 3 to a wider group of exemplary incumbents to validate the competencies and key actions and
to identify additional changes that might need to be made. Draft 3 was converted into a questionnaire with respondents asked to rate the importance of each trend, each competency overall, and each key action on a five-point Likert-type scale with the higher score representing greater importance (Bernthal et al., 2004; Dubois & Rothwell, 2000). Open-ended questions provided opportunities to give feedback on the model content. The questionnaire also included a final item asking respondents to select three competencies that would be most important to their work in the next three years. The complete instrument used is in Appendix I.

A high degree of content validity was already established because the instrument was constructed directly from text of the OSUE Competency Model Draft 3; a model developed from Extension employee input as described above. A field test was used to ensure face validity and determine how long it would take to complete the survey. The instrument was distributed to four colleagues who were not part of the survey pool; they completed the questionnaire and provided suggestions for minor changes to instructions or changes that would improve flow. These suggestions were incorporated into the survey instructions and survey before it was sent to the participants.

Purposive sampling, specifically criterion sampling, was used as a sampling strategy (Patton, 1990). A census of employees in the exemplary performer criterion group was used. The survey was administered electronically using Zoomerang and following recommendations from Dillman (2000) for messages and reminders. An initial e-mail (see Appendix I) was sent to the criterion group inviting them to participate, providing instructions and links to Trends and Implications Draft 2 and OSUE Competency Model Draft 3 for review prior to completing the survey and providing
information about confidentiality. The survey was launched on March 16, 2009, and was open for two weeks. Four reminders were sent while the survey was open. The response rate was 71 percent (67 of 94 employees in the criterion group completed the questionnaire). Detailed information on demographics of the criterion group and survey respondents is reported in Chapter 4 (see Table 4.2, p. 151).

**Data Synthesis and Integration 4 – Creating Final Draft**

Qualitative and quantitative data from the survey were compiled and reviewed. Data were analyzed using Excel and open coding. Descriptive statistics and frequency distributions for importance ratings and future priority were calculated and summarized. Written responses were analyzed for alignment, common themes, and frequently raised questions or suggestions. Based on a review of the quantitative and qualitative survey data, trends, competency definitions, and key actions were refined. The result of this step was the final *Trends and Implications* and the *OSUE Competency Model Final Draft*.

**Peer Review and Debriefing – Final Draft**

My peer debriefer reviewed data integration notes and the two final drafts: *Trends and Implications Final Draft* and *OSUE Competency Model Final Draft*. This step was used to validate the process and decisions I was making. I also received feedback and suggestions from her related to the final set of group interviews in the research process.

**Phase IV – Final Review and Data Integration**

**Review by CPT and Administrative Cabinet**

As a final cross-check, the *OSUE Competency Model Final Draft* was reviewed by Administrative Cabinet and the CPT. Both groups were sent a copy of the final draft to review and were asked to consider suggestions they might have to ensure the language
was clear and that the model would be effective as a communication tool. Administrative Cabinet participated in a face-to-face session that included a group interview. See Appendix J for additional detail on the final group interview with Administrative Cabinet including an agenda and questions. CPT members participated in a similar session via the Internet using WebEx (a web-based meeting platform that includes teleconference, screen sharing, and chat features). Additional detail for the final CPT group interview is in Appendix J. Both sessions were recorded and transcribed for data analysis and integration. A follow up e-mail was sent to each group of participants giving them a final opportunity to provide input that they might not have thought of during the group session.

Data Analysis and Integration 5 – Creating the Final OSUE Competency Model

For this data analysis and integration step, I reviewed data provided by the two groups of participants and used the data to make final revisions to the OSUE Competency Model Final Draft. For Administrative Cabinet, I reviewed the interview transcript, assistant moderator notes, written notes from one participant, and a follow up e-mail identifying themes and areas of alignment. CPT session data review included a chat transcript, assistant moderator notes, audio transcript, and one follow-up e-mail. Both sets of data were incorporated into the OSUE Competency Model using my judgment as a researcher on how suggestions were in alignment (i.e., suggested changes would add clarity and would improve language as a communication tool but would not conflict with the literature and prior model drafts). This step concluded the research process; the result was a final competency model for this research that will be shared for use in OSU Extension.
Trustworthiness and Validity

In discussing research that is focused on qualitative methodologies, authors use the terms trustworthiness and validity to describe how researchers establish confidence in the research (Jones et al., 2006; Lincoln & Guba, 1986). For evaluating trustworthiness and validity in this study, I have chosen to utilize the elements of goodness framework presented by Jones et al. These elements are epistemology and theory, methodology, method, voice, analysis and presentation, and implications for professional practice.

Epistemology and theory is about being grounded, stating the epistemological and theoretical assumptions, showing evidence they are complimentary, and using triangulation of theories (Jones et al., 2006; Lather, 1986). Methodology is the approach: showing a clear question that can be addressed by the methodology and providing clarity on how the data are collected (Lamont, 2004). Method, the third element, is triangulation of methods and data with an audit trail that records the method (Jones et al., 2006; Lather, 1986). Fourth, voice, is described by Jones et al. as reflexivity of researcher and participants and is a concept supported by other authors (Lamont, 2004; Lincoln, 1995; Lather, 1986). Fifth, analysis and presentation, involves triangulation of explanations, showing how the interpretation was arrived at, and showing that it is indeed trustworthy; this element includes credibility, plausibility, and applicability (Jones et al., 2006; Lamont, 2004; Lather, 1986). The final level in judging qualitative research involves the research being important in the world, which is described by authors as improving practice (Jones et al., 2006), having political or social significance (Lamont, 2004), or having catalytic validity (Lather, 1986).
Strategies or procedures suggested to address trustworthiness in qualitative research include: triangulation, peer review and debriefing, face validity through member checks, and clarification of researcher bias (Glesne, 2006; Jones et al., 2006; Lather, 1986). The following verification procedures or strategies to address validity are mentioned in the literature and were used in this study:

1. Triangulation in qualitative research has been described as using multiple data sources, data gathering methods, and theoretical schemes to ensure that interpretations are credible (Glesne, 2006; Lather, 1986). This study relied on multiple data sources and multiple gathering methods. For example, to identify the criterion group of exemplary performers, data from supervisors, peers, and performance evaluations (where available) were used. Across the four phases of this study, data were gathered from literature reviews, interviews, group processes, and a survey. Data analysis and integration steps included both qualitative and quantitative judgments.

2. Peer review and debriefing is used to establish credibility through external review, reflection, and critique (Glesne, 2006; Lincoln & Guba, 1986). The peer debriefer should be someone who knows the area of study and the methodological issues but is external; ideally this reviewer is not connected to participants in the study. In this research, it was important to identify a peer debriefer who was knowledgeable of the area of study and the organizational context but not affiliated with OSU Extension.

My colleague, Deborah Maddy, agreed to serve as a peer debriefer for this study. Maddy has a Ph.D. from The Ohio State University and is very familiar
with Extension work, state Extension organizations, and the Extension System having spent 32 years in local, regional, and state roles with Extension. She currently serves as Associate Director of Extension for Oregon State University. Maddy has expertise in human resource management and was co-author of *Core Competencies for the Cooperative Extension System* (Maddy et al., 2002).

Peer review and debriefing was used throughout this study and included a review of data collected, researcher notes, researcher reflections, data analysis, and data integration. I asked Maddy to keep me honest with questions and to be a devil’s advocate, to help test my analysis and decisions during data integration, and to critique my work.

3. Face validity can be addressed through member checks, recycling the categories, emerging analysis, and results back through at least a sample of respondents (Glesne, 2006; Jones et al. 2006; Lather, 1986). This study recycled results back to respondents at multiple times as illustrated in Figure 3.1 (p. 119).

4. Clarification of researcher bias is a reflection on one’s own subjectivity and how the researcher will use it as well as monitor it throughout the research process (Glesne, 2006). The subsequent section on self as researcher describes what I brought to the research and how my subjectivity may have affected the research process.

5. Catalytic validity refers to some documentation that the research process has led to insight and action such as how respondents gain through their research participation (Jones et al., 2006; Lather, 1986). Jones et al. assert that part of *goodness* is convincing the reader that the study findings are important in bringing
about informed action. Documentation was provided on relevance of this study to participants, the organization, and professional practice. While it may be beyond the scope of this study, an attempt was made to document and share any benefits to participants and the organization noted during the course of the research. Also, findings from this research will be available for immediate use by OSU Extension. The ultimate effectiveness or validity of this research will be in how the competency model is used.

**Self as Researcher: Clarification of Researcher Bias**

As a researcher, I was part of the process, bringing my own opinions and points of view. It is important to note that as a researcher, I served as an instrument, involving myself with individuals and groups as a data gathering tool. I am also a member of the organization that was being studied, specifically a member of the Human Resources Team in OSU Extension. I had previously existing relationships with employees involved as participants in the study. I am invested in this research and the Extension organization. As an experienced Extension professional with opinions about competencies of successful professionals, I needed to be aware of the likelihood that I might hear what I wanted to hear and find ways of focusing on those ideas that I agreed with in the research process.

In this research, my opinions, knowledge, and experience with OSU Extension were used in the research, but represented a potential source of bias. Therefore, it was important for me to monitor my bias, which I did through keeping a reflective journal throughout the research process. Journal entries were used for critical self-reflection, processing, and inspecting the research process. Concerns about bias having a negative
influence on the research were addressed through strategies described above including member checks and peer debriefing.

**Summary**

Chapter 3 described the type of study (multi-method action research in the context of a state Extension organization) and research participants (employees of OSU Extension). This chapter also provided an overview (Figure 3.1, p. 119) and then detailed description of the research design and specific data collection, analysis, and integration methods. Trustworthiness and validity in the context of post-positivist research were also addressed. The next chapter, Chapter 4, presents the results obtained using methods described in Chapter 3.
CHAPTER 4
FINDINGS

As stated in Chapter 1, the purpose of this study was to develop and validate a competency model for a state Extension organization by identifying and describing competencies, constructing a competency model, and completing validation steps. Because of the primarily qualitative and multi-phase nature of this study, it made sense to include results and a brief discussion of the findings at each step in the research process in this chapter, with further discussion reserved for Chapter 5. Data gathered and decisions made at each step informed the next one. Therefore Chapter 4 is organized by the four phases of research illustrated in Figure 3.1 (p. 119).

I will use the series of steps in each phase, where data were gathered from multiple sources and then integrated to develop documents that were then used for subsequent data collection, as an organizing framework for presenting results. The results from data collection at each step are shared followed by the results of the subsequent data integration. First, findings from the initial background review and identification of an exemplary performer pool (Phase I) are described. Phase II includes results from several rounds of data collection, synthesis, and integration steps. Results from the validation survey and subsequent data synthesis and integration in Phase III are then shared, followed by results from Phase IV, which includes the final competency model.
Phase I Results

Phase I results include data collected from an interview with the HR Leader, data collected and decisions made to identify a criterion group of exemplary performers, and Session #1 with the Competency Project Team.

Organizational Alignment – HR Leader

Through an interview and associated member checks, the HR Leader provided opinions and thoughts about definitions, recommendations for competency modeling and how they might apply to OSU Extension, and key decisions about building a model. His feedback was used to support the research process, model development (e.g., format and structure), and content for later data integration steps. Several clusters of ideas emerged from my discussions with the HR Leader: (a) revisions to operational definitions; (b) opinions about competency modeling for OSU Extension including structure, organization, level of detail, and length; (c) content for model development; and (d) other ideas. A brief description of the concepts shared and representative quotes are provided below.

The HR Leader provided suggestions for revisions to definitions being used for the study. For example, he suggested revisions to job group definitions so they accurately reflected current HR practices. The HR Leader also suggested minor changes to the definitions for exemplary and effective performers to better align with current language in OSU Extension’s performance management system. Definitions were revised and the results are shared in Chapter 1 as operational definitions.

When asked about the research process and competency modeling, the HR Leader was supportive of the process being used, of the way employees and administrators were
being involved, and of developing one model with core competencies that would apply to all employees. He had previously indicated support for the operational definition of core competency used in this research. During our interview he said, “You know…we do need a set [of competencies] across the organization. It’s becoming clearer and clearer for me that there is a core set of competencies.” The HR Leader felt strongly that behavioral descriptions were important, saying that “the descriptions of behaviors are the key to our success.” Several times in the interview the HR Leader mentioned that he liked models that showed how someone could progress or show growth in a competency. Related to model length and level of detail, the HR Leader expressed concerns about the model having enough detail to be meaningful yet not be too complex. He described it as “walking a tightrope about being complex enough to do what we need to do with it yet be understandable and understood by everyone within the organization.”

Several comments or ideas from the HR Leader were coded and used in the first data integration step as content needed for developing both the trends and implications and the competencies. For example, the HR Leader talked about the complexity of the organization as well as the ability to change and how that concept is related to understanding the organization.

The complexity of this organization and how we’re tied to many things, not only within the college and the university but statewide, federally….how can we help others in the organization understand that?

I know it’s important for our organization to be able to change and be flexible and adapt….to understand that….You have to understand the organization and the structure of which you live and work.

The HR Leader also identified technical knowledge or skills that employees in specific job groups needed that might include subject matter expertise and teaching skills (for
program staff), managing and facilitating conflict (for county directors), and accounting (for certain support staff and county directors). Finally, he indicated that something like areas of expertise as used in ASTD’s model (Bernthal et al., 2004) would be helpful for OSU Extension’s model because it would show they were “outside the competencies.” In other words, although areas of expertise were not the focus of the current study, they would not be forgotten as part of the larger skill sets needed within OSU Extension.

“Other” was the final cluster of concepts identified from the HR Leader interview. These comments and suggestions were not applicable to the current competency modeling process but were important to document, especially as the organization looks at applying the results of this research. One example was a discussion about a preference for models that show growth with behavioral descriptions or rating scales that show how an employee could progress or show growth within a competency.

**Identifying a Pool of Exemplary Performers**

As described in Chapter 3, a pool of exemplary performers was identified using three primary sources of information: nominations from peers, nominations from supervisors, and a list of Extension educators categorized as excellent in OSU Extension’s 2008 performance appraisal process. It is important to note that these performance data were only available for the educator job group. To collect nominations, invitations were sent to all employees (1,003 as of November 14, 2008) to nominate exemplary performers; 201 individuals provided peer or supervisory nominations. Table 4.1 is a summary by job group of the invitations sent and of the nominators who responded with at least one nomination.
Table 4.1
Summary of Invitations to Nominate and Nominators by Job Group

<table>
<thead>
<tr>
<th>Nominator Group</th>
<th>Number of Invitations</th>
<th>Number Responding</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peers only&lt;sup&gt;a&lt;/sup&gt;</td>
<td>857</td>
<td>148</td>
<td>17.3</td>
</tr>
<tr>
<td><strong>Supervisory:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit Directors</td>
<td>112</td>
<td>36</td>
<td>32.1</td>
</tr>
<tr>
<td>Assistant Directors</td>
<td>4</td>
<td>4</td>
<td>100.0</td>
</tr>
<tr>
<td>Regional Directors</td>
<td>3</td>
<td>3</td>
<td>100.0</td>
</tr>
<tr>
<td>Administrative Cabinet&lt;sup&gt;b&lt;/sup&gt;</td>
<td>6</td>
<td>5</td>
<td>83.3</td>
</tr>
<tr>
<td>Administrative Support</td>
<td>21</td>
<td>5</td>
<td>23.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>146</strong></td>
<td><strong>53</strong></td>
<td><strong>20.0</strong></td>
</tr>
</tbody>
</table>

<sup>a</sup>Peers only nominator group included all employees in all job groups except temporary employees, excluding those with supervisory roles.

<sup>b</sup>This figure does not include assistant directors & regional directors who are part of the Administrative Cabinet. They are included with their respective group above.

The initial list of 1,003 employees was reduced to a list of 860 employees by excluding job groups that were not part of the study in terms of identifying a criterion group of exemplary performers (Administrative Cabinet and administrative support) and employees with less than 50 percent Extension funding. This group of 860 employees represented the sampling frame of potential exemplary performers. That is, potential nominees (sampling frame) were all employees meeting two criteria (a) being in one of six job groups (educator, office support, program management, program support, research/technical support, and specialist) and (b) having at least 50 percent Extension funding for their position. The first column of Table 4.2 summarizes demographics for the sampling frame, the criterion group, and the survey respondents. The sampling frame and criterion group will be discussed below. Demographics of survey respondents will be discussed later in the chapter with other Phase III results.
Table 4.2  
Demographics of Nominee Frame, Criterion Group, and Survey Respondents

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Population of OSUE Employees</th>
<th>Criterion Group</th>
<th>Survey Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=860</td>
<td>N=94</td>
<td>N=67</td>
</tr>
<tr>
<td></td>
<td>f (%)</td>
<td>f %</td>
<td>f %</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>222</td>
<td>27</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>25.8</td>
<td>28.7</td>
<td>25.4</td>
</tr>
<tr>
<td>Female</td>
<td>638</td>
<td>67</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>74.2</td>
<td>71.3</td>
<td>74.6</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>794</td>
<td>91</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>92.3</td>
<td>96.8</td>
<td>97.0</td>
</tr>
<tr>
<td>Black</td>
<td>28</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>3.3</td>
<td>19.1</td>
<td>22.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>22</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2.6</td>
<td>2.1</td>
<td>3.0</td>
</tr>
<tr>
<td>Asian</td>
<td>6</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>0.7</td>
<td>14.9</td>
<td>14.9</td>
</tr>
<tr>
<td>Undisclosed</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>11.7</td>
<td>16.4</td>
</tr>
<tr>
<td>American Indian</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Years of Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 5 years</td>
<td>207</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>24.1</td>
<td>10.6</td>
<td>6.0</td>
</tr>
<tr>
<td>5-9</td>
<td>153</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>17.8</td>
<td>19.1</td>
<td>22.4</td>
</tr>
<tr>
<td>10-14</td>
<td>146</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>17.0</td>
<td>11.7</td>
<td>14.9</td>
</tr>
<tr>
<td>15-19</td>
<td>129</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>15.0</td>
<td>16.0</td>
<td>13.4</td>
</tr>
<tr>
<td>20-24</td>
<td>94</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>10.9</td>
<td>14.9</td>
<td>10.4</td>
</tr>
<tr>
<td>25-29</td>
<td>71</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>8.3</td>
<td>11.7</td>
<td>16.4</td>
</tr>
<tr>
<td>30 years or more</td>
<td>60</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>7.0</td>
<td>16.0</td>
<td>16.4</td>
</tr>
<tr>
<td>M</td>
<td>13.2</td>
<td>17.5</td>
<td>17.7</td>
</tr>
<tr>
<td>SD</td>
<td>9.8</td>
<td>10.3</td>
<td>10.0</td>
</tr>
<tr>
<td>Job Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educator</td>
<td>249</td>
<td>37</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>28.1</td>
<td>39.4</td>
<td>41.8</td>
</tr>
<tr>
<td>Office Support</td>
<td>225</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>25.4</td>
<td>23.4</td>
<td>25.4</td>
</tr>
<tr>
<td>Program Management</td>
<td>53</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>6.0</td>
<td>8.5</td>
<td>6.0</td>
</tr>
<tr>
<td>Program Support</td>
<td>222</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>25.1</td>
<td>11.7</td>
<td>13.4</td>
</tr>
<tr>
<td>Research/Tech</td>
<td>41</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4.6</td>
<td>5.3</td>
<td>4.5</td>
</tr>
<tr>
<td>Specialist</td>
<td>70</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>7.9</td>
<td>11.7</td>
<td>9.0</td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Central</td>
<td>220</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>24.9</td>
<td>21.3</td>
<td>20.9</td>
</tr>
<tr>
<td>South East</td>
<td>188</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>21.2</td>
<td>20.2</td>
<td>19.4</td>
</tr>
<tr>
<td>West</td>
<td>220</td>
<td>23</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>24.9</td>
<td>24.5</td>
<td>28.4</td>
</tr>
<tr>
<td>State</td>
<td>232</td>
<td>32</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>26.2</td>
<td>34.0</td>
<td>31.3</td>
</tr>
</tbody>
</table>
The nominators in Table 4.1 provided 1,021 peer or supervisory nominations (representing 365 unduplicated individual nominees) that were entered in Excel, along with performance data for the Extension educator job group (a list of 71 educators who were rated as “excellent” in the 2008 performance appraisal process). After examining the nomination data, the criteria in Table 4.3 were established to identify the criterion group of exemplary performers.

Table 4.3
Cutoff Rules Established for Inclusion in Criterion Group

<table>
<thead>
<tr>
<th>Job Group</th>
<th>Cutoff Criteria Used</th>
<th>Frame</th>
<th>Criterion Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$N$</td>
<td>$n$</td>
</tr>
<tr>
<td>Educator</td>
<td>$\geq 4$ nominations from $\geq 4$ sources</td>
<td>249</td>
<td>34</td>
</tr>
<tr>
<td>Office support</td>
<td>$\geq 2$ nominations from $\geq 1$ source</td>
<td>225</td>
<td>22</td>
</tr>
<tr>
<td>Program support</td>
<td>$\geq 2$ nominations from $\geq 1$ source</td>
<td>222</td>
<td>11</td>
</tr>
<tr>
<td>Program management</td>
<td>$\geq 3$ nominations from $\geq 2$ sources</td>
<td>53</td>
<td>8</td>
</tr>
<tr>
<td>Specialist</td>
<td>$\geq 3$ nominations from $\geq 2$ sources</td>
<td>70</td>
<td>11</td>
</tr>
<tr>
<td>Technical support</td>
<td>$\geq 3$ nominations from $\geq 2$ sources</td>
<td>41</td>
<td>5</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>860</td>
<td>91</td>
</tr>
<tr>
<td>Unit directors$^a$</td>
<td>$\geq 2$ nominations from $\geq 2$ sources</td>
<td>112</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>860$^a$</td>
<td>94$^b$</td>
</tr>
</tbody>
</table>

$^a$All unit directors were in one of the first six job groups listed above, in addition to serving as a unit director. Therefore the unit director group was not added to the total for the sampling frame.

$^b$Three of the 13 unit directors met the cutoff criteria based on nominations for their unit director role but not as an educator. All other unit directors met criteria in their roles both as a unit director and educator. Therefore, 94 is the total unduplicated number of nominees in the seven job groups.

In determining criteria for inclusion in the exemplary performer criterion group, I reasoned that it was important to have a similar representation across job groups, where possible, that reflected the proportion of employees in that job group. It was equally important to identify only employees who were exemplary performers, to the extent
possible. I further reasoned that higher numbers of nominations from multiple sources would support inclusion as an exemplary performer. Also, prior research suggests that about 10 percent of employees in an organization are truly high performers (Spencer & Spencer, 1993). Therefore, based on the data available and the considerations mentioned, cutoff criteria were established for each job group that would triangulate these sources to the extent possible (across nominator sources and available performance data). Cutoff rules illustrated in Table 4.3 varied based on the potential sources of nominations for each group and the volume of nominations received. Criteria were set that were as high as possible while still including approximately 5 to 15 percent of each job group. For example, an educator had to receive at least 4 nominations and those nominations had to be from at least 4 different sources (e.g., peers, Administrative Cabinet, assistant director, performance data). The office support and program support groups received fewer nominations in proportion to the number of employees in those groups. I reasoned that a lower cutoff was acceptable for these groups (to include at least 5% as exemplary performers) because they tend to have less contact across the organization and may be marginalized. Therefore, fewer nominations might be expected.

Using the criteria in Table 4.3, 94 employees representing approximately 11 percent (10.9%) of the sampling frame were identified as exemplary performers. For each job group, between 5 and 16 (15.7%) percent of the population were identified as exemplary. Based on demographic data presented in Table 4.2, the criterion group appeared to be representative of the sampling frame in terms of gender and of the percentage of white and Hispanic individuals, but not for African Americans. Also, the criterion group had a higher percentage of individuals with more years of service than the
sampling frame. The criterion group had a greater percentage of educators and fewer in the program support job group as compared to the sampling frame. A rationale for the lack of representation in the program support job group was described above. Finally, the percentage for each work location was representative.

**CPT Session #1**

During a four-hour session, using a modified nominal group technique described in Chapter 3, CPT members generated ideas and provided initial prioritization in three rounds of data collection. In Round 1, CPT members were asked about their thoughts about trends facing OSU Extension and competencies needed by Extension professionals. At the end of this round, 122 ideas for trends and implications were collected (see Appendix K, Table K.1). The list included some duplication, many related concepts, and overlap. In this session trends and implications tended to blur together as ideas were generated. During prioritization, 28 trends received at least one priority vote from CPT members. Examples of trends with multiple priority votes included: declining budgets, more competing sources of information, increased use of technology, technology changes, diverse workforce, relationship building, and conflicting accountability. Discussing implications related to competition and technology, one member said, “We need to emphasize user-friendly, convenient…utilize the technology that clientele are demanding.”

In Round 2, CPT members were asked to think about competencies that predict success and drive organizational and individual performance. At the end of this round, 66 ideas or clusters of ideas for competencies were collected (see Appendix K, Table K.2). Thirty-six received one or more priority votes from CPT members. Examples of
competencies with multiple priority votes included communication skills (e.g., written, oral, listening), time management, strong relationship builder, ability to work in a team environment, manage resources, flexibility/adaptability, cultural competencies, specialized knowledge base, work independently, social interaction skills, and emotional intelligence.

In Round 3, members were asked the same question as Round 1 but were given several existing competency models and lists to review for competencies or phrases that stood out as having two characteristics: (a) those competencies that contribute directly to organizational success for OSU Extension and (b) those that constitute top performance in OSU Extension. At the end of this round, 43 ideas or clusters of ideas for competencies were collected (see Appendix K, Table K.3). Thirty-four received one or more priority votes from CPT members. Examples of competencies with multiple priority votes included: teamwork; cognitive ability; subject matter expertise; knowledge of the organization; impact and influence relationship building; diversity; professionalism; personal effectiveness; technology expertise; professional development; management skills; evaluation, applied research, and scholarship; and volunteer and employee management.

Phase II

Creating Draft 1

Trends and Implications Draft 1

As described Chapter 3, four sources of information were used to develop the Trends and Implications Draft 1 (HR Leader interview, CPT Session #1, OSU internal documents, and literature review). The result of this data integration phase was a draft list
of six trends, descriptions of those trends, eight implications, and associated descriptions.

See Table 4.4 for a list of the trends and implications; the complete *Trends and Implications Draft 1* is in Appendix L.

### Table 4.4

**List of Trends and Implications from *Trends and Implications Draft 1***

<table>
<thead>
<tr>
<th>Trends</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complex and changing conditions</td>
<td>Be flexible, innovative, and embrace change</td>
</tr>
<tr>
<td>Increased competition and limited resources</td>
<td>Customer driven, a focus on quality and responsiveness</td>
</tr>
<tr>
<td>Changing organizational structures</td>
<td>Demonstrate the value</td>
</tr>
<tr>
<td>Changing demographics</td>
<td>Entrepreneurial spirit/activity</td>
</tr>
<tr>
<td>Technology and life in the e-world</td>
<td>Become proficient in technology use and application</td>
</tr>
<tr>
<td>Globalization and increased accessibility to the world’s knowledge base</td>
<td>Life and work</td>
</tr>
<tr>
<td></td>
<td>Relationships</td>
</tr>
<tr>
<td></td>
<td>Diversity</td>
</tr>
</tbody>
</table>

Some descriptions of trends or implications were more fully developed than others in this draft. If enough data were available from Phase I, a complete description was written. However, if data were lacking, detail was not added during this step.

**OSUE Competency Model Draft 1**

As described in Chapter 3, only data gathered from employees and OSU Extension contextual information were used to develop the *OSUE Competency Model Draft 1*. That is, data from the literature review were not used in this step. I reasoned that a focus on internal data early in the model development would help ensure that the model emerging aligned with opinions of exemplary performers and with the strategic direction
of the organization. Based on the HR Leader interview, CPT Session #1, and OSUE context information, the *OSUE Competency Model Draft 1* was developed. This draft was in the form of a table with 20 potential competencies; it included supporting concepts when this information was available from the data. Six of the 20 competencies as presented in the *OSUE Competency Model Draft 1* are illustrated in Table 4.5. As shown in Table 4.5 some competencies (e.g., communication) had supporting concepts while others (e.g., problem-solving) had no detail available from the Phase I sources described above to write a supporting description. The complete *OSUE Competency Model Draft 1* is in Appendix L.

### Table 4.5
**Examples of OSUE Competency Model Draft 1 Competencies and Supporting Concepts**

<table>
<thead>
<tr>
<th>Potential Competency</th>
<th>Supporting Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer service</td>
<td>Focus on quality; user friendly; meeting clientele needs; responsive; people (customer, clientele, student) oriented/centered</td>
</tr>
<tr>
<td>Communication</td>
<td>The ability to communicate effectively with others. Written and oral communication; listening Co-workers, clients, and other stakeholders</td>
</tr>
<tr>
<td>Thinking</td>
<td>Thinks weird, innovative, diverse thinker, critical thinker, thinking brilliantly, forward thinker, strategic thinker, entrepreneurial thinker</td>
</tr>
<tr>
<td>Problem-solving</td>
<td></td>
</tr>
<tr>
<td>Accountability</td>
<td>Responsible use of resources; evaluation, applied research and reporting</td>
</tr>
</tbody>
</table>
| Technical/subject matter expertise | The mastery of a discipline, body of knowledge, or technical proficiency that enhances individual effectiveness and meets organizational goals. In-depth knowledge in a particular area or areas that might include:  
  o Extension teaching (teaching excellence; effectiveness; experiential learning; facilitation; enthusiasm)  
  o Fiscal/accounting  
  o Information technology  
  o Management and supervision  
  o Volunteer management  
  o Program planning and evaluation  
  o Subject matter content |
Administrative Cabinet Review and Input

Through a group interview, Administrative Cabinet members provided opinions and ideas related to *Trends and Implications Draft 1* and the *OSUE Competency Model Draft 1*. It is important to note that this interview was held during a retreat where members were talking about organizational restructuring and the future of OSU Extension. Several categories of comments or ideas emerged from my group interview with Administrative Cabinet: (a) comments or suggestions related to existing trends, implications, or competencies; (b) thoughts about gaps or what was missing; and (c) other comments. A brief description of the concepts shared and examples are provided below.

*Trends and Implications Draft 1*

Administrative Cabinet members were asked to provide feedback on the *Trends and Implications Draft 1*. Most of the interview time was spent on this topic because the group had a lot to say about trends and their implications. Administrative Cabinet members had comments or suggestions about trends and implications that indicated support for the draft, helped further define or refine what was in the draft, and identified gaps in the draft. There was support for the concept of uncertain times or uncertainty with implications around flexibility, adaptability, learning new skills to meet changing clientele needs, and so forth. “The trend is really….coping with or living with risk and drastic or sudden change.” This concept of coping with change was also discussed related to generational differences.

There is probably a higher level of comfort with ambiguity on the part of our younger generation than for those of us who thought we understood things….I don’t think as I look at a teenager today that they’re facing a world where things feel certain.

The idea of constant change was emphasized several times and linked to implications.
I would argue that we probably need more of those kind of conflict resolution
techniques than we have had in the past because of the constant change we’re in…run
those into the ground but we are changing. The organization is, the culture is,
diversity brings that constant change.

Changing demographics was also discussed both in terms of Ohio’s population
and Extension clientele as well as the Extension workforce. Cabinet members had a
variety of opinions about demographic trends in Ohio. The point seemed to be that much
is changing, and we don’t know exactly what will be happening in the next few years in
terms of where people live and population shifts; in other words, there is uncertainty
about the future.

It’s a challenge to define trends now. A year ago, I think it was easier to define
trends. We had the research to back our trends. I think now I am not comfortable
with defining trends because I don’t think we know….so what we were
comfortable saying might be in the past…I wouldn’t be comfortable in saying it’s
a trend now.

Demographics and the multigenerational workplace was another topic of
discussion for the group. They talked about changes in workforce demographics,
including an increase in younger workers as well as older workers, and how that change
will have a variety of implications. Comments were made about younger workers with
their unique values, work styles, and communication styles. It is important to note here
that the Administrative Cabinet a relatively older group, all in the “baby boomer”
generation. Related to communication, although some were concerned about the quality
of communication by younger workers in a digital age, others saw a need to learn new
methods themselves: “We need to know better, more effective ways, life in the e-world
communicating, texting, or e-mail, or whatever.” Finally, an example of a change
suggested was for globalization, specifically a suggestion about adding the word physical
to say “physical geography” because although physical geography is much less of an
issue affecting Extension, virtual geography is a new term that might affect Extension work.

**OSUE Competencies Draft 1**

Administrative Cabinet members were asked to provide feedback on the *OSUE Competency Model Draft 1*. Discussion with this group centered around 6 of the 20 competencies in the draft model or on competencies they thought should be added. Representative examples are provided below.

Technical or subject matter expertise was a topic of discussion that sparked disagreement among members about how it fit with core competencies and the relative importance of hard versus soft skills. One member expressed concern about subject matter expertise being at the end of the model when “in my mind that’s half, at least, if not more than half, of what I’m looking for in an educator.” Another member provided a rebuttal saying that “we want to hire people who have these [referring to other competencies listed in the draft] other skills. The technical subject matter, we can teach them what we want them to know.” Finally, at the end of the interview another member raised the point again about technical skills, suggesting that the competencies needed by the organization were covered in the draft because if someone had the competencies listed, they would do the leg work to make sure they had the technical or subject matter skills.

Emotional intelligence was suggested as something missing from the current draft. Concepts such as *getting along with people, self-discipline, being able to discipline yourself, motivate yourself*, and *dealing with crisis* were mentioned. Thinking and problem-solving were also discussed, specifically the ability to “think quickly or the
ability to make decisions….in an ever-changing environment.” Conflict resolution was also suggested as something that was missing.

Conflict resolution takes flexibility and adaptability. It takes problem-solving skills and professionalism all mixed in there…the ability to be creative and come up with new ways to address the issue. So you have to be a critical thinker, a creative thinker.

There was considerable debate among participants about the differences and commonalities between two competencies in the draft model: understanding the organization and understanding systems. In general, the group mentioned several concepts that would be part of the larger “understanding”: understanding the basics of community development, being politically savvy or astute, and being able to understand and put things in context. Finally, an example of a comment coded as “other”, that is, it was about the process rather than the competencies themselves, came via e-mail and said “I think I can speak for all of cabinet that we enjoyed the brainstorming activity with you yesterday….we never have enough time nor the opportunities to have casual conversation about philosophies, trends, and competencies.”

CPT Session #2

Using group interview and idea generation techniques, CPT members (a) discussed and provided feedback on Trends and Implications Draft 1, (b) discussed and provided suggestions to refine the OSUE Competency Model Draft 1, and (c) used a list of competency titles refined that day to generate ideas on definitions, statements, or actions that would illustrate those competencies.

Group Interview - Trends and Implications Draft 1

Round 1 of this group interview focused on trends and implications. CPT members shared comments and ideas that indicated support for what was included in the
current draft and suggested changes or clarification to the content. Some made specific supportive comments about the content.

I think you have some really good key words as I look through there. I see words like changing competition, limited globalization, technology. You know, you have some really good key words in there that I think is really important so that if somebody reads down through them I think it’s easy to pick up on what the key issues are.

Also, the group’s support for the list of trends and their implications was embedded in their discussion about adding detail. That is, as CPT members discussed details that might get added or how to reorganize them, it was evident that they supported the overall concepts. For example, the group talked about how the current trend complex and changing conditions was higher order, more related to the big picture, whereas the rest were more related to OSU Extension. A specific suggestion was made to make sure the first trend (complex and changing conditions) was higher order and to make the current third trend (changing organizational structures) the place to “talk about OSU Extension and what it [complex and changing conditions] means for us.”

Suggestions were made about improving clarity of the trend related to conflicting demands and its associated implications. Examples given of conflicting demands included: promotion and tenure versus rewarding group effort, balance between research and teaching, and conflicting demands placed on county personnel. These conflicting demands mean “you’ve got a lot of different ways it can pull you.” The implications discussed included communication, relationship building, prioritization, and decision-making. Talking about conflicting expectations, one member said:

We get different responses from different level[s] of the organization about which of those priorities are more important on any given day and we have, as an individual, we have to be able to make a decision about how we personally respond to it.
In turn, this led to a discussion about learning to deal with conflicting demands. This led to a conversation about meeting demands by collaborating.

At least three members talked about the importance of collaboration and relationships. One said “I think relationships is just a really big one in terms of maintaining our clientele base, maintaining support for the program, and working with partners.” A second responded, saying that partnerships are the essence, the measure of our success: “We’re never any better than the strength of our relationships.”

Another example of clarification about language in the third trend changing organizational structures was discussion about the terms autonomy and teamwork seeming to conflict with each other. “I’m not sure autonomy is the right word. I know what you mean…but I always keep going why is that word there?” Further discussion clarified that the group could see a need to be self-motivated, “an ability to work independently and as a team member.” A suggestion was made to remove “do more with less” and focus more on being creative, innovative, and taking risks, which was probably a fit under the entrepreneurial spirit or activity implication.

**OSUE Competency Model Draft 1**

Round 2 of this group interview focused on comments and suggestions related to the OSUE Competency Model Draft 1. The discussion during the round included suggestions for changing, adding to, or clarifying the competencies, as well as thoughts about combining or dividing them. CPT members were encouraged not to worry about the exact title of a competency but to focus on clarifying, adding, or combining competency titles from Draft 1, ensuring that any major concept they thought was important was represented in some way. Competencies titles or major concepts discussed
included teamwork, resources, interpersonal skills, problem-solving, professionalism, cognitive skills, conflict management, risk management, accountability, understanding systems, understanding the organization, and technical subject matter expertise. Some representative examples of the discussion are provided below.

The group talked at length about what was listed in Draft 1 as technical or subject matter expertise. There was disagreement among the group about what does or doesn’t belong there. The term subject matter appeared to be an issue with some members. For example, one said that “youth development…could go under something like subject matter expertise….Then there would be some other heading that cuts across things like the volunteer management or program planning.” When asked to give examples of subject matter expertise, members mentioned nutrition, youth development, and horticulture. Another member said that it “could be accounting for someone in the business office.” As this discussion continued, one member saw many of the concepts fitting together.

But that's where I see subject matter. I guess I think of whatever it is that's your area of expertise, but, like I said, if you're in the business office, that could be accounting. If you're an administrative assistant, that could be what's happening in your office. I guess I see that as whatever it is that you're gonna be asked about on a daily basis. For program staff, teaching and program development could be a part of it, but it wouldn't be for everyone.

Another suggestion was to combine many of the concepts related to cognitive abilities into a category of thinking that might include “thinking, creativity, problem-solving, visionary, and maybe even learning.” Two participants suggested that learning not be grouped here but remain separate, and others did not like combining thinking with problem-solving. A clarification was suggested for resources to include “people, money, time, and facilities.” Also, a suggestion was made to change the title of building
relationships and networking to interpersonal skills. As a final example, one person suggested that understanding systems was too abstract and didn’t fit with the definition given. An alternate title of understanding organizations and communities was suggested.

At the end of this step, the group had agreed on combining, subdividing, or adding new competency titles or concepts that resulted in 24 separate competencies.

Round 3 of CPT Session #2 used a modified nominal group process, without prioritization, to generate ideas for definitions, statements, or key actions to illustrate each of the 24 competencies from Round 2. Through silent idea generation and then group sharing, 222 statements were generated that further defined or illustrated the 24 competencies. Examples of these statements are provided in Table 4.6 (See Appendix M for a complete list of the 24 competencies and supporting statements generated).
Table 4.6
Representative Examples of Competency Statements from CPT Session #2

<table>
<thead>
<tr>
<th>Competency</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing resources</td>
<td>Follow business office procedures</td>
</tr>
<tr>
<td></td>
<td>Recognized need to hold people accountable</td>
</tr>
<tr>
<td>Customer service</td>
<td>Prompt with reply</td>
</tr>
<tr>
<td></td>
<td>Go the extra mile to best serve clientele</td>
</tr>
<tr>
<td></td>
<td>Focus on our audiences we serve</td>
</tr>
<tr>
<td>Interpersonal skills</td>
<td>Empathetic</td>
</tr>
<tr>
<td></td>
<td>Body language matches words</td>
</tr>
<tr>
<td></td>
<td>Ability to both build and maintain relationships with stakeholders (clientele, coworkers, partners, etc.)</td>
</tr>
<tr>
<td>Flexibility</td>
<td>I recognize that even when I have every detail squared away, there are always some unexpected things that I have to deal with and that to deal with these unexpected things I must remain open minded</td>
</tr>
<tr>
<td></td>
<td>I read/talk/process to understand a new direction and take steps to move with it rather than against it</td>
</tr>
<tr>
<td>Diversity</td>
<td>Be able to treat all clientele the same way regardless of differences they may bring to the table.</td>
</tr>
<tr>
<td></td>
<td>Ability to recognize what we don’t know and work with who does know</td>
</tr>
<tr>
<td></td>
<td>Encourages non-traditional partnerships</td>
</tr>
</tbody>
</table>

Note. See Appendix M for a complete list of 24 competencies and 222 statements generated during CPT Session #2.

Peer Review and Debriefing

As described in Chapter 3, peer review and debriefing was used throughout the study as a strategy to improve the research and address validity. My peer debriefer reviewed the data I had collected, my researcher notes and reflections, and my analysis and integration notes. Results from peer debriefing will be discussed here and at other steps when it was used. In general, my peer debriefer felt like I was on track, and she could follow my work in developing Draft 1. She was supportive of my decision to let the model emerge by gathering more data from the CPT before using outside competency data. Specifically on Trends and Implications Draft 1, my debriefer wanted me to think
about the section on relationships and diversity. She noted that how I talked about
diversity and relationships (and the accompanying headers) was very different from the
other implications. She suggested I think about these two competencies; she noted that
they sounded more like a competency now, especially because they were used as a
header. We talked about how relationships and diversity were related (e.g., relationships
are needed to be able to trust one another).

In discussing next steps, my debriefer suggested that that I adopt some working
definitions (e.g., behavioral description, dimension, competency dimension, competency
statement, or actions) for parts of the model. This would force me and the others that I
identified (e.g., HR Leader) to agree and begin to operationalize the terms we used so
there would be a shared meaning (at least for the purpose of this study). Based on the data
already collected, I had started thinking about a need to describe or outline what the final
model would contain and at what level of detail. These definitions and a general concept
of the structure or level of detail for the model being developed for this study would be
important in the next integration step. My debriefer described this as “putting boundaries
on what I can achieve in this research.” I had done this to some extent but needed to be
more specific about what the model created from this research will and will not contain.

Creating Draft 2

Creating Trends and Implications Draft 2

As described in Chapter 3, five key sources of information were used to develop
Trends and Implications Draft 2. They included: (a) Administrative Cabinet group
interview, (b) CPT Session #2, (c) peer review, (d) additional sources of data needed for
discussing demographics, and (e) Draft 1 and associated data. In creating Draft 2,
changes were made to titles for trends and implications, and some implications were combined or reorganized. Most changes were revisions and additions to the content describing trends and implications to reflect data from the sources mentioned above. Some representative examples of the changes I made are described below.

The title of Trend #1 was changed from complex and changing conditions to changing and complex conditions. This change and the expanded content for the description was made to align with feedback from Administrative Cabinet and the CPT. Changes were made in Trend #2, increased competition and limited resources, to emphasize competitive funding as a part of this trend. Finally, diversity was removed as an implication; some content related to diversity was incorporated elsewhere and other content was saved for later competency development.

The result of this data integration phase was Draft 2, which contained six trends, edited and more detailed descriptions of those trends, seven implications, and edited and more detailed descriptions of those implications. The Trends and Implications Draft 2 was not revised again until after feedback from survey respondents in Phase III. Only minor changes were made at that time. Thus, the final Trends and Implications illustrated at the end of Chapter 4 (Figure 4.1) was very similar to Trends and Implications Draft 2.

Creating OSUE Competency Model Draft 2

As described in Chapter 3, data analysis and integration to create the OSUE Competency Model Draft 2 used Draft 1 and associated internal data and drew from the from the following additional sources of data: (a) Administrative Cabinet group interview, (b) CPT Session #2, (c) Ohio State University core competencies; (d) existing
models and competency lists from peer Extension organizations; and (e) existing competency literature and menus developed for general use in competency modeling.

Before creating Draft 2, I used existing data and additional input from the HR Leader to identify working definitions to guide my work in model development and to promote shared meaning so participants in later steps would have a common understanding of what each part of the model should contain. Working definitions for competency title and definition, key actions, and areas of expertise (AOE) were created. These definitions are in Chapter 1 as operational definitions for this study and can be seen as presented to participants on pages 1 and 2 of the OSUE Competency Model (Figure 4.2).

Using the working definitions described above as a guide, the OSUE Competency Model Draft 1 was revised and expanded. Because Draft 1 was a list of competencies and only some supporting concepts, this integration step involved adding significant amounts of content to the model including complete definitions and key actions to illustrate each competency. Representative examples of changes and additions to Draft 1 are provided below.

Accountability was dropped as a competency based on data suggesting this concept would show up in other competencies as well as AOEs. Based on data from the sources described above, a title, definition, and key actions were written for customer service:

**Customer service orientation**
Works constantly to provide superior services to OSU Extension clientele, making each interaction a positive one. Understands and delivers quality service through a customer-focused mindset that acknowledges the importance of and value of the person being served; acts accordingly; dedicated to meeting
expectations and requirements of internal and/or external customers; uses customer information to improve.

**Key actions**
- Demonstrates concern for satisfying one’s own internal and/or external clientele.
- Listens and responds to clientele needs.
- Delivers friendly and courteous service.
- Provides a response that is timely and meets clientele needs.
- Looks for and makes continuous improvements.

Other competency titles were changed. For example, *autonomy* was changed to *working independently*, then further defined using statements from CPT Session #2 and the literature. Finally, *understanding the organization* was changed to *understanding OSU Extension* based on suggestions from the CPT about making it clear that this was different from *Draft 1’s understanding systems*, which became *understanding organizations and communities* in Draft 2.

Finally, I re-ordered competencies for this draft based on questions from participants about the order presented in Draft 1 and whether it had any significance. The competencies in Draft 1 were presented in no particular order, leading participants to draw their own conclusions about what the order did or did not mean. To eliminate this issue, I presented the competencies in alphabetical order. The result of this step was the *OSUE Competency Model Draft 2*. Draft 2 included 14 competencies.

1. communicating effectively
2. continuous learning
3. customer service orientation
4. diversity/multiculturalism
5. efficient management of resources
6. flexibility
7. interpersonal savvy
8. professionalism
9. teamwork and leadership
10. technology adoption and application
11. thinking and problem solving
12. understanding OSU Extension
13. understanding organizations and communities
14. working independently

Each competency included a title (see numbered list above), definition, and key actions. The complete draft is provided in Appendix N because it represented major changes from *Draft 1.* The *OSUE Competency Model Draft 2* was used with focus groups as described in the following section.

**Focus Groups**

As described in Chapter 3, a total of 25 employees participated in three focus group sessions, where they critiqued the content of the *OSUE Competency Model Draft 2* and generated ideas for key actions (i.e., behaviors that illustrate the competencies for Extension employees). First, focus group participants were asked a series of questions about their reactions to *Draft 2.* Major themes that emerged from focus group discussion included: (a) overall support for the model and interest in next steps related to application; (b) suggestions for model format and structure; (c) specific supportive comments or suggestions for changes to individual competency titles, definitions, or key actions; and (d) missing competencies. Examples of each are provided below.
Across focus groups, there was support for the *OSUE Competency Model Draft 2* and interest in talking about how the competencies could be applied in OSU Extension. One participant said, “It’s really great. I like the overall idea….I would much rather be evaluated on these on any other thing I’ve been evaluated on before.” Another stated “From a county director standpoint…very good.” As an additional sign of support for *Draft 2*, participants were also thinking about how the model would get used in the organization. “You could easily put little checks by it and evaluate…identify talent up front…some of them are things that will have to be taught.” Another participant said, “What I found myself asking is how do you put this in a format that can be used to select new personnel.”

There were also suggestions for model format and structure. Some opinions were divergent such as whether to group more competencies together or keep the list of 14. After some suggestions about combining different competencies, one participant said, “I kind of like them the way they are. The reason I say that is that I think if you’d start to lump them together…it’s going to make your job harder to evaluate me.” In response, another participant said, “I think I’d be happier with that if we lumped more of them together and then laid them out alphabetically.” Focus group participants discussed and shared ideas for how to present competencies including putting them in order of priority, leaving them in alphabetical order, and grouping them by type. One participant suggested grouping by type, a suggestion that was used later to show conceptual groupings.

Well, I don’t know that it would be a matter of importance as it would be a matter of continuations of thought, that you’d understand one because it would lead you into another one. Maybe we could organize them that way, so it’s like organizing a show in a gallery…that you’d have some continuity. So, I think you could move them around so they have some…you’ll understand the answer on one core competency when you look at this next answer down here.
For other suggestions, such as a need to use consistent language for titles, there was a pattern of consensus across groups that consistency was needed but there was lack of agreement on specific preferences (e.g., use of adjectives in competency titles or not).

Discussing specific competencies, participants indicated their support with statements like “key actions were pretty good.” Others had suggestions for changes to competency titles. *Interpersonal savvy* was used as a title in Draft 2 but several participants did not like the word *savvy* and made comments like “savvy sounds sly, sleazy.” Other comments were about adding to definitions or key actions such as adding “thinking quickly on your feet” to *thinking and problem solving*. Another example was adding content to *understanding OSU Extension* about understanding the function of OSU Extension, that is, “I provide programming in a certain way because I understand the function of OSU Extension.” Finally, a few comments were made about competencies that might be missing (i.e., concepts that were not readily identified in the current draft). One line of discussion was about employees caring about what they are doing and “having one voice” in communication about the organization. Another was about the importance of being proactive and looking for way to integrate concepts related to being proactive throughout the competencies.

In Round 2, participants generated ideas to further describe or define the competencies. As a result of this step, 180 key actions, statements, or illustrations were collected for the 14 competencies in Draft 2. Representative examples of these statements are in Table 4.7.
<table>
<thead>
<tr>
<th>Competency</th>
<th>Idea or Description Shared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicating effectively</td>
<td>• Good listener</td>
</tr>
<tr>
<td></td>
<td>• Demonstrated effective written communications</td>
</tr>
<tr>
<td></td>
<td>• Creates and develops clear, consistent messages – oral and written communications</td>
</tr>
<tr>
<td>Continuous learning</td>
<td>• Seeks out opportunities for professional development that will directly impact county</td>
</tr>
<tr>
<td></td>
<td>programming in a positive or meaningful way</td>
</tr>
<tr>
<td>Customer service</td>
<td>• Exceed customer/clientele expectations in terms of service</td>
</tr>
<tr>
<td></td>
<td>• Seeks to better understand clientele needs via formal and informal research</td>
</tr>
<tr>
<td></td>
<td>• Anticipate future clientele needs</td>
</tr>
<tr>
<td>Efficient management of resources</td>
<td>• Know and understand university policies and procedures</td>
</tr>
<tr>
<td></td>
<td>• Creatively identifies, accesses, and manages resources needed to achieve impacts</td>
</tr>
<tr>
<td></td>
<td>• Develop creative resource management plans for limited resource objectives</td>
</tr>
<tr>
<td>Understands organizations and communities</td>
<td>• Ability to understand and positively utilize relationships between Extension and</td>
</tr>
<tr>
<td></td>
<td>community organizations</td>
</tr>
<tr>
<td></td>
<td>• Understands relationship between OSUE and the geopolitical communities in which OSUE</td>
</tr>
<tr>
<td></td>
<td>operates as well as the myriad of stakeholder groups we partner with or could partner</td>
</tr>
<tr>
<td></td>
<td>with</td>
</tr>
</tbody>
</table>

In general, discussion during Round 1 and specific statements generated during Round 2 provided validation for the content of Draft 2 as well as providing additional data for refining the content that would be used in the next integration step.

**Member Checks and Peer Review**

At the same time that focus groups were being held, the *OSUE Competency Model Draft 2* was sent to Administrative Cabinet and the CPT as a form of member check. Seven (out of 13) Cabinet members provided feedback. Overall, their reactions to
Draft 2 were positive. Six of the seven members who provided comments indicated that the current draft looked good and captured important concepts. The seventh did not indicate concern with the model but had suggestions for improvement including adding an AOE related to *marketing* and asking a question about the relationship between *communicating effectively* and *interpersonal savvy*. Other suggestions from this group included adding language to clearly describe the importance of understanding the land-grant history so that employees would better understand Extension’s mission and could serve as stronger advocates and adding content about *learning about self*.

Ten (out of 17) CPT members responded. All ten responses from CPT members indicated overall support. “I think things look great. You’ve been able to incorporate the information and discussion throughout our two sessions into these documents.” Another member said:

I believe that Draft 2 of the *Trends and Implications* covers the conversations we have had and begins to incorporate the body of information that exists in the literature. I am glad that you have begun to infuse the actions that demonstrate that the competency is present into the Model. I am much more comfortable with where you are now and look forward to Draft 3. I have no recommendations at this point.

CPT members liked seeing their ideas and specific suggestions for language appear in the model. One member said that this draft captured my feelings that “we are never any better than the strength of our relationships.”

There were several supportive comments from CPT members about the key actions that were new in Draft 2. One CPT member said, “I specifically like the key actions and how they help to give specifics on the core competencies and give you an idea of what they ‘look like’.” Two CPT members specifically mentioned support for AOE. One was interested in the concept of layering and other said, “I think identifying
‘Areas of Expertise’ is a good way to handle those competencies that are critical for some job descriptions, but not necessarily core competencies critical for EVERY OSUE employee.” CPT members were looking forward to application of the competency model. At least two mentioned that they were looking forward to how this model could be applied. “I believe this information will assist our organization as we move forward with our restructuring of OSUE.” Finally, other individual suggestions for changes were incorporated into the next data synthesis and integration to create Draft 3.

My peer debriefer also reviewed Trends and Implications Draft 2, the OSUE Competency Model Draft 2, supporting data, and my integration notes. Her overall feedback was that the concepts were sound, she could follow my logic about how I drew conclusions, and the documentation for decisions made about revisions or additions to create Draft 2 was solid. She also provided some suggestions, based on her knowledge of Extension and the competency literature, for how to handle integration decisions to create Draft 3. For example, she supported changing the term working independently to self-direction but not combining this competency with professionalism as suggested by some participants.

Creating OSUE Competency Model Draft 3

As described in Chapter 3, data analysis and integration to create OSUE Competency Model Draft 3 used Draft 2, including supporting data, and drew from (a) focus group data and (b) feedback from Administrative Cabinet, the CPT, and my peer debriefer. The same 14 competencies were carried through to Draft 3 with minor changes to titles and definitions based on the data used in this step. Most of the changes in this
step were edits and additions to key actions. Examples of changes and additions to create Draft 3 are described below.

For continuous learning, the title was retained, the definition was revised to include language about lifelong learning and learning about self, and key actions were added to support the revised definition and focus group feedback. New key actions were:

1. Realistically assesses one’s strengths and weaknesses and their impacts on others.
2. Seeks and accepts feedback and uses other sources of information to improve.
3. Seeks out opportunities for professional development that directly impact Extension work in a positive way.

An example with changes in all three parts of the competency was Draft 2’s efficient management of resources. The title efficient management of resources was changed to resource management to be consistent with other titles, and the definition was revised based on suggestions including addition of the accountability concept. Key actions were revised or added (e.g., to describe accountability, a key action stating “documents and reports results/impact of Extension work” was added).

Before finalizing Draft 3, my peer debriefer reviewed the draft and my data integration notes, validated decisions I had made, and responded to a specific question about two competencies that I was having difficulty refining. One was knowledge of Extension and the other was understanding organizations and communities. She suggested using the National Association of Community Development Extension Professional’s (NACDEP) Foundations of Practice (Ayres et al., 2005) as a resource and additional source for refining concepts related to understanding communities. I used Foundations of Practice as a source for language aligned with participant suggestions to make final revisions to Draft 3. The result of this step was the OSUE Competency Model.
Draft 3. The content of this draft is what appears in the validation survey (see Appendix I).

**Phase III**

*Survey Results and Data Integration to Create Final Draft*

As described in Chapter 3, the *Trends and Implications Draft 2* and *OSUE Competency Model Draft 3* were converted into an on-line questionnaire (Appendix I) with respondents asked to rate the importance of each trend, each competency overall, and each key action on a five-point Likert-type scale (not important; slightly important; moderately important; very important; essential). A comments box provided opportunities to provide feedback on each competency as well as each key action. To assess relative future priority of the competencies in the model, the questionnaire also included a final item asking respondents to select three of the 14 competencies that would be most important over the next three years.

An invitation to complete the survey was sent to a census of 94 employees identified in Phase I as the criterion group of exemplary performers (described in Table 4.2, p. 151). Sixty-seven employees responded for a response rate of 71 percent. Respondents closely mirrored the demographics of the criterion group in terms of gender, race, years of service, job group, and work location (Table 4.2, p. 151).

*Trends*

*Survey results for trends.* The first question asked respondents to rate the importance of each trend in *Trends and Implications Draft 2*. In general, all six trends were highly rated. As illustrated in Table 4.8, 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).

Table 4.8
Level of Importance for Trends Rank Ordered by Percentage Rating as Essential

<table>
<thead>
<tr>
<th>Trend</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased competition and limited resources</td>
<td>0.0</td>
<td>1.5</td>
<td>4.5</td>
<td>46.3</td>
<td>47.8</td>
</tr>
<tr>
<td>Technology and life in the e-world</td>
<td>0.0</td>
<td>3.0</td>
<td>7.5</td>
<td>43.3</td>
<td>46.3</td>
</tr>
<tr>
<td>Changing and complex conditions</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>47.8</td>
<td>44.8</td>
</tr>
<tr>
<td>Changing complex organizational structures</td>
<td>0.0</td>
<td>1.5</td>
<td>10.4</td>
<td>46.3</td>
<td>41.8</td>
</tr>
<tr>
<td>Globalization and increased accessibility to the world’s knowledge base</td>
<td>1.5</td>
<td>6.0</td>
<td>23.9</td>
<td>40.3</td>
<td>28.4</td>
</tr>
<tr>
<td>Changing demographics</td>
<td>0.0</td>
<td>13.4</td>
<td>25.4</td>
<td>40.3</td>
<td>20.9</td>
</tr>
</tbody>
</table>

*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.

*\(n=67\) for each item.

From 61 percent to 91 percent of respondents rated each trend as very important or essential. At least 86 percent (86.6%) of respondents rated each trend as moderately important, very important, or essential.

Respondents provided 15 open-ended comments in three general areas: (a) supportive comments (for trends in general and support for specific trends), (b) suggestions for changes to refine the content, and (c) other comments. Several statements indicated support. One person stated ratings of moderately important were given “to give an indication of my ‘relative’ importance to other issues. I think ALL are fairly on the essential end.” There were also suggestions for changes to clarify or combine concepts. Another said, “I believe each one of these factors are 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.” Other supportive comments were related to specific trends. “Technology is a major factor in dealing with so many of the above issues. If we do not grow with technology, we will not be able to compete in today's market.”

The second group of comments included critiques or suggestions for changes to the content. Several focused on globalization and increased accessibility to the world’s knowledge base including one suggestion to combine globalization with technology and another saying that “the globalization and increased accessibility to the world's knowledge base is odd. I think you mean recognition that we live in a global and knowledge economy.” The comments in the final group were either questions about implementation (“Will use of technology be part of the performance evaluation?”) or statements about the organization related to the trends (“OSU is behind in the technology area….We always seem to be behind other Extension systems.”)

Data integration to create final Trends and Implications. No changes were made to the trends based on importance ratings. All received relatively high ratings that were supported by open-ended comments. However, based on suggestions for changes given in the open-ended comments and support from the literature used in previous steps, some changes were made to Trends and Implications Draft 2. Globalization was removed as a trend and combined with Trend 1, changing and complex conditions, which already included reference to the knowledge economy. Other content from the description of globalization, related to increased accessibility to the world’s knowledge based, was moved to the technology and life in the e-world trend. The result of this step was the final Trends and Implications, which included five trends (one less than the previous version):
(a) changing and complex conditions, (b) increased competition and limited resources, (c) changing complex organizational structures, (d) changing demographics, and (e) technology and life in the e-world. The final version of *Trends and Implications* is shown in Figure 4.1
OSUE Competency Study
Trends & Implications

Trends & Implications

The 21st century is a time of change for organizations; it is a time when more than ever, the success of organizations depends on the knowledge and capabilities of their employees. As OSU Extension develops a model that will define and describe competencies for its employees, the changing environment and issues facing OSU Extension are important topics.

During initial stages of research to develop a competency model, major trends affecting OSU Extension and the implications those trends may have on Extension professionals were identified. These trends and implications were identified in the following ways:

- A review of numerous studies on the current environment for organizations and specifically for Extension organizations
- A review of current context information for OSU Extension including OSU Extension’s strategic plan and supporting data
- Interviews with OSU Extension’s Administrative Cabinet and Competency Project Team
- Survey with exemplary employees representing different job groups in Extension

These trends and their implications served as a foundation for research to develop a competency model for OSU Extension today as well as one that will be relevant in the future. Identifying trends and implications is an important first step in creating a future focused competency model that describes the knowledge, skills, and behaviors that contribute to excellence in Extension work and lead to organizational success.

The Trends

1. Changing and complex conditions

Globalization and changing social, environmental, and economic conditions are affecting OSU Extension, the work of our employees, and 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, cost containment, and quality services. While Extension continues to receive significant support from traditional sources, there is a trend toward increased competitive
OSUE Competency Study
Trends & Implications

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. While predictions are constantly changing, demographic trends for Ohio have implications for Extension as we plan and deliver 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 the changing population in Ohio.
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Trends & Implications

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 way we 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 (e.g., for some Extension professionals this may mean increased specialization and decreased generalization; for others it may mean helping clients make choices about information sources).
The Implications
In a changing environment with issues making OSU Extension’s mission, “Engaging people to strengthen their lives and communities through research-based educational programming,” as critical as ever, there are a number of lessons related to the current trends.

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.

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.

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.

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 we cannot depend on traditional funding sources, this will be important for successful Extension employees.

Become proficient in technology use and application. Extension professionals must understand technology; its current uses in their work; and its current uses for communication, 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
OSUE Competency Study
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to use technology, troubleshoot, and identify the appropriate mix for their work. Learning technology skills will be particularly important for 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.

Effectively manage work and life issues. Technology and organizational changes mean employees need to be prepared to work in a flexible, flatter 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.

Build relationships and collaborate in a diverse environment. Extension professionals need to be process oriented. According to one Competency Project Team member, “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 Competency 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.
**Competencies**

*Survey results for competencies.* As described in Chapter 3, a questionnaire was sent to a census of the exemplary performer criterion group. The purpose of this step was to circulate Draft 3 to a wider group of employees to validate the competencies and key actions, and to identify additional changes that might need made. Respondents were asked to rate the importance of each competency overall and then each of the specific key actions. In general, the competencies and key actions were highly rated, validating each as a competency and the key actions as an important part of the corresponding competency. When asked to rate each of the 14 competencies overall, at least 96 percent of respondents rated each competency as moderately important, very important or essential. At least 82 percent of respondents rated each competency as very important or essential. Overall competency ratings are summarized in Table 4.9.
Table 4.9
Level of Importance for Competencies Rank Ordered by Future Importance

<table>
<thead>
<tr>
<th>Competency</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
<th>future importance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Flexibility and change</td>
<td>0.0</td>
<td>0.0</td>
<td>4.5</td>
<td>31.3</td>
<td>64.2</td>
<td>53.7</td>
</tr>
<tr>
<td>Customer Service</td>
<td>0.0</td>
<td>0.0</td>
<td>1.5</td>
<td>19.4</td>
<td>79.1</td>
<td>44.8</td>
</tr>
<tr>
<td>Communication</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>25.4</td>
<td>74.6</td>
<td>37.3</td>
</tr>
<tr>
<td>Teamwork and leadership</td>
<td>0.0</td>
<td>0.0</td>
<td>1.5</td>
<td>46.3</td>
<td>52.2</td>
<td>31.3</td>
</tr>
<tr>
<td>Technology adoption and application</td>
<td>0.0</td>
<td>0.0</td>
<td>10.4</td>
<td>46.3</td>
<td>43.3</td>
<td>25.4</td>
</tr>
<tr>
<td>Professionalism</td>
<td>0.0</td>
<td>0.0</td>
<td>1.5</td>
<td>14.9</td>
<td>83.6</td>
<td>16.4</td>
</tr>
<tr>
<td>Continuous learning</td>
<td>0.0</td>
<td>0.0</td>
<td>4.5</td>
<td>50.7</td>
<td>44.8</td>
<td>16.4</td>
</tr>
<tr>
<td>Resource management</td>
<td>0.0</td>
<td>0.0</td>
<td>4.5</td>
<td>43.3</td>
<td>52.2</td>
<td>14.9</td>
</tr>
<tr>
<td>Interpersonal relationships</td>
<td>0.0</td>
<td>1.5</td>
<td>3.0</td>
<td>32.8</td>
<td>62.7</td>
<td>13.4</td>
</tr>
<tr>
<td>Thinking and problem solving</td>
<td>0.0</td>
<td>0.0</td>
<td>6.0</td>
<td>41.8</td>
<td>52.2</td>
<td>13.4</td>
</tr>
<tr>
<td>Understanding stakeholders and communities</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>32.8</td>
<td>59.7</td>
<td>11.9</td>
</tr>
<tr>
<td>Self-direction</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>35.8</td>
<td>61.2</td>
<td>9.0</td>
</tr>
<tr>
<td>Knowledge of Extension</td>
<td>0.0</td>
<td>4.5</td>
<td>13.4</td>
<td>43.3</td>
<td>38.8</td>
<td>9.0</td>
</tr>
<tr>
<td>Diversity</td>
<td>0.0</td>
<td>1.5</td>
<td>16.4</td>
<td>44.8</td>
<td>37.3</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Note. n=67 for each item.

aCompetencies are rank ordered by future importance (percent of respondents selecting that competency as one of their top three). For competencies with equal percentages for future importance, rank order was determined by those with higher percentage in essential column for importance.

bRespondents were asked to select three competencies that would be most important for their job in the next three years.

To collect data on relative priority of competencies, given changes happening in the organization, survey respondents were also asked to select three competencies that they thought would be the most important for their job performance during the next three years. The 14 competencies in Table 4.9 are rank ordered based on percentage of respondents selecting the competency as one of their top three. This showed that while all competencies were rated highly as individual competencies, when forced to pick, there
were some competencies (*flexibility and change, customer service, communication*, and *technology adoption and application*) that were judged to be more important than others. However, responses to the final open-ended comment prompt coded as relating directly to future importance suggested that even picking three was difficult. Six comments relating to future importance indicated it was hard to pick only three because most were considered important. One respondent said, “Selecting three is difficult when they are all important at various times; but, being able to communicate effectively and being flexible work hand-in-hand with teamwork and leadership. I highly value all 3.” Another said, “Picking three was hard as you cannot accomplish a goal without all of these competencies working together.”

Individual key actions were also all highly rated. For key actions across all 14 competencies at least 97 percent of respondents rated each key action as moderately important, very important, or essential. At least 69 percent of respondents rated each key action as very important or essential. Importance ratings for key actions are summarized by competency in Table 4.10 through Table 4.21 (presented in descending order by percent rating that key action as essential).
Table 4.10
Level of Importance for Each Key Action Describing *Communication*

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrates effective listening skills; listens to others, interprets message, checks for understanding.</td>
<td>0.0</td>
<td>0.0</td>
<td>1.5</td>
<td>32.8</td>
<td>65.7</td>
</tr>
<tr>
<td>Creates clear and concise written communication.</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>40.3</td>
<td>59.7</td>
</tr>
<tr>
<td>Delivers clear messages when speaking.</td>
<td>0.0</td>
<td>0.0</td>
<td>1.5</td>
<td>44.8</td>
<td>53.7</td>
</tr>
<tr>
<td>Selects communication tools and methods based on needs of recipients.</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>44.8</td>
<td>47.8</td>
</tr>
</tbody>
</table>

*Note. n=67 for each item. Percentages may not sum to 100 due to rounding.*

Table 4.11
Level of Importance for Each Key Action Describing *Continuous Learning*

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeks and accepts feedback and uses other sources of information to improve.</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>56.7</td>
<td>40.3</td>
</tr>
<tr>
<td>Seeks out opportunities for professional development that directly impact Extension work in a positive way.</td>
<td>0.0</td>
<td>0.0</td>
<td>11.9</td>
<td>47.8</td>
<td>40.3</td>
</tr>
<tr>
<td>Applies new knowledge or skills to practical use on the job; furthers learning through trial and error.</td>
<td>0.0</td>
<td>0.0</td>
<td>10.4</td>
<td>50.7</td>
<td>38.8</td>
</tr>
<tr>
<td>Actively identifies new areas for learning and sets goals.</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>67.2</td>
<td>25.4</td>
</tr>
<tr>
<td>Seeks and effectively uses performance feedback from others.</td>
<td>0.0</td>
<td>0.0</td>
<td>16.4</td>
<td>59.7</td>
<td>23.9</td>
</tr>
</tbody>
</table>

*Note. n=67 for each item. Percentages may not sum to 100 due to rounding.*
Table 4.12
Level of Importance for Each Key Action Describing Customer Service

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivers friendly and courteous service.</td>
<td>0.0</td>
<td>0.0</td>
<td>1.5</td>
<td>17.9</td>
<td>80.6</td>
</tr>
<tr>
<td>Provides a response that is timely and meets clientele needs.</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>19.4</td>
<td>80.6</td>
</tr>
<tr>
<td>Listens and responds to clientele needs.</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>23.9</td>
<td>76.1</td>
</tr>
<tr>
<td>Looks for and makes continuous improvements.</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>43.3</td>
<td>53.7</td>
</tr>
<tr>
<td>Goes the extra mile to exceed clientele expectations.</td>
<td>0.0</td>
<td>0.0</td>
<td>10.4</td>
<td>38.8</td>
<td>50.7</td>
</tr>
<tr>
<td>Demonstrates concern for satisfying one’s own internal and/or external clientele.</td>
<td>0.0</td>
<td>0.0</td>
<td>9.0</td>
<td>41.8</td>
<td>49.3</td>
</tr>
<tr>
<td>Seeks to better understand clientele needs via formal and informal research and anticipates future clientele needs based on trends.</td>
<td>0.0</td>
<td>1.5</td>
<td>13.4</td>
<td>59.7</td>
<td>25.4</td>
</tr>
</tbody>
</table>

Note. n=67 for each item. Percentages may not sum to 100 due to rounding.

Table 4.13
Level of Importance for Each Key Action Describing Diversity

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conveys respect for different perspectives.</td>
<td>0.0</td>
<td>0.0</td>
<td>4.5</td>
<td>41.8</td>
<td>53.7</td>
</tr>
<tr>
<td>Modifies behavior to help others feel welcome and accepted.</td>
<td>0.0</td>
<td>1.5</td>
<td>14.9</td>
<td>38.8</td>
<td>44.8</td>
</tr>
<tr>
<td>Recognizes lack of knowledge and seeks information and/or support when needed.</td>
<td>0.0</td>
<td>0.0</td>
<td>16.4</td>
<td>47.8</td>
<td>35.8</td>
</tr>
<tr>
<td>Champions diversity; takes action to increase diversity; confronts inappropriate behavior; suggests new approaches.</td>
<td>0.0</td>
<td>1.5</td>
<td>19.4</td>
<td>43.3</td>
<td>35.8</td>
</tr>
<tr>
<td>Identifies, understands, and appreciates needs of a diverse workforce and clientele.</td>
<td>0.0</td>
<td>0.0</td>
<td>20.9</td>
<td>47.8</td>
<td>31.3</td>
</tr>
<tr>
<td>Expands own awareness; learns about issues of diversity and multiculturalism as they relate to one’s role and the organization.</td>
<td>0.0</td>
<td>0.0</td>
<td>26.9</td>
<td>50.7</td>
<td>22.4</td>
</tr>
</tbody>
</table>

Note. n=67 for each item.
Table 4.14
Level of Importance for Each Key Action Describing *Flexibility and Change*

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remains open to different ideas and approaches.</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>40.3</td>
<td>56.7</td>
</tr>
<tr>
<td>Approaches changes positively.</td>
<td>0.0</td>
<td>1.5</td>
<td>6.0</td>
<td>38.8</td>
<td>53.7</td>
</tr>
<tr>
<td>Adjusts behavior.</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>40.3</td>
<td>52.2</td>
</tr>
<tr>
<td>Adapts to handle unexpected implementation challenges.</td>
<td>1.5</td>
<td>0.0</td>
<td>6.0</td>
<td>43.3</td>
<td>49.3</td>
</tr>
<tr>
<td>Recognizes the need for change and proposes solutions.</td>
<td>0.0</td>
<td>1.5</td>
<td>9.0</td>
<td>47.8</td>
<td>41.8</td>
</tr>
<tr>
<td>Seeks to understand changes.</td>
<td>0.0</td>
<td>3.0</td>
<td>7.5</td>
<td>52.2</td>
<td>37.3</td>
</tr>
</tbody>
</table>

*Note. n=67 for each item. Percentages may not sum to 100 due to rounding.*

Table 4.15
Level of Importance for Each Key Action Describing *Interpersonal Relationships*

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintains confidentiality.</td>
<td>0.0</td>
<td>1.5</td>
<td>3.0</td>
<td>17.9</td>
<td>77.6</td>
</tr>
<tr>
<td>Networks with others.</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>43.3</td>
<td>53.7</td>
</tr>
<tr>
<td>Understands the importance partnerships play in the success of Extension work.</td>
<td>0.0</td>
<td>0.0</td>
<td>6.0</td>
<td>49.3</td>
<td>44.8</td>
</tr>
<tr>
<td>Develops partnering relationships to support Extension work.</td>
<td>0.0</td>
<td>1.5</td>
<td>7.5</td>
<td>46.3</td>
<td>44.8</td>
</tr>
<tr>
<td>Assesses interpersonal situations and adapts accordingly.</td>
<td>0.0</td>
<td>1.5</td>
<td>9.0</td>
<td>44.8</td>
<td>44.8</td>
</tr>
<tr>
<td>Diffuses high-tension situations.</td>
<td>0.0</td>
<td>3.0</td>
<td>14.9</td>
<td>44.8</td>
<td>37.3</td>
</tr>
</tbody>
</table>

*Note. n=67 for each item. Percentages may not sum to 100 due to rounding.*
Table 4.16
Level of Importance for Each Key Action Describing Knowledge of Extension

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describes the importance of local, state, and national funding partners to stakeholders.</td>
<td>0.0</td>
<td>0.0</td>
<td>17.9</td>
<td>34.3</td>
<td>47.8</td>
</tr>
<tr>
<td>Knows current programs and priorities and informs clientele of programs and resources available.</td>
<td>1.5</td>
<td>0.0</td>
<td>3.0</td>
<td>49.3</td>
<td>46.3</td>
</tr>
<tr>
<td>Uses knowledge of Extension to leverage the system to meet internal and external clientele needs.</td>
<td>1.5</td>
<td>3.0</td>
<td>10.4</td>
<td>41.8</td>
<td>43.3</td>
</tr>
<tr>
<td>Acts or makes decisions with an understanding of current structure and function for OSU Extension and one’s role in the organization.</td>
<td>0.0</td>
<td>3.0</td>
<td>11.9</td>
<td>52.2</td>
<td>32.8</td>
</tr>
<tr>
<td>Articulates the land-grant mission and OSU Extension’s role in that mission.</td>
<td>0.0</td>
<td>3.0</td>
<td>26.9</td>
<td>40.3</td>
<td>29.9</td>
</tr>
</tbody>
</table>

*Note. n=67 for each item. Percentages may not sum to 100 due to rounding.*
Table 4.17
Level of Importance for Each Key Action Describing Professionalism

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is dependable; does what one says one will do.</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>9.0</td>
<td>88.1</td>
</tr>
<tr>
<td>Demonstrates ethical behavior.</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>17.9</td>
<td>82.1</td>
</tr>
<tr>
<td>Demonstrates courtesy with colleagues and clientele.</td>
<td>0.0</td>
<td>0.0</td>
<td>4.5</td>
<td>19.4</td>
<td>76.1</td>
</tr>
<tr>
<td>Demonstrates a strong work ethic; is willing to go the extra mile.</td>
<td>0.0</td>
<td>0.0</td>
<td>4.5</td>
<td>35.8</td>
<td>59.7</td>
</tr>
<tr>
<td>Effectively manages multiple priorities.</td>
<td>0.0</td>
<td>1.5</td>
<td>1.5</td>
<td>40.3</td>
<td>56.7</td>
</tr>
<tr>
<td>Demonstrates belief and commitment in the mission, vision, and goals of OSU Extension by acting in ways that promote organizational goals or needs.</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>43.3</td>
<td>49.3</td>
</tr>
<tr>
<td>Maintains a conscious balance between work and personal life so one doesn’t dominate the other – attends to both and gets what one wants from both.</td>
<td>0.0</td>
<td>0.0</td>
<td>9.0</td>
<td>44.8</td>
<td>46.3</td>
</tr>
</tbody>
</table>

Note. n=67 for each item. Percentages may not sum to 100 due to rounding.

Table 4.18
Level of Importance for Each Key Action Describing Resource Management

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documents and reports results and/or impact of Extension work.</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>35.8</td>
<td>56.7</td>
</tr>
<tr>
<td>Identifies and manages resources to achieve maximum impact.</td>
<td>0.0</td>
<td>0.0</td>
<td>6.0</td>
<td>49.3</td>
<td>44.8</td>
</tr>
<tr>
<td>Leverages fiscal and human resources available.</td>
<td>0.0</td>
<td>0.0</td>
<td>4.5</td>
<td>50.7</td>
<td>44.8</td>
</tr>
<tr>
<td>Understands and applies University policies and procedures appropriate for one’s work.</td>
<td>0.0</td>
<td>1.5</td>
<td>6.0</td>
<td>56.7</td>
<td>35.8</td>
</tr>
<tr>
<td>Links programmatic or organizational needs to specific solutions.</td>
<td>0.0</td>
<td>1.5</td>
<td>10.4</td>
<td>53.7</td>
<td>34.3</td>
</tr>
</tbody>
</table>

Note. n=67 for each item. Percentages may not sum to 100 due to rounding.
<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performs effectively with minimal direction, support, or approval and</td>
<td>1.5</td>
<td>0.0</td>
<td>1.5</td>
<td>26.9</td>
<td>70.1</td>
</tr>
<tr>
<td>without direct supervision.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeks out and utilizes appropriate support for one’s work.</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>41.8</td>
<td>55.2</td>
</tr>
<tr>
<td>Identifies what needs to be done and takes action before being asked.</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>40.3</td>
<td>52.2</td>
</tr>
<tr>
<td>Takes initiative to get involved with teams, committees, and professional</td>
<td>0.0</td>
<td>1.5</td>
<td>10.4</td>
<td>44.8</td>
<td>43.3</td>
</tr>
<tr>
<td>associations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Challenges existing work unit or organizational policies, procedures,</td>
<td>0.0</td>
<td>3.0</td>
<td>13.4</td>
<td>52.2</td>
<td>31.3</td>
</tr>
<tr>
<td>or plans when such action is in the best interest of organizational success.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. n=67 for each item. Percentages may not sum to 100 due to rounding.*
### Table 4.20
Level of Importance for Each Key Action Describing *Teamwork and Leadership*

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develops constructive and cooperative working relationships with others.</td>
<td>0.0</td>
<td>0.0</td>
<td>1.5</td>
<td>32.8</td>
<td>65.7</td>
</tr>
<tr>
<td>Delivers individual contributions and carries a fair share of the workload.</td>
<td>0.0</td>
<td>0.0</td>
<td>1.5</td>
<td>35.8</td>
<td>62.7</td>
</tr>
<tr>
<td>Is focused on success of the team over personal recognition; shares or gives credit to others.</td>
<td>0.0</td>
<td>1.5</td>
<td>3.0</td>
<td>38.8</td>
<td>56.7</td>
</tr>
<tr>
<td>Brings out the best in those around them by inspiring, motivating, and guiding others toward a goal.</td>
<td>1.5</td>
<td>1.5</td>
<td>4.5</td>
<td>41.8</td>
<td>50.7</td>
</tr>
<tr>
<td>Identifies and draws upon team members’ strengths to achieve common goals.</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>52.2</td>
<td>44.8</td>
</tr>
<tr>
<td>Uses interpersonal skills and Area(s) of Expertise to develop and coach others.</td>
<td>1.5</td>
<td>0.0</td>
<td>10.4</td>
<td>46.3</td>
<td>41.8</td>
</tr>
<tr>
<td>Assumes a leadership role when necessary.</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>52.2</td>
<td>40.3</td>
</tr>
</tbody>
</table>

*Note. n=67 for each item.*

### Table 4.21
Level of Importance for Each Key Action Describing *Technology Adoption and Application*

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learns new ways of using technology to improve quality or efficiency of work.</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>46.3</td>
<td>46.3</td>
</tr>
<tr>
<td>Understands and effectively uses information technology tools needed for Extension work.</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>52.2</td>
<td>40.3</td>
</tr>
<tr>
<td>Selects and applies appropriate technology to one’s work.</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>58.2</td>
<td>38.8</td>
</tr>
<tr>
<td>Identifies and solves routine problems involving the use of technology.</td>
<td>1.5</td>
<td>1.5</td>
<td>28.4</td>
<td>38.8</td>
<td>29.9</td>
</tr>
<tr>
<td>Models technology adoption.</td>
<td>0.0</td>
<td>1.5</td>
<td>17.9</td>
<td>58.2</td>
<td>22.4</td>
</tr>
</tbody>
</table>

*Note. n=67 for each item. Percentages may not sum to 100 due to rounding.*
### Table 4.22
**Level of Importance for Each Key Action Describing Thinking and Problem Solving**

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proactively identifies areas of improvement, anticipates what is needed, and solves problems before they become a crisis.</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>40.3</td>
<td>56.7</td>
</tr>
<tr>
<td>Listens; seeks to understand proposed solutions.</td>
<td>0.0</td>
<td>0.0</td>
<td>7.5</td>
<td>44.8</td>
<td>47.8</td>
</tr>
<tr>
<td>Continuously gathers, evaluates, and uses diverse, relevant sources of information to create opportunities and solve problems.</td>
<td>0.0</td>
<td>0.0</td>
<td>11.9</td>
<td>41.8</td>
<td>46.3</td>
</tr>
<tr>
<td>Analyzes needs and proposes solutions.</td>
<td>0.0</td>
<td>0.0</td>
<td>6.0</td>
<td>47.8</td>
<td>46.3</td>
</tr>
</tbody>
</table>

*Note. n=67 for each item. Percentages may not sum to 100 due to rounding.*

### Table 4.23
**Level of Importance for Each Key Action Describing Understanding Stakeholders**

<table>
<thead>
<tr>
<th>Key Action</th>
<th>not important</th>
<th>slightly important</th>
<th>moderately important</th>
<th>very important</th>
<th>essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses knowledge of stakeholders and communities to identify issues, build and nurture relationships, and support Extension programming.</td>
<td>0.0</td>
<td>0.0</td>
<td>9.0</td>
<td>35.8</td>
<td>55.2</td>
</tr>
<tr>
<td>Demonstrates an understanding of the relationships between OSU Extension and communities in which OSU Extension operates as well as the variety of stakeholder groups we partner or could partner with.</td>
<td>0.0</td>
<td>0.0</td>
<td>10.4</td>
<td>41.8</td>
<td>47.8</td>
</tr>
<tr>
<td>Understands and appreciates the complex dynamics of organizations and communities.</td>
<td>0.0</td>
<td>1.5</td>
<td>14.9</td>
<td>37.3</td>
<td>46.3</td>
</tr>
</tbody>
</table>

*Note. n=67 for each item.*
Open-ended comments were analyzed next. A total of 716 open-ended comments were collected for competencies overall (193 comments) and for individual key actions (523 comments). All comments were coded into three major themes: (a) comments indicating support for a competency or key action, (b) comments suggesting changes, and (c) other comments. Other comments included questions to the researcher and critiques or suggestions to the organization not specifically related to the study and therefore they are not be discussed here. Supportive comments confirmed the ratings reported above and added to the validity of the competencies and key actions. Representative examples of supportive comments for one competency (customer service) and two associated key actions are reported in Table 4.24.

<table>
<thead>
<tr>
<th>Focus of comment</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency overall</td>
<td>• Our clientele is the future of our organization. If we don't take care of them, then we won't have anything to build our organization on. &lt;br&gt;• Our customers are everything! &lt;br&gt;• Our motto should be “We're not happy until our clientele are happy.” Accept any negative feedback as help in identifying areas for needed change and improvement; help in making Extension a premier organization. &lt;br&gt;• Responding to clientele will be key in order to maintain funding—in a positive manner especially. Internal clientele important as well although I don't know that we always view each other in that manner—as customers. &lt;br&gt;• See Scott Peters (Cornell) Catalyzing Change. He demonstrates that &quot;anybody&quot; can disseminate information or data. It's &quot;relationship&quot; w/ our clientele that is CRITICAL.</td>
</tr>
<tr>
<td>Key action: Demonstrates concern for satisfying one’s own internal and/or external clientele.</td>
<td>• Identifying a target clientele is essential. I've seen programs created without a target audience in mind. &lt;br&gt;• If your customer is not happy they won't give you a second chance. &lt;br&gt;• Not everyone realizes the importance of internal clientele. &lt;br&gt;• People are our business—we have to meet their needs.</td>
</tr>
<tr>
<td>Key action: Provides a response that is timely and meets clientele needs.</td>
<td>• If we don't respond quickly, there are many other places where folks can go for answers. &lt;br&gt;• People live at the speed of Google. We have to respond quickly...even back home in Jackson, Vinton, and Scioto County. &lt;br&gt;• People want questions answered immediately. &lt;br&gt;• Quickly responding to clientele's needs is needed, whether one-to-one or through use of technology such as a widget.</td>
</tr>
</tbody>
</table>
Comments suggesting changes were the focus of analysis for use in data integration. For competencies overall, these comments generally were suggestions for changes to wording or requests to clarify language. For specific key actions, these same types of suggestions were made as well as some to add, remove, or combine key actions. Table 4.25 provides representative examples of comments coded as “change” for the overall competency of communication, and for one key action related to flexibility and change, and one key action related to self-direction.

Table 4.25
Representative Examples of Open-ended Comments Coded as Suggestions for Changes and Action Taken for Data Integration

<table>
<thead>
<tr>
<th>Competency and Focus of Comment</th>
<th>Suggestion</th>
<th>Action Taken</th>
</tr>
</thead>
</table>
| Communication: Overall         | • Does effective non-verbal communication merit its own key action?  
                                 | • Where does non-verbal communication factor in here?             | Added “uses nonverbal communication that is congruent with the intended message” |
| Flexibility and change Key action: Adapts to handle unexpected implementation challenges. | • Delete "handle" for clarity.  
                                 | • I'm not as clear on this one maybe take out "implementation."  
                                 | • I'm not sure I know what this means or could apply it easily.  
                                 | • Please clarify this key action. | Made edits to this action in an effort to address many of the comments here. Differentiated between previous key action and this key action, which is about unexpected challenges like someone not showing up, etc. |
| Self-direction Key action: Challenges existing work unit or organizational policies, procedures, or plans when such action is in the best interest of organizational success. | • “Challenges” could be changed to “questions” and then it wouldn't sound confrontational.  
                                 | • Maybe reword to be less “challenges” and more “offers”.  
                                 | • This action concerns me the way it is written. | Rewritten using language from Cripe and Mansfield’s (2001) competency dictionary that seems like it will address three concerns here while maintaining the initial intent about speaking up. |

Responses to a final open-ended prompt asking if there were any other final comments or suggestions about the competency model were reviewed and coded into three major themes: (a) future importance; (b) support, and (c) other. Future importance
comments were described above when discussing Table 4.9. Most of the comments in this final question \( n = 20 \) indicated overall support of the model or the process.

Representative examples of overall supportive comments include:

“I'm very pleased with the drafts so far and excited to see so much input from our discussions.”

“Excellent model. Contains all of the competencies that are critically important for our Extension work success.”

“The results of this study will be valuable for Extension going forward. Thanks for the opportunity to participate.”

“I appreciate having the opportunity to participate in your research, Graham.”

Other supportive comments indicated that respondents’ participation in the process helped in understanding the use of competencies. “Excellent work to date. I was worried about a competency based system. I can say I now really appreciate it.” Participation helped with professional development. One respondent noted: “Working through the survey has provided some additional thoughts and ideas for me on how I will adapt to the changes as we move to the new OSU Extension model.” Finally, one respondent encouraged immediate application saying: “Pick one competency and start implementing this yesterday.”

A few comments were categorized as other. They included a suggestion for a different rating label on the rating scale, and one participant shared thoughts that employees in the program support job group might not be valued or supported in terms of professional development. This respondent suggested that the organization should consider more options for program support staff and their professional development needs, stating: “if we could begin to offer some on-line courses and help these employees [program support employees] advance it would benefit the organization as a whole.”

200
Data integration to create final draft. After examining the survey data, including importance ratings and open-ended comments, the following criteria were established to identify individual competencies and key actions perceived as important by the survey respondents. For competencies and key actions to be validated as important and retained in the final model each item must be rated by at least 50 percent of respondents as very important or essential, with a concurrent requirement that each item be rated by at least 90 percent of respondents as moderately important, very important, or essential. In setting these criteria, I drew from the literature and my judgment as a researcher.

I reasoned that there should be little doubt as to the importance of the item for it to be included in the final model. I further reasoned that requiring at least 50 percent of respondents to rate the item as very important or essential would indicate importance. Also, I reasoned that an item which 10 percent or more of the respondents rated as not important or slightly important would suggest doubt as to the importance of the item, thus the concurrent requirement of at least 90 percent rating an item as moderately important, very important or essential. These criteria align with or require higher levels of support as compared to criteria used by other competency researchers (Bernthal et al., 2004; Dubois & Rothwell, 2000; Lucia & Lepsinger, 1999). Competency studies using a similar 5-point scale have used importance ratings of at least 90 percent in the top three categories as a decision rule (Dubois & Rothwell, 2000) or an average response in the middle of the 5-point rating scale (Bernthal et al., 2004; Dubois & Rothwell, 2000) as a cut-off for inclusion as a valid competency.

Based on the criteria described above, importance ratings for competencies (Table 4.9) and individual ratings for key actions (Table 4.10 through Table 4.23) validated the
importance of each, therefore none was dropped as a result of these ratings. Items meeting the criteria were generally supported in the literature and received few, if any, negative comments from survey respondents. As a result, items were only eliminated from the OSUE Competency Model Draft 3 if they were redundant (based on analysis of open-ended comments that is described below).

Open-ended comments described above were analyzed with a focus on comments coded as support and change. Changes suggested or concerns mentioned were considered when creating the OSUE Competency Model Final Draft. The revisions made addressed problems with clarity, duplication, or other concerns. In making decisions about revisions, attention was given to whether changes were mentioned by multiple respondents and to my judgment as a researcher about alignment, that is, alignment with prior data collected and existing competency research, and whether suggested changes would alter the nature of the model. This integration phase also included having my peer debriefer review the survey data, my integration notes, and the revisions I proposed. Feedback from my peer debriefer indicated that the ratings were strong in all regards and the survey “did a nice job of clarifying concepts….helping logical changes fall into place. For example, moving professional associations to professionalism.” Her feedback was also supportive of looking at other competency lists, which helped ground the model being developed in this study. No changes were made as a result of feedback from my peer debriefer. The result of this data integration phase was the OSUE Competency Model Final Draft that was used in Phase IV.
Phase IV

Administrative Cabinet and CPT Group Interviews

As described in Chapter 3, the *OSUE Competency Model Final Draft* was reviewed by Administrative Cabinet and the CPT as a final cross-check. Both groups participated in interviews where they responded to questions about final reactions and gave suggestions they might have, with a focus on making sure the language was clear and that the model would be an effective communication tool. Comments from Administrative Cabinet and CPT members were coded into four major themes: (a) support, (b) suggestions for changes, (c) questions, or (d) other. Data coded as “questions” were related to questions and discussion about application of competency models to HR management or other questions that did not have direct application to the current research. Data coded as “other” were lines of discussions not directly applicable to validating or changing the model. For example, one participant expressed disagreement with the operational definition of core competency being used in the research. This concern was not addressed because members had been asked to provide opinions based on the operational definitions identified early in the research and shared throughout the process with them. The focus for analysis was on data coded as “support” and “suggestions for changes.”

One member liked the conceptual grouping used in the introductory section of this version. “I appreciate you doing these [conceptually grouping competencies] like you did down here. I think that really helps. It helps with some of the definitions.” Another member made a comment about the competencies supporting the strategic direction. “I think it all points and helps get us going down the strategic plan path. I can’t see much
that would be anything that really looks missing.” After the group interview, one
participant sent a follow up comment to express support of the model.

I hope today’s WebEx [web-based platform for virtual meetings], even with its
lack of verbal comments and feedback, (we need head nodding and shaking icons)
was a confirmation of … a comprehensive model that needed very few finishing
touches. From my perspective, the final draft, after survey input, accurately
reflected changes the team may have suggested in language or clarity.

Data coded as “suggestions for changes” included minor editorial suggestions and
discussion in three areas: (a) resource management, (b) knowledge of Extension, and (c)
teaching. For resource management there was discussion about “emphasizing the activity
of doing it, the importance of documenting.” A related comment suggested that the key
action about documenting impact was not clearly described in the definition. The group
also discussed the relationship between documenting impact and several other
competencies. Finally, one group discussed teaching and whether it should be more
evident in the model or not. There were divergent opinions about this area, with some
members saying teaching should specifically be mentioned in several competencies while
others saw teaching embedded in a number of the competencies and did not like the
concept of adding language about teaching because we “have some employees who are
not involved directly in teaching.”

Creating the Final OSUE Competency Model

Using data collected from Administrative Cabinet and CPT group interviews, a
few minor changes were made to the model. Again in this integration step, attention was
paid to changes that could be made while maintaining alignment with prior data collected
and existing competency research. Examples of revisions made include:

1. Added “national Extension system” to definition of understanding Extension.
2. Added “is responsible for appropriate documentation of work activity and results or impacts” to definition of resource management.

3. Added to last key action in resource management language to reflect actively documenting and illustrations of what documenting might include.

The result of this data integration phase was the major finding of this research, the final OSUE Competency Model. This model includes 14 core competencies, each with three to eight key actions illustrating the competency. The final OSUE Competency Model is presented in Figure 4.2.
OSU Extension Competency Model

With the trends and implications identified as current drivers for Extension work as a foundation (See Trends & Implications), this draft of the OSU Extension Competency Model was developed using a variety of internal and external sources.

The focus was on developing a competency model that included core competencies, a competency definition, and key actions for each competency. Some definitions are helpful before reviewing the draft competency model.

**Competency**
A competency is “a collection of related knowledge, skills, abilities, and other personal characteristics (KSAOs) working in concert to produce outstanding performance” (Weatherly, 2005a, p. 1). More specifically, a competency affects a major part of jobs within the organization, correlates with performance on the job, and can be measured behaviorally (Parry, 1998; Tabet, 2003; Weatherly, 2005a).

**Core competencies**
In this study, core competencies will be used to describe a broad set of competencies relevant across job groups. Core competencies will be “the basic knowledge, attitudes, skills, and observable behaviors that lead to excellence in the workplace” (Liles & Mustian, 2004, p. 432).

**Competency model**
A narrative description of the critical competencies required for fully successful or exemplary performance in a job, role, or an organization. Competency models should be high leverage, that is, they include only the most important competencies that really have an impact on excellent performance. Each competency in OSU Extension’s model includes the following:

- **Competency title and definition** - A term and associated description of the knowledge, skills, abilities, and observable behaviors that represent the term identified.

- **Key actions** - Statements and general descriptions of behaviors that illustrate a competency. They personalize the competency or help bring to life what OSU Extension professionals do. The set of key actions should illustrate the different aspects of the competency identified. To best fit the broad application of the core competencies, they should be informative but general, not specific, and they should cut across job groups as much as possible.

Eventually, the OSU Extension Competency Model will include multiple layers. One layer will be the core competencies, their definitions, and key actions (which is what is in this document). Another layer developed later will be areas of expertise (AOEs); they are described here to distinguish between what is meant by core competencies (described in this model) and AOE (defined below and to be developed later). Other potential layers may be specific to job groups or may be developed for purposes like self-assessment, professional development planning, or performance management.

**Figure 4.2**
Final OSU Extension Competency Model Constructed in Phase IV

Page 1 of 8
**Figure 4.2 continued**

**Areas of Expertise**
Areas of expertise (AOEs) are the specific subject matter, technical, or professional knowledge and skills required for successful Extension work in individual jobs or job groups. They are above and beyond the core competencies. In order to be successful in a given job, Extension professionals must have a foundation of the appropriate core competencies and a blend of unique AOE. While some Extension work is highly specialized, most requires expertise in several AOE.

The AOE will be developed later through ongoing work with Extension Administration, program areas, and professionals.

*Based on initial research, the AOE would likely include some of the following:
- Extension teaching
- Information technology
- Management and supervision
- Marketing
- Program planning, development, and evaluation
- Research
- Subject matter expertise
- Volunteer management

*This list is for explanatory purposes and is not intended to be all-inclusive. A final list and descriptions will be developed through future research.

**OSU Extension Core Competencies**
Initial research identified the following set of 14 competencies, presented in alphabetical order.

<table>
<thead>
<tr>
<th>People (interpersonal)</th>
<th>The Business of Extension</th>
<th>Self (personal competencies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>Customer service</td>
<td>Continuous learning</td>
</tr>
<tr>
<td>Diversity</td>
<td>Knowledge of Extension</td>
<td>Flexibility and change</td>
</tr>
<tr>
<td>Interpersonal relations</td>
<td>Resource management</td>
<td>Professionalism</td>
</tr>
<tr>
<td>Teamwork and leadership</td>
<td>Technology adoption and application</td>
<td>Self-direction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Understanding stakeholders and communities</td>
</tr>
</tbody>
</table>

The 14 competencies can also be grouped conceptually into three clusters to facilitate understanding. Grouped conceptually, there are competencies dealing with...
Communication
Communicates effectively with others using the range of methods and tools available in today’s environment; in both individual and group settings; and with co-workers, clientele, and other stakeholders.

Key actions
- Delivers clear messages when speaking; uses nonverbal communication that is congruent with the intended message.
- Creates clear and concise written communication.
- Demonstrates effective listening skills, listens to others, interprets message, checks for understanding.
- Selects communication tools and methods based on the needs of recipients.

Continuous learning
Demonstrates self-awareness and lifelong learning; learns about self; continually improves skills and capabilities; is willing to learn new things; actively identifies new areas for growth; takes the time to learn and apply newly gained knowledge and skills on the job.

Key actions
- Seeks and effectively uses performance feedback from others.
- Develops self-awareness by realistically assessing one’s strengths and weaknesses and their impacts on others relative to the requirements of current work assignment.
- Actively identifies new areas for learning and sets goals.
- Seeks out and actively participates in opportunities for professional development that directly impact Extension work.
- Applies new knowledge and skills to practical use on the job; furthers learning through experience in practicing new approaches and behaviors.

Customer service
Works constantly to provide superior services for clientele, making each interaction a positive one. Understands who clientele are (internal and/or external) and delivers quality service through a customer-focused mindset that acknowledges the importance and value of the person being served; acts accordingly; dedicated to meeting expectations and needs of customers; uses customer feedback to improve.

Key actions
- Listens and provides a response that is timely and meets clientele needs.
- Seeks to better understand clientele needs via formal and informal research and anticipates future clientele needs based on trends.
- Delivers friendly and courteous service.
- Goes the extra mile to exceed clientele expectations.
- Looks for and makes continuous improvements.
Figure 4.2 continued

Diversity
Recognizes, understands, and appreciates differences and the impact these differences may have in the workplace, in interactions with clientele, or in Extension programming; works effectively with individuals having diverse styles, abilities, motivations, and backgrounds; has the commitment and ability to include one’s own as well as others’ different cultural perceptions, assumptions, norms, beliefs, and values.

Key actions
- Conveys respect for different perspectives (e.g., cultural, religious, socioeconomic, educational, gender, sexual orientation, and other differences).
- Identifies, understands, and appreciates needs of a diverse workforce and clientele.
- Recognizes one’s lack of knowledge about differences (e.g., social norms, decision-making approaches, and preferences) and seeks information and/or support when needed.
- Expands own awareness; learns about issues of diversity and multiculturalism as they relate to one’s role and the organization.
- Modifies behavior to help make others feel welcome and accepted.
- Champions diversity; takes action to increase diversity; addresses inappropriate behavior; suggests new approaches.

Flexibility and change
Demonstrates agility and adaptability, maintaining effectiveness when experiencing changes in the work environment or conditions affecting OSU Extension (e.g., social, economic, or political); has an openness to new and different ways of doing things; accepts change and is willing to deal with ambiguity; adjusts to new work structures, programs, or processes; recognizes need to change and is willing to take risks.

Key actions
- Seeks to understand changes in work tasks, situations, and environment as well as the reason for such change; seeks information and withholds judgment.
- Approaches changes positively; treats changes as opportunities for growth; focuses on the beneficial aspects; speaks positively and advocates for change when it promotes organizational goals.
- Remains open to different ideas and approaches; is able to see the merits of other ideas; has an open mind; readily tries new approaches.
- Adjusts behavior to deal effectively with changes in the work environment; quickly modifies behavior to fit the circumstances when situations change; acquires new knowledge or skills if needed; does not persist with ineffective behavior.
- Adapts to handle unexpected challenges to completing task or projects; works to overcome barriers and deal constructively with unexpected challenging situations.
Figure 4.2 continued

**Interpersonal relationships**
Successfully interacts with diverse individuals and groups, creating partnerships, networks, and dynamic human systems; relates well with people. Builds trust by interacting with others in a way that gives them confidence in one’s intentions and in OSU Extension. Develops and uses a network of collaborative relationships with internal and external contacts to leverage efforts and accomplish results. Manages conflict constructively.

*Key actions*
- Understands the importance that relationships and partnerships (both internally and externally) play in the success of Extension work.
- Builds and maintains effective relationships with others.
- Maintains confidentiality; keeps private or sensitive information about others confidential.
- Assesses interpersonal situations; uses empathy to read others (e.g., understanding, being aware of, and sensitive to a client’s or co-worker’s situation); acts accordingly.
- Engages in effective conflict resolution with sensitivity to others’ feelings; diffuses tense situations appropriately.
- Develops partnerships and collaborations to support Extension work.

**Knowledge of Extension**
Understands the history and philosophy of the land-grant mission and OSU Extension’s role, situated in the College of Food, Agricultural, and Environmental Sciences; The Ohio State University; and the national Extension System. Has a basic knowledge of current organizational structure, function, and funding as well as formal and informal culture; puts knowledge into practice.

*Key actions*
- Articulates the land-grant mission and OSU Extension’s role in that mission.
- Acts or makes decisions with an understanding of current structure and function for OSU Extension and one’s role in the organization.
- Knows current programs and priorities and informs clientele of programs and resources available.
- Describes the importance of local, state, and national funding partners to stakeholders.
- Uses knowledge of Extension to meet internal and external clientele needs.
**Figure 4.2 continued**

<table>
<thead>
<tr>
<th>Professionalism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrates behaviors that reflect high levels of performance and a strong work ethic; has a focus on results, ethical decisions, and balance. Professionalism involves personal characteristics (positive attitude, integrity, honesty, trust, manners/etiquette), commitment to Extension work (the mission, vision, and goals of OSU Extension), productive work habits (organizational skills; setting and managing priorities), and balancing all aspects of personal and professional life.</td>
</tr>
</tbody>
</table>

**Key actions**
- Is dependable; does what one says one will do or communicates proactively with an alternate plan.
- Demonstrates a strong work ethic; is willing to go the extra mile.
- Demonstrates courtesy with colleagues and clientele.
- Demonstrates ethical behavior; acts responsibly with the larger organization and community in mind.
- Demonstrates belief and commitment in the mission, vision, and goals of OSU Extension by acting in ways that promote organizational goals or needs.
- Contributes to organizational committees or professional associations that relate to one’s position.
- Effectively manages multiple priorities.
- Maintains a conscious balance between work and personal life; demonstrates work practices that show a commitment to the profession as well as to the health and well being of the individual from the personal life perspective.

<table>
<thead>
<tr>
<th>Resource management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creatively identifies and efficiently uses time, materials, and human resources to add value to OSU Extension products or services; promotes stewardship and ethical use of resources; leverages resources and expertise available. Acts with accountability in mind; is responsible for appropriate documentation of work activity and results or impacts; is accountable to supervisor, clientele, and key stakeholders.</td>
</tr>
</tbody>
</table>

**Key actions**
- Links programmatic or organizational needs to resources required to meet objectives.
- Identifies and manages resources to achieve maximum impact.
- Leverages fiscal and human resources available (e.g., uses resources in Extension, the University, and/or partners; shares knowledge and expertise).
- Understands and applies University and OSU Extension policies and procedures appropriate for one’s work.
- Actively documents and reports results and/or impact of Extension work (e.g., fiscal documentation, work processes, program plans, or impacts in reporting systems).
Figure 4.2 continued

**Self-direction**
Demonstrates the ability to think and work independently; shows initiative by identifying what needs to be done and does so without being asked; is confident in one’s abilities; sifts through others’ input and expectations, accesses one’s own thoughts, then reaches conclusions and takes action that make sense for one’s work efforts and those of the organization.

*Key actions*
- Performs effectively with minimal direction, support, or supervision.
- Seeks out and uses appropriate support for one’s work.
- Identifies what needs to be done and takes action before being asked or required by the situation.
- Speaks up to the right person or group at the right time when disagreeing with a decision or strategy when such action is in the best interest of organizational success.

**Teamwork and leadership**
Effectively participates and contributes as a member of a team, making contributions to organizational efficiency and effectiveness. Makes decisions and positively influences diverse groups and individuals.

*Key actions*
- Develops constructive and cooperative working relationships with others.
- Delivers individual contributions and carries an appropriate share of the workload.
- Identifies and draws upon team members’ strengths to achieve common goals.
- Is focused on success of the team over personal recognition; shares or gives credit to others.
- Uses interpersonal skills and Area(s) of Expertise to mentor, develop, and coach others.
- Assumes a leadership role when appropriate.
- Brings out the best in others by inspiring, motivating, and guiding them toward a goal.

**Technology adoption and application**
Demonstrates a sound understanding of information technology tools, systems, and operations; has current technology skills for communicating, conducting business, creating, and delivering educational programming with a broad range of colleagues and clientele; actively learns new ways of using technology to enhance Extension work.

*Key actions*
- Understands and effectively uses information technology tools needed for Extension work.
- Selects and applies appropriate technology to one’s work activity and audience.
- Learns new ways of using technology to improve quality or efficiency of work.
- Models technology adoption.
- Identifies and solves routine problems involving the use of technology.
Figure 4.2 continued

**Thinking and problem solving**
Acquires information and uses thinking skills including creativity, analytical thinking (logical thinking, breaking a project or program down, anticipating and planning), and conceptual thinking (seeing connections and patterns, putting together information from different places) to prevent and solve problems; is able to think quickly, critically, and constructively with an orientation toward solutions.

*Key actions*
- Continuously gathers, evaluates, and uses diverse, relevant sources of information to anticipate and solve problems.
- Listens; seeks to understand solutions proposed by others.
- Analyzes needs and proposes solutions; generates new ideas.
- Proactively identifies areas of improvement, anticipates what is needed, and solves problems before they become a crisis.

**Understanding stakeholders and communities**
Understands the basics of the community one works in, its dynamics and the role OSU Extension plays within the community with individuals and organizations; understands the political, social, and economic context of one’s community; has the ability to identify and monitor variables and issues important to a community; applies this knowledge to Extension work.

*Key actions*
- Demonstrates an understanding of the relationships between OSU Extension and the communities in which OSU Extension operates as well as the variety of stakeholder groups with whom we partner or could partner.
- Understands and appreciates the complex dynamics of organizations, communities (place, politics, and people), and the economic base of a community.
- Uses knowledge of stakeholders and communities to identify issues, build and nurture relationships, and support Extension programming.
Summary

The results in Chapter 4 were organized by the four phases in this research. Results from each phase and steps within that phase document a participatory approach to developing and validating a competency model. Results throughout the research process were used in multiple data integration steps to construct drafts of *Trends and Implications* and the *OSUE Competency Model*. A more detailed summary and discussion of findings is presented in the next chapter.
CHAPTER 5
SUMMARY AND DISCUSSION

As an aid to the reader, this chapter restates the research problem and provides an overview of the methodology used for the study. Results are summarized and then discussed in a more general sense than the discussion provided in Chapter 4 about results from each step that were used in subsequent steps. The discussion includes conclusions and researcher insights, including the relationship of this study to other competency research. The chapter concludes with recommendations for OSU Extension, implications for practice, and suggestions for further research.

Research Problem and Review of Methods

The purpose of this study was to develop and validate a competency model for a state Extension organization. Specific research objectives were to:

1. Identify and describe competencies required for Extension professionals in Ohio to be successful now and in the future.
2. Construct a competency model that includes core competencies, describes what they look like in practice, and reflects organizational preferences.
3. Ensure that the competency model created is a valid one.

As explained in Chapter 3, the study reported here was designed as action research with a series of highly participatory approaches used to engage employees in developing, refining, and validating a competency model. Mixed methods were used with an emphasis on qualitative approaches including reviews of existing research and gathering...
data from employees through interviews and group processes. Peer debriefing and survey research were used to validate and further refine the results. The study took place in OSU Extension with purposeful sampling used to select various groups of employees for participation as key informants; they participated as members of Administrative Cabinet, a Competency Project Team (composed of exemplary performers and key internal stakeholders), focus group participants (drawn from exemplary performers), and survey respondents (a census of the exemplary performer criterion group).

The research design included multiple cycles of data gathering, analysis, integration, and peer debriefing. The multiple-step process for this research included four phases (illustrated in Figure 3.1, p. 119).

1. Phase I – Existing data were reviewed and assembled for use in the study including research on competency-based HR management and competency modeling, data on external forces and internal context for OSU Extension, and existing competency lists or models. A criterion group of exemplary performers was identified using peer nominations, supervisory nominations, and performance data. Then new data were gathered on context, competencies, and organizational alignment through interviews and member checks with OSU Extension’s HR Leader as well as a Competency Project Team session using a modified nominal group process.

2. Phase II – Initial drafts of two documents, *Trends and Implications Draft 1* and *OSUE Competency Model Draft 1*, were constructed using data from Phase I. Then using data from Phase I, new data (from Administrative Cabinet, Competency Project Team Session #2, and focus groups with
employees), and two analysis and integration steps, new versions of Trends and Implications Draft 2 and OSUE Competency Model Draft 2 and Draft 3 were constructed.

3. Phase III – A questionnaire was developed using content from Trends and Implications Draft 2 and OSUE Competency Model Draft 3. Respondents from a pool of exemplary performers identified in Phase I completed the survey, which included importance ratings for trends, competencies, and key actions. Survey data were analyzed and integrated to create Trends and Implications and OSUE Competency Model Final Draft

4. Phase IV – Administrative Cabinet and the CPT reviewed the OSUE Competency Model Final Draft and provided feedback through group interviews that was then used in a final data integration step to develop the final OSUE Competency Model.

Before discussing results and implications, it is important to mention the limitations of this study. The data collection, analysis, and integration to construct the results were shaped by the researcher and research participants who contributed as members of expert groups and as survey respondents. Although noted as a limitation, my contributions and those of the research participants were by design. Also, while efforts were made to collect data that were future-focused, current measures of performance were used to select study participants. Therefore their opinions about competencies may not entirely reflect future needs. However, all research participants were asked, at a minimum, to review information about trends and their implications for Extension work before providing opinions about competencies in an effort to minimize this limitation.
Finally, because the research was conducted in OSU Extension, application of these findings is limited to OSU Extension. While the competency model developed does have limited application in its entirety, the results presented below do suggest application of findings beyond OSU Extension. This suggestion will be discussed below.

**Summary of Results**

Overall, the findings from this study are represented by two documents (*Trends and Implications* and *OSUE Competency Model*), which were developed, refined, and validated using the multiple-step process summarized above. Results of each step were important because they were integrated to create draft documents and inform the next steps. Key results for each phase of the study are summarized below with a focus on the final results from Phase IV.

**Results – Phase I**

The HR Leader interview provided data for organizational alignment. These data were used to refine operational definitions provided in Chapter 1 and for later data integration steps. From a sampling frame of 860 employees, a criterion group of 94 exemplary performers representing a 10 percent (10.9%) of the sampling frame was identified. Results from Phase I also included lists of trends, implications, and competencies generated and prioritized by the CPT using a modified nominal group process. Ideas for trends and implications \( (n=122) \) were collected; 28 received at least one priority vote. During idea generation without using existing lists of competencies, 66 competencies were suggested; 36 received at least one priority vote. During the final round of this session participants used existing competency lists to identify 43 suggested competencies; 34 received one or more priority votes.
Results – Phase II

The result from the first data synthesis and integration step in Phase II was *Trends and Implications Draft 1* and *OSUE Competency Model Draft 1*. Both were early versions subsequently used to generate further data collection. *Trends and Implications Draft 1* included six trends and eight implications with descriptions for each. The *OSUE Competency Model Draft 1* was a list of 20 potential competencies and supporting concepts for each (when these supporting data were available). Through group processes, Administrative Cabinet and the CPT provided opinions about these drafts, suggestions for changes, and further illustrations of competencies. Data from the two groups and my peer debriefer were integrated to construct *Trends and Implications Draft 2* and *OSUE Competency Model Draft 2*.

The *OSUE Competency Model Draft 2* was reviewed by 25 employees from the exemplary performer pool. Major themes emerged from analysis of the focus group interviews including: (a) overall support for the model and interest in next steps related to application of the competency model; (b) suggestions for model format and structure; (c) specific supportive comments or suggestions for changes to individual competency titles, definitions, or key actions; and (d) missing competencies. During Round 2, focus group participants generated 180 key actions, statements, or illustrations for the 14 competencies in *Draft 2*. Administrative Cabinet and the CPT reviewed *Draft 2*. Feedback from 16 members included supportive comments about this draft and suggestions for changes. Peer review and debriefing for *Draft 2* included support for analysis and integration decisions made as well as suggestions for the next data
integration. Finally, data from focus groups, member checks, and peer debriefing were used in analysis and integration to create OSUE Competency Model Draft 3.

Draft 3 included 14 competencies with revised titles and revised and expanded definitions and key actions. Competencies in Draft 3 were communication, continuous learning, customer service, diversity, flexibility and change, interpersonal relationships, knowledge of Extension, professionalism, resource management, self-direction, teamwork and leadership, technology adoption and application, thinking and problem solving, and understanding stakeholders and communities. These same competency titles are seen in the final OSUE Competency Model.

Results – Phase III

The Trends and Implications Draft 2 and OSUE Competency Model Draft 3 were used to develop a questionnaire that was sent to all 94 employees in the exemplary performer pool. Sixty-seven employees responded, rating the importance of each trend, each competency overall, and each key action on a five-point Likert-type scale. All six trends were highly rated and support for the relevance of these trends was provided in the open-ended comments. At least 61 percent of respondents rated each trend as very important or essential. Based on open-ended comments and alignment with previous data collection and the literature, the trend globalization was combined with other trends and other edits were made to create the final Trends and Implications described in Chapter 4.

Trends and Implications included five trends:

1. changing and complex conditions,
2. increased competition and limited resources,
3. changing complex organizational structures,
4. changing demographics, and
5. technology and life in the e-world.

There were seven implications associated with these trends:

1. Be flexible, proactive, and embrace change;
2. Be customer driven with a focus on quality and responsiveness;
3. Demonstrate and communicate the value of Extension work;
4. Demonstrate an entrepreneurial spirit;
5. Become proficient in technology use and application;
6. Effectively manage work and life issues; and
7. Build relationships and collaborate in a diverse environment.

For competencies, survey respondents rated all 14 highly; each competency was rated as very important or essential by least 82 percent of respondents. When asked to select three competencies that would be most important in the future, four (flexibility and change, customer service, communication, and teamwork and leadership) were selected by at least 25 percent of respondents as one of their three most important. Individual key actions were also highly rated. Every key action across all competencies was rated as very important or essential by at least 69 percent of respondents. Based on these ratings, all competencies and key actions were retained as important. Open-ended comments were analyzed and used to clarify language, eliminate duplication, or address other concerns, while maintaining alignment with prior data collected. Survey data were integrated to construct the OSUE Competency Model Final Draft.
Results – Phase IV

The OSUE Competency Model Final Draft was reviewed by Administrative Cabinet and the CPT. Feedback provided during group interviews was used to make final revisions to the competency model, leading to construction of the OSUE Competency Model. Illustrated in Figure 4.2 (p. 206), this model contains operational definitions, a description of areas of expertise (to differentiate AOE from competencies), and 14 competencies listed alphabetically and in three conceptual groupings (people, the business of Extension, and self). The full model also includes a title, definition, and three to eight key actions for each competency.

Discussion

Conclusions and Researcher Insights

The purpose of this study was to develop and validate a competency model for OSU Extension, guided by three objectives: (a) identifying and describing competencies required now and in the future; (b) constructing a competency model that includes core competencies, describes what they look like, and reflects organizational preferences; and (c) ensuring that the model created is valid. Based on a review of the literature, my experience as an Extension employee, and the research findings, the following conclusions related to the objectives of this study were reached:

1. The Trends and Implications document, constructed and validated using data from administrators and exemplary performers, represents current thinking on the key trends for OSU Extension and the implications those trends have on Extension work. The findings represented by the Trends and Implications were an
important and necessary precursor to developing a competency model that was future-focused.

2. There are a set of core competencies, relevant across job groups, that are important now and in the near future for OSU Extension employees. These competencies are named, defined, and described using key actions in the OSUE Competency Model.

3. The competency model that was developed reflects organizational preferences; it is customized to the organization.

4. The OSUE Competency Model has high face and content validity.

5. The OSUE Competency Model has catalytic validity.

The following paragraphs will elaborate on my insights regarding these conclusions in relation to the existing literature. This discussion will conclude with recommendations for OSU Extension, implications for practice, and suggestions for further research.

**Trends & Implications Constructed**

The trends developed and validated in this study are generally congruent with the literature for organizations (Bernthal et al., 2004; Carnevale, 1991; Dubois et al., 2004, Duderstadt, 1999; Lawler, 1994; Moulton et al., 2006) and specifically for Extension organizations (ECOP, 1987, 2002, 2007; 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 seen in the findings here. Alternately, there is less information in the literature about the implications of current trends on Extension work. While several authors suggest implications for work in general (Carnevale, 1991; Moulton et al., 2006),
only a few (ECOP 2002, 2007; Ladewig & Rohs, 2000) have described implications for Extension work and those that have lack the detail needed to fully understand what those implications mean for the competencies needed. Therefore the *Trends and Implications* created in this study build on and extend the literature in several ways.

First, this study provides current definitions or descriptions of what trends mean in the context of a state Extension organization and in a language that is meaningful for such an organization. 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 competencies. 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. For example, the description of the implication “Build relationships and collaborate in a diverse environment” included:

> 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 will need to understand cultural issues that might cause conflict and will need to have the skills to deal with conflict constructively. (see Figure 4.1, p.182)

However, not only was the list and the descriptions of trends and implications important as a foundation for the research reported here but it also represents current thinking on trends and the implications for Extension work. Furthermore, the trends and their implications appear applicable to other organizations in addition to Extension.
Core Competencies Were Named, Defined, and Described

Although some authors (Dubois & Rothwell, 2000) have suggested that identifying competencies for all jobs at one time is not possible, the evidence here suggests otherwise. The findings reported here are more aligned with other authors (Lucia & Lepsinger, 1999; Moulton et al., 2006; Parry, 1996) who have concluded that a set of core competencies can be developed successfully for an organization. In response to criticisms of identifying core competencies, Lucia and Lepsinger (1999) stated:

Certainly, diversity is strength—and of course different jobs demand different skills and knowledge….But this is a failure to see the forest for the trees. If we concentrate only on the difference between roles, we lose sight of the commonalities that are the basis for organizational success. (p. 157)

Lucia and Lepsinger continued to discuss how core competencies help to clarify traits and behaviors as well as organizational culture and values. During group interviews and focus groups as well as survey comments, participants expressed feelings that the behaviors being described were important to their perception of OSU Extension’s culture and values.

Focus group data and survey data, including importance ratings and supportive open-ended comments reported in Chapter 4, suggest that employees across job groups in this study were able to identify and describe a set of core competencies that are important to all of them and to further describe what they look like in practice. Several comments help illustrate this conclusion and are aligned with Lucia and Lepsinger’s assertion that we can identify commonalities that are the basis of organizational success. Focus group participants felt that the competencies in Draft 3 were those that were “critically important” for Extension work and that the competencies reflected what they do in practice. Commenting on Draft 4, survey respondents thought the draft was an “excellent
model” that “has a wide range of the competencies necessary for success within
Extension.” Therefore, this study supports the concept of core competencies as a valid
one, particularly in a state Extension organization.

Because an organic process was used where specific competencies were
constructed based on input from employees, it might be expected that the competency
titles and definitions would not match exactly with existing research. However, the 14
competencies identified in this research are generally congruent with the literature,
including aspects of generic menus or models (ASTD, 2006; BHEF, 2003; Casner-Lotto
& Barrington, 2006; Dubois & Rothwell, 2000; SCANS, 1991; Spencer & Spencer,
1993), those identified in the governmental sector (U.S. Office of Personnel
Management, 2006), those identified by professional associations such as ASTD
(Bernthal et al., 2004), and those from the private sector (Alldredge & Nilan, 2000;
Montier et al., 2006). In recent research (SHRM, 2008a), HR professionals rated
adaptability/flexibility, critical thinking/problem solving, leadership,
professionalism/work ethic, teamwork/collaboration, and diversity as skills that are more
important than they were two years ago; all are reflected in the OSUE Competency
Model. Thus, data emerging from exemplary performers were aligned with the literature
referenced above and then the literature was used to expand and refine competencies that
were further validated by employees. The final list of competencies in the OSU Extension
Competency Model includes competencies closely aligned with the current literature. The
competencies can be conceptually grouped, as others have done (Bernthal et al., 2004;
Cripe & Mansfield, 2001), as a combination of individual, interpersonal, and business-
related competencies.
If the findings from the current study are compared to existing competency research within Extension organizations, there is some congruence. At the title and general description level there are similarities between several of the 14 competencies identified here and in other research in Extension organizations with specific job groups. For example, many lists of competencies developed for Extension educators or those in leadership roles have included competencies related to communication (Beeman et al., 1979; Brown et al., 2008; ECOP, 1968, Gonzales et al., 1984; Harder & Dooley, 2007; Moore & Rudd, 2005; Smith & Clark, 1987), interpersonal relationships (CSREES, 2006; Hahn, 1979), teamwork (Cooper & Graham, 2001), technology (CSREES, 2006), thinking (Brown et al., 2008, ECOP, 1968), and professionalism (Beeman et al., 1979; Gonzales et al., 1984). These similarities lend support to the findings from the current study.

Competency models developed nationally for the Extension System or for state Extension organizations also have competencies in common with the OSUE Competency Model developed here. All 14 competencies in the OSUE Competency Model are found in competencies or sub-competencies of at least one other existing Extension model (Coppernoll & Stone, 2003; Kansas State Research and Extension, 2007; Kuchinke et al., 2008; Liles, 1999; Maddy et al., 2002, Michigan State University Extension, 2003; North Dakota State University Extension Service, n.d.; University of Missouri, 2007; University of Nebraska-Lincoln, 2005). However, most of the lists and models cited above also include competencies such as programming, program planning and development, teaching, and subject matter expertise that are not in the OSUE Competency Model; they were considered areas of expertise because they are specific subject matter, technical, or
professional knowledge that would be required for certain job groups in an Extension organization. In addition, if one looks beyond the competency titles, there are differences in how the competencies are defined and described behaviorally. The contradictions with other Extension models are primarily because these models tend to focus only on distinct positions such as specialist, educator, and in some cases, program support. Only a few of the models (Coppernoll & Stone, 2003; Liles, 1999) appear to be written for all employees in an Extension organization. The Texas model (Coppernoll & Stone, 2003) provided behavioral detail at the sub-competency level. North Carolina (Liles & Mustian, 2004) provided behavioral detail for sub-competencies by job groups. The study reported here provides competencies, definitions, and key actions that are intended to cut across all job groups, which distinguishes the OSUE Competency Model from other Extension models.

This study extends the research on core competencies in four ways. First, there has never been a study of this type in OSU Extension. The research described here identifies core competencies for Extension professionals in Ohio for the first time. Second, the research presented here provides a model, including key actions to illustrate competences that are core (i.e., relevant across job groups). This appears to be the first competency model in Extension providing a single framework with competencies, definitions, and key actions (i.e., behavioral descriptions) designed to cut across the entire organization instead of providing behavioral descriptions for sub-competencies or for specific job groups. Third, previous research in Extension did not appear to use criterion samples of exemplary performers to develop and validate competencies. Use of exemplary performers was a key part of the current research, where a competency model
was constructed relying heavily on opinions of exemplary job incumbents. Spencer and Spencer (1993) emphasized the importance of using the characteristics of superior performers in competency identification, stating “failure to do so is essentially to select and train to mediocrity” (p. 15). Finally, approximately 10 years has elapsed since the last core competency model documented in the literature was developed for an Extension organization. In those 10 years, Extension organizations have experienced significant changes. Therefore this research extends the body of knowledge about competencies in Extension by providing more current findings related to core competencies for Extension work.

The Competency Model Reflects Organizational Preferences

Researchers (Dubois et al., 2004; Hay Group, 2003; Rahbar-Daniels et al., 2001; Zemke, 1982) suggest that competency models need to be tailored to the unique needs and context of an organization. For example, Mirabile (1997) suggested that the format of a competency model should be determined by the people who would use it most. Therefore it is important to assess the current research in this light. Findings from the research reported here suggest that the model developed reflects organizational preferences (i.e., it is customized to the organization). Evidence that the model reflects organizational preferences is found in the process used, how the data collected were applied to model format and structure, and subsequent support expressed by employees.

The research process included gathering opinions from the HR Leader, Administrative Cabinet, and employees throughout the organization. Data from all of those sources as well as the literature were applied to decisions made during the modeling process. It is also important to note here that as a researcher, who is also an employee of
the organization working in HR, my judgments influenced the model format and structure as it developed. One example of a decision about model structure that appeared to meet the needs of the organization was identification of *areas of expertise (AOEs)*. Early in the data collection, a group of suggestions for competencies emerged that were related to subject matter or technical expertise and tended to be more job-specific than other suggestions. These concepts became a stumbling block because they were important to participants but clearly not relevant for all jobs in the organization.

To address this group of suggestions, the term AOEs was introduced and defined. The model also described how AOEs would fit with competencies (i.e., an Extension professional would need a foundation in the core competencies and a blend of AOEs needed for their specific job). Although not the focus of the current research, AOEs, including examples from the data, were identified in the model as another layer to be developed later. Acknowledging the importance of specific subject matter or technical skills and giving them a future place in the competency model seemed to be a good fit for the organization, and it allowed employees to focus on identifying and critiquing core competencies, while knowing that AOEs would be part of the model in the future. Focus group participants and CPT members specifically mentioned their support for the way AOEs were identified in the model. They realized AOEs were a “good way to handle” the knowledge and skills that might be critical to success in a specific job group but were “not necessarily core competencies.”

Another decision was to develop a competency model with key actions; that is, statements illustrating each competency. Key actions were developed initially out of data from a session with the CPT. Key actions were confirmed as a good fit for the
organization through initial member checks with the CPT and then later with focus groups and the validation survey. After reviewing the model for the first time after key actions were added, CPT members expressed support for key actions that “demonstrate that the competency is present” and add detail to the model by describing what the core competencies “look like” in practice. Finally, focus group participants were supportive of key actions. They appreciated seeing the detail added to the core competencies that showed them “what behaviors we are supposed to see.”

As noted in the literature, it is important to build competency models that are tailored to the unique needs of an organization (Dubois et al., 2004; Mirabile, 1997; Parry, 1996; Rahbar-Daniels et al., 2001; Zemke, 1982). This includes not only the specific competencies but also decisions about how the model is formatted and structured for presentation and use. The findings reported in Chapter 4 and the brief description summarized above support the conclusion that the model developed in this research does reflect organizational preferences.

**OSUE Competency Model Validity**

Establishing validity is an important part of competency modeling. In the context of competency modeling, several types of validity can be evaluated including face validity, content validity, and criterion-related validity (Dubois & Rothwell, 2000; Lucia & Lepsinger, 1999; Spencer & Spencer, 1993). Catalytic validity is another measure of quality for this research. Face validity is related to the competencies making sense to those doing the job or to others in the organization. Content validity refers to how well the model reflects the competencies that are essential. Showing that competencies are
correlated with other measures of performance, criterion-related validity can be important for some used but was beyond the scope of this research.

The methodology 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 competencies. The way in which the model was constructed and repeatedly cycled back to employees for feedback and refinement led to competency titles, definitions, and key actions that made sense to them. Research participants felt like the model looked like something that would be useful. They talked about using the model with employees in their office, with volunteers, and with clientele. One focus group member talked about writing a list of important competencies before attending and then finding everything on her list in the model.

Content validity was primarily established through a validation survey where exemplary performers rated the competencies and associated key actions as important. Comparison of the OSUE Competency Model content to other competency models in Extension organizations, showing congruence, also supports content validity.

Methods used to establish face and content validity were aligned with recommendations from the literature including using expert panels (Dubois, 1993) and testing with a broad group of incumbents (Lucia & Lepsinger, 1999). Other research in Extension organizations has varied greatly in apparent level of face and content validity. Some research has relied primarily on small teams of employees or focus groups. North Carolina Cooperative Extension’s model (Liles & Mustian, 2004) appears to have additional content validity because although a core group of employees was used to build the model, it was then reviewed and refined by a broader group of employees.
Benchmarking with peer institutions was also used by North Carolina Cooperative Extension. In terms of validity, a major difference between the research reported here and other research in Extension organizations is the focus on a criterion group of exemplary performers throughout the research process; such a focus should increase content validity. The current research appears to be aligned with the practice of competency modeling, which tends to do a good job of capturing the language of an organization (Schippmann et al., 2000). As a result, employees tend to see themselves in the resulting descriptions (Schippmann, et al., 2000), as was reported in the findings here.

Finally, I concluded that the OSUE Competency Model had catalytic validity. The term catalytic validity is used in qualitative research to refer to the criterion of action. Thus, as used here, catalytic validity refers to documentation that the research process, findings, or both have led to insight or informed action (Jones et al., 2006; Lamont, 2004; Lather, 1986). Comments made by research participants about their participation in the process and about the application of the competency model to HR functions bear mentioning here. There was evidence that employees gained insight through participation in the research. For example, one focus group participant said “I found the process was very interesting and thought provoking.” A survey respondent stated “I was worried about a competency-based system. I can say I now really appreciate it.” Also, even though they were not directly asked, research participants were interested in talking about application of the competency model to HR functions. In focus groups and group interviews, participants asked questions or made comments about how the organization could use the model in hiring or performance management. One focus group participant noted “You could easily put little checks by it and evaluate. I also wondered…[about]
identifying talent up front…[whereas] some of them are things that will have to be taught.” Others asked questions that indicated they were thinking about how to apply the competencies being developed such as whether they would be used in hiring, performance evaluation, or certain ones in each.

First, the comments mentioned above and others like them served as additional face and content validation if one makes the assumption that participants asking questions about application were comfortable enough with the content and ready to move on to its use. Second, and more importantly, such comments suggest catalytic validity. Participants were gaining insight through their participation and were thinking about using the OSUE Competency Model. Achieving catalytic validity is an important part of research where the results are to be applied directly as is the case with this research, that is, research where a competency model was developed for an organization’s immediate use. Many of the recommendations for practice in competency modeling (see Table 2.8, p. 94) were considered when planning the study reported here and are congruent with building catalytic validity. Specifically, several authors (Dubois, et al., 2004; Green, 1999; Liles & Mustian, 2004; Public Service Commission of Canada, 1998) identify sources of information and participation as important factors that affect later buy-in, understanding, and use of a competency model. Athey and Orth (1999) noted a trend in competency modeling toward more participatory approaches. Participation was carefully planned in this study, building what Liles and Mustian (2004) call the “principle of IOU that is involvement results in ownership and understanding” (p. 439). Finally, it should be mentioned that participation and associated catalytic validity suggested here was not
without a cost. The scope of information sources used in this study and high level of participation meant a considerable investment of fiscal and human resources.

**Recommendations for OSU Extension**

As action research, the immediate focus of my recommendations is for the organization in which the study took place, specifically recommendations for how OSU Extension should use the research findings. Based on the findings of this study, a review of the literature, and my insights as a researcher, the following recommendations are offered to OSU Extension.

1. **Use the model developed.** The model developed followed recommended practice to construct a competency model, and the resulting model appears to have high face and content validity. Early feedback during model development also indicated that participation in the process of developing the associated model has had a catalytic effect, with participants learning about and anticipating application of the model as an outcome of the process.

2. **Continue participatory approaches.** The focus on participatory approaches was an important aspect of this research that should be continued in the other steps recommended below.

3. **Plan for organizational communication and education about the competencies and their use in the organization.** Communication and education was built into this research, and consequently a common understanding of competencies and competency-based HR developed among research participants. Leverage this understanding by inviting CPT members and focus group participants to support the application of the model by teaching their peers. Furthermore, this
understanding should be extended to all employees of the organization as the competency model is moved out for use throughout the organization.

4. Integrate competencies into HR functions. Begin integrating competencies into HR functions as soon as possible to leverage the interest already built during this research. A competency assessment process, including a self-assessment tool, is recommended as a first step and could be integrated as part of the communication and education recommended above.

5. Utilize competency assessment data to identify gaps and apply that information to individual employee’s professional development planning. As well, the organization should invest resources where they will have the most impact (i.e., gaps identified through competency assessment in those competencies identified in this research as most important for the future).

6. Consider extending the model to volunteers. At least one focus group in this study discussed the concept of the same competencies identified here being important for volunteers working with the organization. This is congruent with at least one other state Extension organization’s competency model (Liles & Mustian, 2004) and might be valuable in that Extension relies heavily on volunteers as part of its programming.

7. Conduct additional research as needed to extend and further validate the model. During this study, areas of expertise (AOEs) were identified as a component needed for a holistic competency model in OSU Extension. Research should be conducted to identify these AOE. Also, a need was identified in this research for more detail in the model that would show
growth for individuals or for levels of a competency that might be needed in a position or job group. If, during application of this model in the organization, other layers are needed for the model, research should be conducted to fill the gap (e.g., the organization might identify a need for descriptions of what competencies look like at the job group level).

Although this study focused on developing and validating a competency model for one organization, the findings and the specific recommendations for OSU Extension mentioned above might be useful to other organizations planning to develop or refine a competency model and integrate it with HR functions. Whereas direct application of the research findings and recommendations may be limited to OSU Extension, and in some cases other organizations with a similar mission and range of job groups, there are broader implications for practice.

**Implications for Practice**

Although a single study to develop and validate a competency model for one organization cannot alone provide a sound basis for the practice of competency modeling, this study, the literature, and my experience as a researcher would suggest some general implications for practice. These implications include:

1. The nature of the research process described here is comprehensive, and it is aligned with many of the recommendations for practice in the competency modeling literature. The process was designed to address recommendations from the literature including: (a) aligning competencies with organizational mission and strategy, (b) focusing on core competencies, (c) using behavioral definitions, (c) customizing to the organization, (d) using triangulation
through multiple sources and multiple types of information, (e) developing a common language, and (f) involving employees at all levels.

2. Participation and future orientation were particularly important. Involving employees at all levels contributed to the quality of the data and will likely lead to greater acceptance, understanding, and use of the model. Identifying trends and their implications was valuable in helping to focus on future needs, especially during a time of organizational change.

3. The process worked. The results from this study illustrate the usefulness of the methodology and the specific process used to identify and validate a core competency model for an organization. Although it is too early to know how successful the model will be in practice, the findings show promise in terms of validation of the model and the interest shown in its application by those who will be involved in applying and using it. Results from this study support action research as an approach where participants learn from the process itself and are likely to be interested in what happens next (Somekh et al., 2005).

4. The process is replicable and could be used by other organizations to create, update, or refine their competency models. In reviewing the literature, I found few other sources with detailed descriptions of how other organizations, especially Extension organizations, had conducted competency studies with similar objectives. Schippmann et al. (2000) confirm this problem, describing a lack of documentation of processes used for competency modeling in the field as a whole. Drawing from the general competency literature and specifically from methodologies used by ASTD (Bernthal, et al., 2004;
McLagan, 1989b), 3M (Montier et al., 2006), and North Carolina Cooperative Extension (Liles & Mustian, 2004), this study fills a gap by providing detailed documentation of the entire research process. However, readers should bear in mind earlier discussions about the cost in terms of human and fiscal resources. Organizations should be prepared to make an investment in the process in order to yield similar results.

**Recommendations for Further Research**

Based on the findings of this study, a review of the literature, and my insights as a researcher, the following recommendations are offered for further research.

1. Because this study dealt exclusively with building and validating a competency model using exemplary performers, additional research should be conducted using existing competency models in Extension to determine criterion-related validity, which would confirm that high performers are actually rated higher than average or low performers. In addition to validating competencies, the research process used to determine criterion-related validity could be used to refine existing models by dropping competencies that do not differentiate between performance groups. I was not able to find research in Extension organizations that has established criterion-related validity for competencies. Therefore, research is needed to establish criterion-related validity for existing competency models in Extension.

2. Additional research to develop a competency dictionary—a master list of well-researched competencies, definitions, and behavioral indicators for Extension organizations—could aggregate existing research and provide a
valuable tool for updating or creating new competency models. Although Extension organizations would still need to tailor such lists, having a competency dictionary that was already designed for Extension organizations would reduce the expense associated with competency model development and allow for more rapid results while maintaining validity.

3. Research should be conducted to develop, test, and describe tools for applying competencies to HR functions. The focus of this research should be on integration and application. That is, synthesizing existing literature and documented practices to develop and test HR tools or processes and then communicating them in a way that the practices could be revised and replicated by other practitioners. For example, participants in this study identified a need for tools and training to conduct competency-based interviews. A similar need was identified for designing a competency-based performance management process, including performance planning and appraisal tools.

Summary

Nearly 50 years ago, President Kennedy said “Change is the law of life. And those who look only to the past or the present are certain to miss the future” (Kennedy, 1963). Themes related to change in the world, in communities, and in organizations are seen in the literature, in the popular press, and were evident in this research. The overarching theme in the Trends and Implications document developed out of this competency study reads “changing and complex conditions: globalization and changing social, environmental, and economic conditions are affecting OSU Extension, the work of
our employees, and clientele” and points to the future by providing implications based on the trends identified. Given trends such as changing and complex conditions and other pressures organizations are facing, authors (Dubois et al., 2004; Lawler, 1994; Lucia & Lepsinger, 1999) recommend a competency-based approach to HR management to most effectively leverage human capital.

Recommendations for a competency-based approach have emerged because jobs have changed, making it harder to define intangibles that are more important to work success than easier to define hard skills (Rothwell & Kazanas, 2008). Competency models are the blueprint for building those intangibles as well as other combinations of knowledge, skills, attitudes, and observable behaviors that lay the foundation for any organization interested in competency-based HR management. The product of the research reported here was the OSUE Competency Model, a model that identifies 14 core competencies, including definitions and key actions that further illustrate each. As action research, this study provided a competency model that will be used and further developed by the participants who constructed it. The study also extends the body of knowledge by providing a core competency model, of which few exist, for state Extension organizations that was developed by a criterion group of exemplary performers. Finally, this research documented a process from initial information gathering through validation that could serve as a model for other organizations interested in developing their own blueprint for successful performance.
REFERENCES


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APPENDIX A
LETTERS OF SUPPORT AND APPROVAL
August 1, 2008

Office of Responsible Research Practices
2000 Research Foundation Building
1960 Kenny Road
Columbus, OH 43210

RE: Cochran Research Proposal

To Whom It May Concern:

I am supportive of Graham Cochran’s research entitled “Ohio State University Extension Competency Study”. This study will include contacting employees of OSU Extension and involving them in interviews, focus groups, and other processes to collect data for this study.

Sincerely,

Keith L. Smith
Associate Vice President, Agricultural Administration;
Associate Dean, College of Food, Agricultural, and Environmental Sciences;
Director, Ohio State University Extension; and
Gist Chair in Extension Education and Leadership

bjw
Dear Mr. Cochran,

The Behavioral IRB APPROVED BY EXPEDITED REVIEW the above referenced protocol. The Board was able to provide expedited approval under 45 CFR 46.110(D)(1) because the research presents minimal risk to subjects and qualifies under the expedited review category(s) listed below.

Date of IRB Approval: November 30, 2008
Date of IRB Approval Expiration: November 5, 2009
Expeditied Review Category: 7

In addition: the protocol has been approved for a waiver of documentation of the consent process for survey in phase III and for nominators of exemplary employees.

If applicable, informed consent (and HIPAA research authorization) must be obtained from subjects or their legally authorized representatives and documented prior to research involvement. The IRB-approved consent form and process must be used. Changes in the research (e.g., recruitment procedures, advertisements, enrollment numbers, etc.) or informed consent process must be approved by the IRB before they are implemented (except where necessary to eliminate apparent immediate hazards to subjects).

This approval is valid for one year from the date of IRB review when approval is granted or modifications are required. The approval will no longer be in effect on the date listed above as the IRB expiration date. A Continuing Review application must be approved within this interval to avoid expiration of IRB approval and cessation of all research activities. A final report must be provided to the IRB and all records relating to the research (including signed consent forms) must be retained and available for audit for at least 3 years after the research has ended.

It is the responsibility of the investigator to promptly report to the IRB any serious, unexpected and related adverse events or potential unanticipated problems involving risks to subjects or others.

This approval is issued under The Ohio State University's IRB Federal Assurance 8000063781. All forms and procedures can be found on the ORRP website – www.orrp.osu.edu. Please feel free to contact the IRB staff contact listed above with any questions or concerns.

Shari R. Speer, PhD, Chair
Behavioral and Social Sciences Institutional Review Board
APPENDIX B
INTERVIEW WITH HR LEADER – GUIDING QUESTIONS

Interview with HR Leader

You have had a chance to review draft definitions to be used in this study and provide suggestions for changes. It will be important for the definitions I use to align with how OSU Extension views competencies and use a language that makes sense in the organization. I will use them for this study but they should also align with communication in OSU Extension about competencies and competency-based human resource management.

- Are there any of the definitions that you have questions or concerns about?
- Suggestions for changes?
- Anything missing?

Review and discuss recommendations for practice (derived from the literature in Chapter 2, specifically Table 2.8, p. 94).

So far, I have used these recommendations to guide my research.

- Any of these recommendations that strike you as particularly important for the OSUE study?
- Any of them that don’t make sense in OSUE’s context?
- Any questions or concerns about this list?
- Based on your understanding of the planned research, and review of this list of recommended practices, are there any gaps you see/concerns related to alignment/linkage? Sources of info? Participation?
- Follow up as needed to clarify.

Review and discuss key decisions for an organization building a competency model (shared earlier with HR Leader; derived from the literature in Chapter 2, specifically Table 2.9, p. 96). One area to consider as we discuss these key decisions is that competency models can drive organizational change. Keep current changes in OSU Extension in mind as you respond to the following questions.
• Thoughts about decisions on chart and OSUE in general?
• Future orientation?
• Scope, focus – Ask for feedback and thoughts on this area, specifically a focus on generic list of core competencies that are relevant across the organization. Lucia & Lepsinger (1999) talk about critics questioning one model (they will say organization is too diverse). Read quote from Lucia and Lepsinger (see Lucia & Lepsinger, 1999, p.157). Thoughts? (Focus on core and provide some detail?...Spiral up and down?)
• Length/structure/level of detail?
• Other thoughts?
• Review some examples, thoughts on each as we look at them?
  o General Format – Byham & Moyer (2005)
  o Business – 3M (Alldredge & Nilan, 2000) & Sharp (Montier et al., 2006)
  o ASTD (Bernthal et al., 2004)
  o Extension – MSUE (Michigan State University Extension, 2003), K-State (Kansas State Research and Extension, 2007), NCCE (Liles, 1999), TAEX (Coppernoll & Stone, 2003), and ECOP (Maddy et al., 2002)

  • Discuss thoughts on what length/structure may be the best fit for OSU Extension.
  • Thoughts on detail organized by job group (e.g., NCCE) versus detail by sub-competency (e.g., TAEX, MSUE) with some sub-competencies/examples that might apply more to certain roles than others.
  • Or, staying at a core competency level for now, listing actions/examples that would fit different job groups?

Opinions on how to identify performance levels? (behaviorally anchored rating scale (BARS) versus general rating scale that would fit across competencies and job groups)

Have we missed anything? Is there anything else you would like to discuss at this stage of about my research to build a competency model for OSU Extension?
APPENDIX C
SAMPLE INVITATIONS AND WEB-BASED FORMS USED TO COLLECT NOMINATIONS OF EXEMPLARY PERFORMERS

Invitations and Nomination Form for Peer Nominator Group

Peer Nominators - Advance E-mail
Subject: OSU Extension Competency Study - Please contribute!

Dear Colleague,

As you know, OSU Extension released a new strategic plan in May. One of the performance goals in the plan is to “Develop and sustain world-class Extension professionals.” To meet this goal, Strategy #4 is a transition to a competency-based approach to human resources. A first action step in this strategy is development of a competency model. The model developed will contain descriptions and illustrations of core competencies. This is where I need your help. First, please read a little more about how we will be developing a competency model for OSU Extension.

Research is needed to develop and validate a competency model for Ohio State University Extension. The model we develop will contain descriptions and illustrations of core competencies, basic knowledge, skills, attitudes, and observable behaviors that contribute to excellence in the workplace. The research will consist of multiple phases to review existing information and to gather input from key internal stakeholders and individuals from across the organization. There will be opportunities for a number of individuals to be involved. An important step in building competency models for organizations is to identify a pool of exemplary employees who will be invited to participate in various ways throughout the process of developing and validating a competency model.

Specifically I am asking you to help with this study by thinking about your peers and submitting names of individuals you would consider exemplary performers. For this project…

1. Peers are those who do similar work in OSU Extension. They may be in your office team, do similar work in other locations, and/or serve on program or project teams with you.
2. Exemplary performers are individuals whose performance would be described as exceptional or best-in-class. Exemplary performers are those who: (a) stand out
and far exceed what is expected of them, (b) are highly motivated to achieve whatever it is they believe is worthy of achievement, and (c) people whose contributions extend or add value to the organization’s operation or product.

3. Effective performers are fully successful individuals who are not exceptional or best-in-class, but are performing at a satisfactory or very good level. Also referred to as average performers, this is considered the threshold level below which an employee would not be considered competent for a job.

You may know or work with effective performers who are doing good work but are not exemplary. As you think about individuals to nominate, please note that we are looking for nominations for those who truly stand out.

The information you provide will be a valuable part of developing a competency model for OSU Extension and implementing part of our new strategic plan. The risks to your participation are minimal. Your nominations are confidential and will only be used by the researcher (me) for this study. These data will not be shared with Extension administration. Information about work location and job title will only be shared when aggregated and describing the nature of who provided nominations. Names you provide will be combined with other nominations and data to develop a pool of employees for participating in various steps of OSU Extension’s Competency Study.

You are not required to participate in this project. By submitting names you are agreeing to participate in the project and have the information you submit be used for research purposes. There is no penalty if you choose not to participate and you may withdraw your consent to participate at any time prior to submitting your nominations.

In the near future, you will receive another email from me with a link to provide nominations via Zoomerang. This link will be active through December 17th.

If you have any questions about the study, please contact me by phone (614-688-4246) or email (cochran.99@osu.edu) at your convenience. I appreciate your time and contributions to this important project!

Graham Cochran
OSU Extension Human Resources
Peer nominators – E-mail with Link to Nomination Form
Dear Colleague,

Greetings!

This is a follow up to the email you recently received from me asking you to help with the OSU Extension Competency study by thinking about your peers and submitting names of individuals you would consider exemplary performers. The information you provide will be a valuable part of developing a competency model for OSU Extension and implementing part of our new strategic plan.

I would like to remind you that your nominations are confidential and will only be used by the researcher (me) for this study. These data will not be shared with Extension administration. Information about work location and job title will only be shared when aggregated and describing the nature of who provided nominations. Names you provide will be combined with other nominations and data to develop a pool of employees for participating in various steps of OSU Extension’s Competency Study.

You are not required to participate in this project. By submitting names you are agreeing to participate in the project and have the information you submit be used for research purposes. There is no penalty if you choose not to participate and you may withdraw your consent to participate at any time prior to submitting your nominations.

If you choose to participate, please click on the link below when you are ready to provide your nominations. This link will be active through December 17th.

If you have any questions about the study, please contact me by phone (614-688-4246) or email (cochran.99@osu.edu) at your convenience. I appreciate your time and contributions to this important project!

Graham Cochran
OSU Extension Human Resources

[URL here]
OSU Extension Competency Study
Peer Nominations of Exemplary Performers

To help us describe the group responding, please answer the following questions about yourself.

1. Gender:
   - Female
   - Male

2. How many years have you worked for OSU Extension?
   [Years of service with OSU Extension]

3. My work assignment is:
   - North Central Region
   - South East Region
   - West Region
   - State Level (All others not assigned to a region)

4. My position is in the following job group:
   Titles are listed beside job groups.
   - office support (administrative associate, assistant to director, accountant, information assistant, information associate, office administrative associate, office assistant, office associate, office production assistant, and personnel technician)
   - program support (program assistants and program coordinators)
   - program management (program director, program manager, program specialist)
   - technical support (graphic artist, senior graphic designer, systems developer, systems manager, technical editor, technology coordinator, TV producer, TV program manager, research assistant, and research associate)
   - educator (Extension educator)
Nominating Exemplary Peers

For this project...

1. Peers are those who do similar work in OSU Extension. They may be in your office team, do similar work in other locations, and/or serve on program or project teams with you.

2. Exemplary performers are individuals whose performance would be described as exceptional or best-in-class. Exemplary performers are those who: (a) stand out and far exceed what is expected of them, (b) are highly motivated to achieve whatever it is they believe is worthy of achievement, and (c) people whose contributions extend or add value to the organization's operation or product.

3. Effective performers are fully successful individuals who are not exceptional or best-in-class, but are performing at a satisfactory or very good level. Also referred to as average performers, this is considered the threshold level below which an employee would not be considered competent for a job.

You may know or work with effective performers who are doing good work but are not exemplary. As you think about individuals to nominate, please note that we are looking for nominations for those who truly stand out. At this time, we are only asking for nominations of exemplary performers.

5 I am submitting the following names as peers that I view as exemplary performers:

(Enter all your nominations in this box. Either separate with a comma or start a new line for each entry. Leave this box blank if you have no nominations after reading the information above.)
Dear County and Unit Directors,

As you know, OSU Extension released a new strategic plan in May. One of the performance goals in the plan is to “Develop and sustain world-class Extension professionals.” To meet this goal, Strategy #4 is a transition to a competency-based approach to human resources. A first action step in this strategy is development of a competency model. The model developed will contain descriptions and illustrations of core competencies. This is where I need your help. First, please read a little more about how we will be developing a competency model for OSU Extension.

Research is needed to develop and validate a competency model for Ohio State University Extension. The model we develop will contain descriptions and illustrations of core competencies, basic knowledge, skills, attitudes, and observable behaviors that contribute to excellence in the workplace. The research will consist of multiple phases to review existing information and to gather input from key internal stakeholders and individuals from across the organization. There will be opportunities for a number of individuals to be involved. An important step in building competency models for organizations is to identify a pool of exemplary employees who will be invited to participate in various ways throughout the process of developing and validating a competency model.

Specifically I am asking you to help with this study by providing two types of nominations of exemplary employees. The two types of nominations I would like you to provide are supervisory nominations and peer nominations. For this project…

1. Peers are those who do similar work in OSU Extension. They may do similar work in other locations, and/or serve on program or project teams with you.
2. Exemplary performers are individuals whose performance would be described as exceptional or best-in-class. Exemplary performers are those who: (a) stand out and far exceed what is expected of them, (b) are highly motivated to achieve whatever it is they believe is worthy of achievement, and (c) people whose contributions extend or add value to the organization’s operation or product.
3. Effective performers are fully successful individuals who are not exceptional or best-in-class, but are performing at a satisfactory or very good level. Also referred to as average performers, this is considered the threshold level below which an employee would not be considered competent for a job.

You may know or work with effective performers who are doing good work but are not exemplary. As you think about individuals to nominate, please note that we are looking for nominations for those who truly stand out.

First, as a county or unit director, please think about the individuals in your office
or unit and submit names of those you view as exemplary performers. Nominations can be in any of the following job groups: office support (titles including administrative associate, assistant to director, accountant, information assistant, information associate, office administrative associate, office assistant, office associate, office production assistant, and personnel technician), program support (program assistants and program coordinators), program management (program director, program manager, program specialist), technical support (titles including graphic artist, senior graphic designer, systems developer, systems manager, technical editor, technology coordinator, TV producer, TV program manager, research assistant, and research associate), and educators.

Secondly, think about your peers and submit names of individuals you would consider exemplary performers. For this project, peers are those who do similar work in OSU Extension. They may be in our office team, do similar work in other locations, and/or serve on program or project teams with you.

Of those you nominate as exemplary performers, I would like recommendations for individuals who should be considered for participation on a team that will learn about competency-based human resources and serve as an expert group providing ideas and feedback throughout the project or in focus group interviews. In addition to being exemplary performers, these individuals should be knowledgeable of their work and the larger organization. They should also be articulate, likely able to discuss and describe competencies needed for their Extension work now and in the future.

The information you provide will be a valuable part of developing a competency model for OSU Extension and implementing part of our new strategic plan. The risks to your participation are minimal. Your nominations are confidential and will only be used by me for this study. These data will not be shared with Extension administration. Information you provide about your work location and job title will only be shared when aggregated and describing the nature of who provided nominations. Names you provide will be combined with other nominations and data to develop a pool of employees for participating in various steps of OSU Extension’s Competency Study.

You are not required to participate in this project. By submitting names you are agreeing to participate in the project and have the information you submit be used for research purposes. There is no penalty if you choose not to participate and you may withdraw your consent to participate at any time prior to submitting your nominations.

In the near future, you will receive another email from me with a link to provide nominations via Zoomerang. This link will be active through December 17th.

If you have any questions about the study, please contact me by phone (614-688-4246) or email (cochran.99@osu.edu) at your convenience. I appreciate your time and contributions to this important project!

Graham Cochran, OSU Extension, Human Resources
Dear County and Unit Directors,

Greetings!

This is a follow up to the email you recently received from me asking you to help with the OSU Extension Competency Study by providing two types of nominations of exemplary employees - supervisory nominations and peer nominations. The information you provide will be a valuable part of developing a competency model for OSU Extension and implementing part of our new strategic plan.

**I would like to remind you that your nominations are confidential and will only be used by the researcher (me) for this study.** These data will not be shared with Extension administration. Information about work location and job title will only be shared when aggregated and describing the nature of who provided nominations. Names you provide will be combined with other nominations and data to develop a pool of employees for participating in various steps of OSU Extension’s Competency Study.

You are not required to participate in this project. By submitting names you are agreeing to participate in the project and have the information you submit be used for research purposes. There is no penalty if you choose not to participate and you may withdraw your consent to participate at any time prior to submitting your nominations.

**If you choose to participate, please click on the link below when you are ready to provide your nominations.** To provide this information, you will need the names of individuals you plan to nominate (both as a supervisor and as a peer). This link will be active through December 17th.

If you have any questions about the study, please contact me by phone (614-688-4246) or email (cochran.99@osu.edu) at your convenience. I appreciate your time and contributions to this important project!

Graham Cochran
OSU Extension, Human Resources

[URL here]
OSU Extension Competency Study
County and Unit Director Nominations of Exemplary Performers

To help us describe the group responding, please answer the following questions.

1. Gender
   - Female
   - Male

2. How many years have you worked for OSU Extension?
   Years of service

3. My work assignment is...
   - North Central Region
   - South East Region
   - West Region
   - State Level (All others not assigned to a region)

Nominations
For this project...

1. Peers are those who do similar work in OSU Extension. They may do similar work in other locations, and/or serve on program or project teams with you.

2. Exemplary performers are individuals whose performance would be described as exceptional or best-in-class. Exemplary performers are those who: (a) stand out and far exceed what is expected of them, (b) are highly motivated to achieve whatever it is they believe is worthy of achievement, and (c) people whose contributions extend or add value to the organization's operation or product.

3. Effective performers are fully successful individuals who are not exceptional or best-in-class, but are performing at a satisfactory or very good level. Also referred to as average performers, this is considered the threshold level below which an employee would not be considered competent for a job.

You may know or work with effective performers who are doing good work but are not exemplary. As you think about individuals to nominate, please note that we
are looking for nominations for those who truly stand out.

The first page of this survey will ask for supervisory nominations. Page two will ask for peer nominations.

---

**Supervisory Nominations**

As a county or unit director, please think about the individuals in your office or unit and submit names of those you view as exemplary performers. Nominations might be in any of the following job groups: office support, program support, technical support, and educators. Titles in each job group are listed below.

---

**4 Nominations for office support group?**

* administrative associate, assistant to director, accountant, information assistant, information associate, office administrative associate, office assistant, office associate, office production assistant, and personnel technician

---

**5 Nominations for program support group?**

* program assistants and program coordinators

---

**6 Nominations for technical support job group?**

* graphic artist, senior graphic designer, systems developer, systems manager, technical editor, technology coordinator, TV producer, TV program manager, research assistant, and research associate

---

**7 Nominations for educator job group?**

* Extension educators
8 Other supervisory nominations?

---

Recommendations for Group Participation

I would like recommendations for individuals who should be considered for participation on a team that will learn about competency-based human resources and serve as an expert group providing ideas and feedback throughout the project or in focus group interviews. In addition to being exemplary performers, these individuals should be knowledgeable of their work and the larger organization. They should also be articulate, likely able to discuss and describe competencies needed for their Extension work now and in the future.

9 Of those nominated above, please list any you would recommend for inclusion in group processes.

---

OSU Extension Competency Study

County and Unit Director Nominations of Exemplary Performers

---

Peer Nominations

As a reminder:

For this project...

1. Peers are those who do similar work in OSU Extension. They may do similar work in other locations and/or serve on program or project teams with you.

2. Exemplary performers are individuals whose performance would be described as exceptional or best-in-class. Exemplary performers are those who: (a) stand out and far exceed what is expected of them, (b) are highly motivated to achieve whatever it is they believe is worthy of achievement, and (c) people whose contributions extend or add value to the organization's operation or product.
3. Effective performers are fully successful individuals who are not exceptional or best-in-class, but are performing at a satisfactory or very good level. Also referred to as average performers, this is considered the threshold level below which an employee would not be considered competent for a job.

You may know or work with effective performers who are doing good work but are not exemplary. As you think about individuals to nominate, please note that we are looking for nominations for those who truly stand out.

10. I am submitting the following names as peers that I view as exemplary performers in their role as a county director or unit director:

   

11. I am submitting the following names as peers that I view as exemplary performers in their role as an educator:

   

Recommendations for Group Participation

I would like recommendations for individuals who should be considered for participation on a team that will learn about competency-based human resources and serve as an expert group providing ideas and feedback throughout the project or in focus group interviews. In addition to being exemplary performers, these individuals should be knowledgeable of their work and the larger organization. They should also be articulate, likely able to discuss and describe competencies needed for their Extension work now and in the future.

12. Of those nominated above, please list any you would recommend for inclusion in group processes.

   

Submit
APPENDIX D
COMPETENCY PROJECT TEAM (CPT) RECRUITMENT LETTER
Dear Colleague,

As you know, OSU Extension released a new strategic plan in May. One of the performance goals in the plan is to “Develop and sustain world-class Extension professionals.” To meet this goal, Strategy #4 is a transition to a competency-based approach to human resources. A first action step in this strategy is development of a competency model.

This is where we need your help. First, please read a little more about how we will be developing a competency model of OSU Extension.

The purpose of this project is to develop and validate a competency model for Ohio State University Extension. The model we develop will contain descriptions and illustrations of core competencies, basic knowledge, skills, attitudes, and observable behaviors that contribute to excellence in the workplace. The project will consist of multiple phases to gather input from key internal stakeholders and individuals from across the organization. You are being asked to participate in this project because we think your input will help identify and describe competencies that employees need to be successful now and in the future. Information you provide will be used to construct a competency model for OSU Extension and help us begin our transition to a competency-based approach to human resource management.

Specifically, I am asking you to help with this project by serving as a member of the Competency Project Team. Composed of 16-20 individuals from throughout the organization, this team will guide OSU Extension’s Competency Project. Initially, I will ask the team to help with:

- reading and discussion to learn about competency-based human resource management;
- reviewing information, generating ideas, and providing feedback on current context, issues and trends for the organization; and
- brainstorming on core competencies and participating in group processes to review and refine lists, definitions and behavioral descriptions.

The initial time commitment is 4-5 work days (approximately 32 hours) over the course of four months. Most of your work can be done from your office by reviewing materials, participating in conference calls, and providing feedback when requested. We also hold 2-3 face-to-face meetings over the course of the project. Any travel-related expenses for participation will be paid by our Human Resources Unit.

The Ohio State University, The United States Department of Agriculture, and County Commissioners Cooperating.
You are not required to participate in this project. If you agree to serve on the Competency Project Team, I will give you a chance to raise any questions and ask you to sign a consent form. Thank you for helping with this important project!

If you have any questions about the project, please contact me by phone (614-688-4246) or email (cochran.99@osu.edu) at your convenience. I appreciate your time!

Sincerely,

Graham Cochran

OSU Extension Human Resources
APPENDIX E
CPT SESSION #1 – AGENDA, PLAN, QUESTIONS,

Competency Project Team - Session #1

Supplies
Name tents, worksheets for each round with question and writing space, handout with definitions and illustrations of competencies, existing competency lists to review, pencils/pens, flip charts, stand(s), markers, tape, dots for prioritization, and digital recorder.

Agenda
Noon Lunch, Getting Acquainted, & Discussion
12:30 Round #1 Trends & Implications
1:30 Round #2 Competency Idea Generation
2:30 Break
2:40 Round #3 Competency Idea Generation
3:40 Break
3:50 Wrap Up
4:00 On the Road

Lunch, Welcome, & Introductions
- Welcome
  - Thank you for agreeing to be part of this study and on the CPT.
  - Each of you is here because of the perspective you bring from your role and work you do as an Extension professional.
  - Important to note that each of you may wear several hats (an educator, supervisor, student, professor, or member of a professional association). This is ok and will be good for the research!
- Introductions
- Setting the stage for the rest of the day with some information and ground rules.

Purpose for the day
1. Idea generation and initial prioritization on trends & implications
2. Idea generation on competencies needed now and in the future, opinions on lists from other studies, and initial prioritization of these ideas

How Information will get used

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• **Trends & Implications** - As a foundation for our competency modeling, we need to develop a list of trends affecting OSU Extension and their implications for competencies needed by Extension professionals. This will help participants (including you) in the research think about competencies needed now and in the future. Identifying trends and their implications will help us create a future-focused competency model. I will take the ideas you provide and combine with other data to generate a draft list of trends and implications.

• **Competencies and descriptions** – I will take this information and combine it with other data to create an initial draft model that we’ll look at next time we meet. Administrative Cabinet will also look at this draft.

**General Information**

• I will be leading the group in a variety of group processes. We will have times when I’ll give you a question and ask you to generate a list of ideas on your own. Then, we’ll share ideas in a round-robin fashion to generate lists on a flip chart. Then we’ll have interactive discussion. I’ll talk more about the ground rules for each part.

• Important – have everyone participate fully = most successful day.

• During some of the activities, we will be recording the discussion. Please make sure you speak up with only one person speaking at a time.

• Reminder that your contributions will be confidential.

• Intense day! Our session will last until 4 p.m. I will take some formal breaks but also feel free to get up, stand, get a drink, or use the restroom as needed.

**Ground rules**

• Leave your stripes at the door (come from a variety of positions)

• For all of our discussions, there is no right or wrong answer. I am interested in all your ideas and comments. Please speak up even if you disagree with someone else.

**Round #1 – Trends & Implications**

Notes: Assistant moderator writes on flip chart, digital recorder for round-robin and group discussion.

1. **(5 min) Introduction & Question** (present verbally, have question on worksheet & flipchart)

You have had a chance to review some background information from OSU Extension’s strategic planning process and ECOP (the Extension Committee on Organization and Policy). You all also are contributing members of OSU Extension. Based on your personal work and experience in Extension, your view of current trends, and what you have reviewed recently about the current context for OSUE, I am interested in your thoughts about trends facing OSU Extension and implications for competencies needed by Extension professionals.
• What are key factors or trends affecting your job? What trends will have the greatest impact on Extension work over the next few years?

• Think about the trends you identify. What are the implications? What effect will this have on what Extension professionals need to be able to know or be able to do? Individual jobs? Organization as a whole?

2. (10 min) Idea generation
   Describe each idea in a few words or phrases. Don’t get hung up on wording. Work independently. Ask for intense effort for the next 10 minutes!
   • Silent, using worksheet (included at the end of the line of questions)

3. (20 min) Record ideas
   Moderator/assistant moderator: Record and number ideas on flip chart, move as quickly as possible, record exactly. Also record discussion with digital recorder.

   During the last few minutes, each of us used our worksheets to list ideas for key factors or trends and their implications. Now I would like to have each of you to share your ideas with other members of the group. This is an important step because it will guide later discussion, show us the ideas we have generated, and stimulate additional ideas. I’ll go around the table asking for ideas one at a time. Summarize in a few words or phrase. After the entire list is on the flip charts, we will have the opportunity to discuss, clarify, and dispute ideas.

   • Round-robin, continue until all ideas are depleted.
   • Discourage discussion, encourage “hitchhiking” (expanding on another’s statement) – add notes to your worksheet if you get new ideas/thoughts.
   • OK to pass; won’t combine ideas at this point unless they are exactly the same.
   • Duplicates – you can skip ideas that are exactly the same but please share anything that is different at all. Slight variations will be important and will help us be creative.

4. (20 min) Group discussion
   Now that we have listed ideas, I want to go back and have a discussion. I encourage you to ask questions or comment on any item, not just your own.
   • Clarify wording, meaning of each item
   • Discuss meaning/logic, other ideas
   • Combine duplicates (or arrange similar ideas under a new heading if participants agree)
   • Don’t discuss value or merit of ideas

   Questions and comments about ________________
   What do you mean by __________________
   Give me an example of ________________
5. (5 min) Prioritization
Now that we have discussed the ideas, I would like your opinions on the most important, highest priority. Please use the five colored dots each of you has to indicate the items you think are highest priority.

- What are the biggest issues and trend that impact Extension work?
- Most important implications to consider?

Round #2 – List of Competencies – Idea generation
Notes: Assistant moderator write on flip chart, digital recorder for round-robin and group discussion.

1. (5 min) Introduction & Question (present verbally, have question on worksheet & flipchart)
During our WebEx meeting and in the supporting materials, you reviewed definitions for competencies and competency models for this study. As a reminder…

- Competency is “a collection of related knowledge, skills, abilities, and other personal characteristics (KSAOs) working in concert to produce outstanding performance.”
- Core competency - a broad set of competencies relevant across job groups. Core competencies will be “the basic knowledge, attitudes, skills, and observable behaviors that lead to excellence in the workplace.”
- Competency model - A narrative description of the critical competencies required for fully successful or exemplary performance in a job, role, or an organization.

(Provide handout with definition of competencies, visual depiction (Tabet, 2003), and an example of what a competency might look like for an unrelated organization.)

For this part of our session, I am interested in your ideas about what competencies are important for OSU Extension professionals. Please think about competencies that predict success, and drive organizational and individual performance. For example:

- What competencies contribute directly to organizational success?
- What competencies constitute top performance?

2. (10 min) Idea generation
Describe each idea in a few words or phrases. Don’t get hung up on wording. Work independently. Ask for intense effort for the next 10 minutes!

- Silent, using worksheet

3. (20 min) Record ideas
Facilitator/Assistant moderator: Record and number ideas on flip chart, move a quickly as possible, record exactly. Also record discussion with digital recorder.

During the last few minutes, each of us used our worksheets to list ideas for competencies. Now I would like to have each of you to share your ideas with other
members of the group. This is an important step because it will guide later discussion, show us the ideas we have generated, and stimulate additional ideas. I’ll go around the table asking for idea one at a time. Summarize in a few words or phrase. After the entire list is on the flip charts, we will have the opportunity to discuss, clarify, and dispute ideas.

- Round-robin, continue until all ideas are depleted.
- Discourage discussion, encourage “hitchhiking” (expanding on another’s statement) – add notes to your worksheet if you get new ideas/thoughts.
- OK to pass; Won’t combine ideas at this point unless that are exactly the same.
- Duplicates – you can skip ideas that are exactly the same but please share anything that is different all. Slight variations will be important and will help us be creative.

4. (25 min) Group discussion
Now that we have listed ideas, I want to go back and have a discussion. I encourage you to ask questions or comment on any item, not just your own.

- Clarify wording, meaning of each item.
- Discuss meaning/logic, other ideas.
- Combine duplicates (or arrange similar ideas under a new heading if participants agree).
- Don’t discuss value or merit of ideas.

Guiding questions for moderator:
Questions and comments about ________________.
In what way is ____ demonstrated?
What do you mean by ________________?
Give me an example of ________________.

I realize that this is only an initial list that we have generated quickly today. To help me understand how you would prioritize these, please spend a few minutes thinking individually about core competencies you believe are critical to driving organizational success.

A couple of things to think about:
- Competency models should be high leverage, that is, they include only the most important competencies that really have an impact on excellent performance.
- 80:20 rule (20% of competencies that drive 80% of performance)

Have individuals identify top ten by going around the room and placing colored dots on flip chart pages.

Round #3 – List of Competencies – Idea Generation
Notes: Assistant moderator writes on flip chart, digital recorder for round-robin and group discussion.
1. (5 min) Introduction & Question
   A number of other organizations, including Extension have adopted lists of competencies or competency models. For this part of our session, I am going to share some of those lists with you to review. The purpose here is to take advantage of existing work that has been done by our colleagues. During this next individual idea step, I will give you extra time to review some existing lists. My goal here is for you to quickly skim them and jot some notes when something stands out for you.

   Again, please think about competencies that predict success, and drive organizational and individual performance in OSU Extension. Based on the lists you reviewed were there words or phrases that stood out? From the lists you skimmed:
   • What competencies contribute directly to organizational success for OSU Extension?
   • What competencies constitute top performance in OSU Extension?

   Ask group to:
   Focus on ideas they see in other models/lists, concepts that jump out at them as illustrating competencies for OSU Extension. The focus here is not on comparing what others say or looking at competencies that everyone else uses! Make notes on the pages, circle concepts that jump out, add to your worksheet.

2. (15 min) Individual Review and Idea Generation
   Note each idea in a few words or phrases. Work independently. Ask for intense effort for the next 15 minutes!
   • Silent, using worksheet

3. (15 min) Record ideas
   Facilitator/Recorder: Record and number ideas on flip chart, move as quickly as possible, record exactly. Also, record discussion with digital recorder.

   During the last few minutes, each of us used our worksheets to list ideas from other organization’s competency lists that we think are important for OSU Extension. Now I would like to have each of you to share your ideas with other members of the group. I’ll go around the table asking for ideas one at a time. Summarize what you noted from other lists in a few words or phrase. After the entire list is on the flip charts, we will have the opportunity to discuss, clarify, and dispute ideas.

   • Round-robin, continue until all ideas are depleted.
   • Discourage discussion, encourage “hitchhiking” (expanding on another’s statement) – add notes to your worksheet if you get new ideas/thoughts.
   • OK to pass; Won’t combine ideas at this point unless that are exactly the same.
• Duplicates – you can skip ideas that are exactly the same but please share anything that is different. Slight variations will be important and will help us be creative.

4. (20 min) Group discussion
   Now that we have listed ideas from other competency models, I want to go back and have a discussion. I encourage you to ask questions or comment on any item, not just your own.
   • Clarify wording, meaning of each item.
   • Discuss meaning/logic, other ideas.
   • Combine duplicates (or arrange similar ideas under a new heading if participants agree).
   • Don’t discuss value or merit of ideas.

   Questions and comments about ________________.

   Follow up questions:
   Why did you pick __________?
   In what way is _____________ demonstrated?
   Give me an example of ____________.

5. (5 min) Prioritization
   I realize that this is only an initial list that we have generated quickly today. To help me understand how you would prioritize these, please spend a few minutes individually about core competencies you believe are critical to driving organizational success.

   A couple of things to think about:
   • Competency models should be high leverage, that is, they include only the most important competencies that really have an impact on excellent performance.
   • 80:20 rule (20% of competencies that drive 80% of performance)

   Have individuals identify top ten by going around the room and placing colored dots on flip chart pages.

Wrap Up & Next Steps
   • Questions about the process today or final comments?
   • Next steps
   • Thank you!
CPT Idea Worksheets for Modified Nominal Group Process

**CPT Idea Worksheet - Round #1**

**Question**
Based on your personal work and experience in Extension, your view of current trends, and what you have reviewed recently, I am interested in your thoughts about trends facing OSU Extension and implications for competencies needed by Extension professionals.

- What are key factors or trends affecting your job? What trends will have the greatest impact on Extension work over the next few years?

- Think about the trends you identify. What are the implications? What effect will this have on what Extension professionals need to be able to know or be able to do? Individual jobs? Organization as a whole?

**NOTES**

<table>
<thead>
<tr>
<th>Trends</th>
<th>Implications</th>
</tr>
</thead>
</table>
CPT Idea Worksheet - Round #2

Question
For this part of our session, I am interested in your ideas about what competencies are important for OSU Extension professionals. Please think about competencies that predict success, and drive organizational and individual performance. For example:

- What competencies contribute directly to organizational success?
- What competencies constitute top performance?

NOTES

CPT Idea Worksheet - Round #3

Question
Again, please think about competencies that predict success, and drive organizational and individual performance in OSU Extension. Based on the lists you reviewed were there words or phrases that stood out? From the lists you skimmed:

- What competencies contribute directly to organizational success for OSU Extension?
- What competencies constitute top performance in OSU Extension?

NOTES
APPENDIX F
ADMINISTRATIVE CABINET GROUP INTERVIEW PLAN AND GUIDING QUESTIONS

Administrative Cabinet Group Interview

Setting the Stage (overview/plan for the day)

- Thank you – Much is happening right now…you have already been working hard this morning. I mentioned the last time we met that this work (developing a competency model) is more important than ever in a changing environment.

- Where I am now with this research –
  - Gathered existing data on trends, competencies and competency modeling.
  - Conducted interview with HR Leader to gather information about competency modeling for OSUE.
  - Held a ½ day session with our Competency Project Team with a focus on generating ideas about trends, implications, and competencies
  - Synthesized and integrated some of this data to create a draft that you are looking at today.

- Purpose for today - To refine the draft competency model and begin aligning with strategic direction of the organization.
  - Opinions and ideas about draft trends and implications
  - Opinions and ideas to refine and add detail to draft competency model (list)

- What I am asking today?
  - I’ll use specific questions to guide our discussion but in general, I am looking for your initial reactions, opinions on what is there, what isn’t, detail that can be added, etc.
  - Future-focused – that is why we will be talking about trends and implications and why this group is so important.
  - Strategic direction - Your opinions and ideas will help make sure the competencies we identify and describe are aligned with those need to move the organization where we need to go.
  - This is not the last time you will see something – will be back with the group towards the end of the study for another opportunity to revise and refine.
• How information will get used and next steps:
  o Data you provide today and additional data from the Competency Project
    Team (meeting Monday) will be used to refine the trends and implications
    as well as the list of competencies.
  o I will use our draft list of competencies and existing models to develop a
    more refined model that will go to focus groups of employees.

• Group Interview Process & Ground Rules
  o This is a research project; will be recording discussion.
  o Speak up.
  o For our discussion today, there are no right or wrong answers. I am
    interested in all your comments and ideas. Please speak up even if you
    disagree with someone else.
  o Not taking a formal break – please get up if you need to (food, restroom,
    stretch).
  o Two rounds of questions (trends/implications & competencies).

Round #1
You have a draft list of trends for OSU Extension and implications for Extension
professionals. This will serve as a foundation for the competency model, helping make
sure it is future-focused. I have a series of questions to guide the group in discussion
about this draft list.

Questions:
  1. What are your initial reactions or opinions about the draft list of trends and
     implications?

*Focus on trends…

  2. Does it cover all the trends that you think are important? If not, what should be
     added? Tell me more about why you think that should be added?

  3. Should any be removed or combined? What should be changed? Why?

*Transition – implications
Think about the draft list of trends and suggestions so far about additions or changes.
Next we want to look at the implications.

  4. What are the implications of the trends we have discussed for Extension
     professionals, for Extension work?

  5. Does the list of implications fit with trends on the draft list and others we have
discussed? If not, what is missing?
6. Should any implications be removed or combined? What should be changed? Why?

7. It is important for this list to make sense for OSU Extension (the language, how it is organized, etc.). Are there other suggestions for formatting or specific edits you have for the trends and implications? (Note: review each part of the draft if needed.)

Round #2 - Competencies
You have a draft list of competencies for OSU Extension professionals. This is a rough list with potential competency names in the left column and supporting concepts on the right. This list is an initial synthesis of ideas generated by the Competency Project Team. For this list we’ll focus more on the ideas and concepts, not on how it is presented.

As a reminder…
- Competency is “a collection of related knowledge, skills, abilities, and other personal characteristics (KSAOs) working in concert to produce outstanding performance.”
- Core competency - a broad set of competencies relevant across job groups. Core competencies will be “the basic knowledge, attitudes, skills, and observable behaviors that lead to excellence in the workplace.”
- Competency model - A narrative description of the critical competencies required for fully successful or exemplary performance in a job, role, or an organization.
- Trends and implications – future oriented!

For this part of our session, I am interested in your opinions and ideas about the draft list. Please think about competencies that predict success, and drive organizational and individual performance for our employees. For example:
- What competencies contribute directly to organizational success?
- What competencies constitute top performance?

I have a series of questions to guide the group in discussion about this draft list.

Questions:
1. Any initial reactions to the draft list?

2. Do you think that these are representative of the competencies that exemplary performers exhibit? If not, what is missing? What is your rationale?

3. Are there competencies included on this list that should be eliminated, combined, or subdivided? What should be changed? Why?

4. Are there any that are not clear or should be worded differently? Specific edits you suggest?
5. What ideas do you have about actions or behaviors that would describe the competencies you think are important?

6. Adding detail…How would you describe ______? In what way is ___ demonstrated? What do you mean by_____? Give me an example of ____? What would that look like?

**Wrap Up**

- Thank you
- Next steps
APPENDIX G
CPT SESSION #2 – AGENDA, PLAN, AND QUESTIONS

OSU Extension Competency Project Team Session #2

Supplies
Handouts (agenda), name tents, masking tape, pencils/pens, flip charts, sticky notes, markers, and digital recorder.

Agenda
Noon   Lunch, Welcome & Introductory Activities
12:30  Trends and Implications – Group interview
1:30   Competencies – Group Interview
2:30   Break & Silent Idea Generation (Supporting Concepts)
2:50   Competencies – Review and Discussion of Supporting Concepts
3:50   Wrap up
4:00   On the road

Lunch, Welcome, and Introductions
• Welcome
• Introductions
• Where I am now with this research:
  o Gathered existing data on trends, competencies and competency modeling
  o Conducted interview with HR Leader to gather information about competency modeling for OSUE.
  o Held a ½ day session with you (our focus was on generating ideas about trends, implications, and competencies)
  o Synthesized and integrated some of this data to create a draft that you are looking at today.
  o Met with Administrative Cabinet.

Purpose for the day
Really are continuing our work from last session…
1. Discuss and provide feedback on Trends and Implications Draft 1 (focus group interview).
2. Discuss and refine OSUE Competency Model Draft 1, competency list developed from work last session (focus group interview).
3. Using categories or “boxes” group refines, idea generation (modified nominal group process) on definitions/statements/actions (generic or specific is ok). Will continue to gather more from focus groups with employees.

How Information will get used
- Trends & Implications – will be revised and used as a foundation for next steps.
- Competencies and descriptions – will be integrated with other data to create OSUE Competency Model Draft 2 – to focus group interviews.

General Information (some a repeat)
- I will be leading the group in a variety of group processes.
- Important – have everyone participate fully = most successful day.
- During some of the activities, we will be recording the discussion. Please make sure you speak up with only one person speaking at a time.
- Reminder that your contributions will be confidential.
- Intense day! Our session will last until 4 p.m. I will take some formal breaks but also feel free to get up, stand, get a drink, or use the restroom as needed.

Ground rules
- Leave your stripes at the door (come from a variety of positions).
- Confidentiality for the group – what we say here stays here.
- For all of our discussions, there is no right or wrong answer. I am interested in all your ideas and comments. Please speak up even if you disagree with someone else.

**Round #1 – Trends & Implications**
Notes: Focus group interview format; list trends and implications on flip chart for group to see; assistant moderator take notes and record with digital recorder.

You have a draft list of trends for OSU Extension and implications for Extension professionals. It should look familiar! I used your ideas along with an interview with the HR Leader and a review of current literature, and current context information for Extension (strategic plan, etc.). This list will serve as a foundation for the competency model, helping make sure it is future-focused.

**TIME TO READ**

I have a series of questions to guide the group in discussion about this draft list.

Questions:
1. What are your initial reactions or opinions about the draft list of trends and implications?

2. Does it cover all the trends that you think are important? If not, what should be added? Tell me more about why you think that should be added?
3. Should any be removed or combined? What should be changed? What is your rationale?

*Transition – implications
Think about the draft list of trends and suggestions so far about additions or changes. Next we want to in detail at the implications, thinking about the implications of the trends we have discussed for Extension professionals, for Extension work.

4. Does the list of implications fit with trends on the draft list and others we have discussed today? If not, what is missing?

5. Should any implications be removed or combined? What should be changed? Why/What is your rationale?

6. It is important for this list to make sense for OSU Extension (the language, how it is organized, etc.). Are there other suggestions for formatting or specific edits you have for the trends and implications? (Note: review each part of the draft if needed.)

7. Ending our discussion on trends and implications – anything I (we) missed?

**Round #2 – Competencies**
Notes: modified focus group interview format, moving into idea generation format for Round #3; sheet of paper or flip chart paper taped up for each competency (add to these, move around, or combine based on group discussion); number these pages when we get done with group discussion and use numbers on sticky notes with definitions/statements generated in Round #3.

**Introduction**
Working on Draft #2, I decided that it was most important for now to assemble/synthesize the data I gathered on competencies from the organization (mostly from you) before using existing data to refine. This will give us a chance to finish work that we began last time we met.

Created a simple list of what I saw based on CPT ideas and prioritization, HR leader, and OSUE context information. The OSUE Competency Model Draft 2 is a chart with potential competencies and supporting concepts if I found something to help define or clarify. Let’s think about the potential competencies listed as a name for the “box or cloud or constellation” of things that we think are important. I don’t want to get stuck today on the exact term, on what we will use to label the “box,” or on how many competencies we have.
It is more important today to the group to discuss a set of boxes (however they may be labeled) and to describe each one as much as we can. To help, the Assistant Moderator and I may list several terms that might get used to describe this set of competencies in the end.

**Set the stage**
- Read quotes from Lucia and Lepsinger (1999, pages 154 and 157) – helping focus on things that we have in common.
- During the current research but also later, we will work on behaviors that will help illustrate differences.

Picking up where we left off….didn’t have a chance last time to evaluate, clarify, rearrange, etc. Keep in mind the trends and implications we have discussed and our focus on what make difference, illustrating exemplary performance.

**Questions:**
1. Any initial reactions to the draft list?
2. Do you think that these are representative of the competencies that exemplary performers should exhibit? If not, what is missing? What is your rationale?
3. Are there competencies included on this list that should be eliminated, combined, or subdivided? What should be changed? Why?
4. Adding detail…(Make sure to discuss creativity, problem-solving, visionary, and understanding systems because these competencies lacked detail in Draft 1.)
   - What does __________ mean?
   - How would you describe __________?
   - In what way is ____ demonstrated?
   - Give me an example of ___?
   - What would that look like?

Next – idea generation like we did last time. But will focus on these categories or “boxes” we have developed. I’ll give you the instructions and we’ll take a short break, and then have you come back and begin the silent phase.

**Round #3 - Definitions or Statements for Competencies – Idea Generation**
Notes: digital recorder for round-robin and group discussion.

1. (5 min) Introduction & Question (present verbally, have question on worksheet & flipchart)

The goal here is to add supporting information to our boxes. Think about definitions, statements, or actions that would provide supporting information and describe the “box” we have up there.
There are several ways you can think about this. Use whichever method works best for you.
- Statements to illustrate specific competencies that are part of the “box.”
- Specific examples of how you would demonstrate this competency (I…).
- Or, specific examples of what you have seen others doing (They…).

What ideas do you have about competency statements, examples, actions, or behaviors that would describe the competencies (groups) we have listed? Examples:
- Communicates effectively; Effectively listens to others
- Deliver effective oral presentation
- Listens effectively and clarifies as needed
- Has the knowledge and skills to be viewed as an expert in xxx (e.g., animal welfare)
- Understands Extension teaching
- Select and use appropriate teaching strategies for my audience

2. (~20 min) Idea generation (including a short break)
- Silent! Intense effort! Use the worksheet if some examples will help you. Don’t get hung up on wording. Work independently.
- Write ideas on sticky notes. Number each note to match the competency number on the wall.
- Focus – while you are gone on break, I’ll divide the group in half and would like you to focus on the groups of competencies that I assign to each of you. You are welcome to write ideas down you may have on other sets but this way we will make sure we generate some ideas for all of them.
- When you are done, bring your sticky notes up – the Assistant Moderator and I will help get them in the right box.

BREAK

RECORD – Sticky notes, flip charts & digital recorder
Note: Ask question #3 and #4 for each competency group/“box” before moving to the next competency.

(60 min)

3. Read ideas collected on sticky notes.
   Moderator/assistant moderator: Record and number ideas, move as quickly as possible, add notes if needed to clarify.
During the last few minutes, each of us used our worksheets to list definitions, statements or actions to help describe the groups of competencies. The Assistant Moderator is going to read the ideas generated for each “box” or group of competencies.

This is an important step because it will guide later discussion, show us the ideas we have generated, and stimulate additional ideas.

After the entire list is read, we will have the opportunity to discuss, clarify, and dispute ideas.

- Round-robin, reading until all ideas are depleted (think about what you are hearing).
- Discourage discussion, encourage “hitchhiking” (expanding on another’s statement) – If the ideas [Assistant Moderator] reads stimulate another idea, write it down on a sticky note and we will add it to the list.

4. Group discussion
Now that we have listed ideas, I want to go back and have a discussion. I encourage you to ask questions or comment on any item, not just your own.

- Clarify wording, meaning of each item.
- Discuss meaning/logic, other ideas.
- Combine duplicates (or arrange similar ideas under a new heading if participants agree).
- Don’t discuss value or merit of ideas.

What do you mean by ______________?
Give me an example of ______________.
Questions and comments about ______________.

Additions?

Wrap Up & Next Steps
- Questions about the process today or final comments?
- Next steps:
  - Draft #2 – developed using information, including ideas and feedback you have given me so far, Administrative Cabinet, strategic plan, and existing models.
  - Send back to you for comments electronically.
  - Conduct focus groups.
  - CPT – survey and then part of review of the final draft with Admin Cabinet.
- Thank you!
APPENDIX H
FOCUS GROUPS WITH INCUMBENTS – AGENDA, PLAN, AND QUESTIONS

OSU Extension Competency Study Focus Groups

Supplies
Extra consent forms, handouts (agenda, OSUE Trends and Implications Draft 2; OSUE Competency Model Draft 2), supplies for teaching background on competency-based HR management, name tents, masking tape, pencils/pens, flip charts, sticky notes, markers, and digital recorder.

Agenda
Noon Welcome, Lunch & Introductions
   Background Information & Discussion
12:30 Review Draft #2 OSUE Competency Model
   Break
1:00 Group Interview
2:30 Idea Generation – Key Actions
3:30 On the road

*Adapt schedule for focus groups that start at 10 a.m.

Lunch, Welcome, & Introductions
• Welcome
• Introductions

Purpose for the day
1. Review and discuss competencies, competency-based HR management and this research – set the stage.
2. Discuss and gather feedback on Draft #2 of the OSU Extension Competency Model.
3. As time allows, generate some additional ideas on key actions that describe the competencies.

**Realize this is a challenging time in the organization….

Review PowerPoint & discuss
• Overview of OSUE Study and their role
• Competencies and competency-based HR management
• Definitions for this project

**TODAY**
• Looking for their input as exemplary performers.
• Want to be forward thinking as much as we can – think about the trends & their implications. Questions?

**General Information**
• Research – reminder that I will be using your ideas, recording, etc. Questions?
• I will be leading the group in a variety of group processes.
• Important – have everyone participate fully = most successful day
• During some of the activities, we will be recording the discussion. Please make sure you speak up with only one person speaking at a time.
• Reminder that your contributions will be confidential.
• Intense few hours! Our session will last until 3:30 p.m. I will take some formal breaks but also feel free to get up, stand, get a drink, or use the restroom as needed.

**Ground rules**
• Leave your stripes at the door (come from a variety of positions).
• Confidentiality for the group – what we say here stays here.
• For all of our discussions, there is no right or wrong answer. I am interested in all your ideas and comments. Please speak up even if you disagree with someone else.
• Questions before we dig in?

**Round #1 - Competencies**
Notes: focus group interview format, assistant moderator takes notes, and record with digital recorder.

I have passed out the *OSUE Competency Model Draft 2*. This is a draft that will continue to evolve based on your input and others. Use the copy you have to read and write on for our discussion. I’ll share one quote to set the stage and then give you some time for reading and reflection and to take some notes.

**Set the stage**
• Read quote from Lucia and Lepsinger (1999, p. 157), helping focus on things that we have in common.

**BREAK**

**General Questions:**
• Initial reactions to how well the model describes the most important aspects of your work? Or, do you think these are representative of what exemplary performers in OSUE exhibit?

• As you looked at the definitions and key actions, to what extent did they accurately describe your work?

• To what extent are the competencies clear and the name or label used make sense for what is described?

• Are there competencies that should be added? (What is missing? What should be changed? Why?) What other ideas do you have about competencies that should be added to make the model more applicable to your work? Why?

• Are there competencies included on this list that should be eliminated? Why?

• It is important for this list to make sense for OSU Extension (the language, how it is organized, etc.). Are there other suggestions for specific edits or formatting or you have?

• Ending our discussion – anything I (we) missed?

Round #2 – Additional Statements for Competencies – Idea Generation
Notes: digital recorder for round-robin and group discussion; one flip chart page for each competency.

1. (5 min) Introduction & Question (present verbally, have question on flipchart)

   The goal here is to add more (or better) key actions that describe the competencies we have listed. We’ll do this through working independently for a few minutes to write down some ideas or jot a note about a story and then share as a group.

   What ideas do you have about key actions or behaviors that would describe the competencies we have listed? There are several ways you can think about this. Use whichever method works best for you.
   • Actions or statements to illustrate specific competencies
   • Specific examples of how you or others have demonstrated this competency (I…They....)
   • Story

   The goal is to look through the list of competencies and write down as many ideas that come to mind when you think about each. Everyone will be different. You may have several ideas for some, none for others, etc.

2. (~10 min) Idea generation
   • Silent! Intense effort! Don’t get hung up on wording. Work independently.
• Write ideas on sticky notes. Number each note to match the competency number on the flip chart.

**RECORD – flip chart, sticky notes, digital recorder**

3. Share ideas for key actions or stories
   Moderator/assistant moderator: Record ideas, move a quickly as possible, add notes if needed to clarify

   During the last few minutes, each of us brainstormed on key actions or stories to help describe the groups of competencies. For each competency:
   • Round-robin, reading/sharing until all ideas are depleted (think about what you are hearing).
   • Discourage discussion, encourage “hitchhiking” (expanding on another’s idea) – If someone’s idea stimulate another idea, write it down on a sticky note and we will add it to the list.
   • Additional discussion? Clarify? (What do you mean by ... Give me an example of …)

Now that we have shared a number of ideas or stories, I want to go back and have a see if you have any final questions or comments.

**Wrap Up & Next Steps**
• Reactions to today? Questions or final comments?
• Reminder on travel
• Thank you!
APPENDIX I
PHASE III VALIDATION SURVEY — E-MAIL INVITATION AND SURVEY INSTRUMENT

Phase III Survey - Advance E-mail
Subject: OSU Extension Competency Study – Please participate!

Dear Colleague,

Greetings!

Please note: Some of you may have received an email request earlier today from Iowa State to complete a survey about “Extension Educational Professional Competencies.” I was not aware of this and want to make sure you know that, even though they both address competencies in Extension, the two surveys are not connected. The request below is for survey that is specifically for OSU Extension.

One of the strategies in OSU Extension’s strategic plan is a transition to a competency-based approach to human resources. During this time of change in our organization, a new and more focused approach to working with employees is more important than ever. A first action step in this strategy is development of a competency model. Since December, I have been conducting research to develop a draft competency model. I used information from existing research, involved Administrative Cabinet, and involved employees across the organization on a Competency Project team and in focus group interviews.

During an early phase of my research, you were identified as an exemplary employee, an individual whose performance would be described as exceptional or best-in-class. Now I am asking you to help with this study by reviewing some information and completing a survey. Participation will include:

4. Reviewing two documents that were developed out of initial phases of my research. They are Trends and Implications Draft 2 (http://extensionhr.osu.edu/resources/TrendsImplicationsDraft2.pdf) and OSUE Competency Model Draft 3 (http://extensionhr.osu.edu/resources/OSUECompetencyModelDraft3.pdf). Please download using the hotlinks or URLs provided. One is a list of trends and their implications for Extension employees. These trends and implications should serve as
a foundation for our competency model. The survey will ask for your opinions on the importance of the implications listed. The second document is Draft 3 of the OSU Extension Competency Model. You will be asked to provide opinions on the level of importance for each competency overall, the importance for each action statement, and any specific suggestions you may have regarding clarity or changes. Finally, you will be asked to choose three (3) competencies that will be the most important over the next three years for your work.

5. Completing a survey using a link in an email you will receive from me in the next 24 hours.

Reviewing the documents and completing the survey will take approximately 90 minutes and will require concentration. I recommend that you read and respond to the survey when you are able block off time to focus and avoid interruptions. I also realize this is a significant amount of time in your busy schedule. The information you provide will be a valuable part of developing a competency model for OSU Extension and implementing part of our strategic plan.

The risks to your participation are minimal. **Your responses are confidential and will only be used by the researcher (me) for this study.** These data will not be shared with Extension administration. Although every effort to protect confidentiality will be made, no guarantee of Internet security can be given, as, although unlikely, transmissions can be intercepted and IP addresses can be identified. I will ask for your name.#. This allows me to skip asking you to provide demographic information. Demographic information will only be shared when aggregated and describing the nature of who responded. You are not required to participate in this project. By completing the survey you are agreeing to participate in the project and have the information you submit be used for research purposes. There is no penalty if you choose not to participate and you may stop participating at any time by simply closing your browser and not submitting your responses.

In the next 24 hours, you will receive another email from me with a link to a survey via Zoomerang. If you don’t receive this email, please let me know. The survey will be open through March 27th.

If you have any questions about the study, please contact me by phone (614-688-4246) or email (cochran.99@osu.edu) at your convenience. I appreciate your time and contributions to this important project!

Graham Cochran
OSU Extension Human Resources
Phase III Survey - E-mail Invitation with Link to Complete Survey
Subject: OSU Extension Competency Study – Please contribute!

Dear Colleague,

Greetings!

This is a follow up to the email you recently received from me asking you to help with the OSU Extension Competency study by reviewing a draft competency model for our organization and completing a survey. I realize there is a lot going on right now in our organization but encourage you to take the time to participate. The information you provide will be a valuable part of developing a competency model for OSU Extension that will help us as we move into the future.

I would like to remind you that your responses are confidential and will only be used by the researcher (me) for this study. These data will not be shared with Extension administration. Although every effort to protect confidentiality will be made, no guarantee of Internet security can be given, as, although unlikely, transmissions can be intercepted and IP addresses can be identified. Demographic information will only be shared when aggregated and describing the nature of who responded. Your response to questions in the survey will be combined with other employees’ responses and used to create Draft 4 of the OSU Extension Competency Model.

You are not required to participate in this project. By completing the survey you are agreeing to participate in the project and have the information you submit be used for research purposes. There is no penalty if you choose not to participate and you may stop participating at any time by simply closing your browser and not submitting your responses.

If you choose to participate, please click on the link below when you are ready to complete the survey. This survey will be open through March 27th.

If you have any questions about the study, please contact me by phone (614-688-4246) or email (cochran.99@osu.edu) at your convenience. I appreciate your time and contributions to this important project!

Graham Cochran
OSU Extension Human Resources

[Survey URL here]
OSU Extension Competency Study

Background Information

Since December, I have been conducting research to develop a competency model for OSU Extension. In my initial email asking you to complete this survey, I attached two documents:

1. Draft 2 Trends and Implications [hotlink]
2. Draft 3 OSUE Competency Model [hotlink]

*Please use the hotlinks to print and review these documents if you have not already done so.*

These two documents were developed using:

- A review of numerous studies on trends, implications, and competencies for organizations and specifically for Extension organizations.
- A review of current context information for OSU Extension including OSU Extension's strategic plan and supporting data.
- Interviews with Administrative Cabinet.
- Interviews with the Competency Project Team and focus groups (both composed of employees representing all job groups, work locations, etc.)

During an early phase of my research, you were identified as an exemplary employee, an individual whose performance would be described as exceptional or best-in-class. As an exemplary performer in the organization, I would like your opinion. This is especially important because we want our competency model to describe the critical competencies required for exemplary performance. We want to describe what you do.

Survey Instructions

If you have reviewed the two documents mentioned above, I expect this entire survey to take you no more than 45 minutes to complete. You may want to print and have both documents on hand for reference as needed.

The survey will have 16 pages and the footer at the bottom of the page will tell you which page you are on. You can use your back button to go forward and backward through the survey until hitting submit on the final page.

If you encounter technical issues, please let me know and I'll provide another link for you to use to complete the survey.
1 OSU Name.

Because of technical issues with Zoomerang in the past few months, I am asking for your name. This allows me to skip asking you to provide demographic information. As mentioned in earlier messages, your responses are confidential and will only be viewed by me as the researcher. Demographic information will only be shared when aggregated and describing the nature of who responded.

For confidential tracking purposes, please provide your OSU name. (for example, ccowchan.53)

Submit

Page 1 of 10

OSU Extension Competency Study

Trends & Implications
Trends facing OSU Extension and the implications for Extension work are an important foundation for developing a competency model for OSU Extension today but that will also be relevant in the future. You have had a chance to review the Draft 2 Trends and Implications document. In this section, you will be asked to indicate how important you think each of the implications will be for your Extension work over the next three years.

2 How important do you believe the following factors will be to your Extension work over the next three years?

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OSU Extension Competency Study

Core Competencies

Core competencies are a broad set of competencies relevant across job groups. They are the basic knowledge, attitudes, skills, and observable behaviors that lead to excellence in the workplace. A competency model is a narrative description of the critical competencies required for successful or exemplary performance. Competency models should be high leverage, that is, they include only the most important competencies that really have an impact on excellent performance.

You have had a chance to review the Draft 3 OSU Extension Competency Model. In this section you will be asked to indicate how important you think each of the competencies is as well as the key actions that describe them.

There will be one page for each competency in the current model and a final ending page.

On each page, enter your ratings and any additional comments you may have with respect to clarity and suggestions for changes. The model should make sense to you, so I am particularly interested in suggestions you have about areas of concern.
OSU Extension Competency Study

4 Communication

Communicates effectively with others using the range of methods and tools available in today's environment; in both individual and group settings; and with co-workers, clientele, and other stakeholders.

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5 Use the following scale to rate the importance of each key action for this competency.

Key action: Delivers clear messages when speaking.

Additional comment about clarity or suggestions for changes:

Key action: Creates clear and concise written communication.

Additional comment about clarity or suggestions for changes:
308

OSU Extension
Competency Study

7 Continuous learning

Demonstrates lifelong learning; learns about self; continually improves skills and capabilities; actively identifies new areas for growth; is willing to learn new things; takes the time to learn and apply newly gained knowledge and skills on the job.

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8 Use the following scale to rate the importance of each key action for this competency.

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Key action: Realistically assesses one's strengths and weaknesses and their impacts on others.

1 2 3 4 5

Additional comment about clarity or suggestions for changes:

Key action: Seeks and accepts feedback and uses other sources of information to improve.

1 2 3 4 5

Additional comment about clarity or suggestions for changes:

Key action: Actively identifies new areas for learning and sets goals.

1 2 3 4 5

Additional comment about clarity or suggestions for changes:

Key action: Seeks out opportunities for professional development that directly impact Extension work in a positive way.

1 2 3 4 5

Additional comment about clarity or suggestions for changes:

Key action: Applies new knowledge or skills to practical use on the job; further learning through trial and error.

1 2 3 4 5

Additional comment about clarity or suggestions for changes:

9 Comments about this competency overall:

Page 5 of 18
OSU Extension Competency Study

10 Customer service

Works constantly to provide superior services to OSU Extension clientele, making each interaction a positive one. Understands and delivers quality service through a customer-focused mindset that acknowledges the importance and value of the person being served; acts accordingly; dedicated to meeting expectations and requirements of internal and/or external customers; uses customer feedback to improve.

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11 Use the following scale to rate the importance of each key action for this competency.

Key action: Demonstrates concern for satisfying one’s own internal and/or external clientele.

Additional comment about clarity or suggestions for changes:

Key action: Listens and responds to clientele needs.

Additional comment about clarity or suggestions for changes:

Key action: Seeks to better understand clientele needs via formal and informal research and/or anticipates future clientele needs based on trends.

Additional comment about clarity or suggestions for changes:
Key action: Delivers friendly and courteous service.

Additional comment about clarity or suggestions for changes:

Key action: Provides a response that is timely and meets clientèle needs.

Additional comment about clarity or suggestions for changes:

Key action: Goes the extra mile to exceed clientèle expectations.

Additional comment about clarity or suggestions for changes:

Key action: Looks for and makes continuous improvements.

Additional comment about clarity or suggestions for changes:

12 Comments about this competency overall:

---

Submit

OSU Extension Competency Study
13 Diversity

Recognizes, understands, and appreciates differences and the impact they may have in the workplace, in interactions with clientele, or in Extension programming; works effectively with individuals having diverse styles, abilities, motivations, and backgrounds (including cultural differences); has the commitment and ability to include one’s own as well as others’ different cultural perceptions, assumptions, norms, beliefs, and values.

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14 Use the following scale to rate the importance of each key action for this competency.

Key action: Conveys respect for different perspectives (cultural, religious, socioeconomic, educational, gender, sexual orientation, and other differences).

Additional comment about clarity or suggestions for changes:

Key action: Identifies, understands, and appreciates needs of a diverse workforce and clientele.

Additional comment about clarity or suggestions for changes:

Key action: Recognizes lack of knowledge and seeks information and/or support when needed.

Additional comment about clarity or suggestions for changes:

Key action: Expands own awareness; learns about issues of diversity and multiculturalism as they relate to one’s role and the organization.

Additional comment about clarity or suggestions for changes:

Key action: Modifies behavior to help others feel welcome and accepted.
15. Comments about this competency overall:

OSU Extension Competency Study

16. Flexibility and change

Demonstrates agility and adaptability, maintaining effectiveness when experiencing changes in the work environment or conditions affecting OSU Extension (e.g., social, economic, or political); has an openness to new and different ways of doing things; accepts change and is willing to deal with ambiguity; adjusts to new work structures, programs, or processes; recognizes need to change and is willing to take risks.

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17 Use the following scale to rate the importance of each key action for this competency.

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Key action: Seeks to understand changes.
1  2  3  4  5

Additional comment about clarity or suggestions for changes:

Key action: Approaches changes positively (treats changes as opportunities for growth; focuses on the beneficial aspects; speaks positively and advocates for change when it promotes organizational goals).
1  2  3  4  5

Additional comment about clarity or suggestions for changes:

Key action: Remains open to different ideas and approaches (is able to see the merits of other ideas; has an open mind).
1  2  3  4  5

Additional comment about clarity or suggestions for changes:

Key action: Recognizes the need for change and proposes solutions (new approaches or methods).
1  2  3  4  5

Additional comment about clarity or suggestions for changes:

Key action: Adjusts behavior (quickly modifies behavior to fit the circumstances when situations change; acquires new knowledge or skills if needed; does not persist with ineffective behavior).
1  2  3  4  5

Additional comment about clarity or suggestions for changes:

Key action: Adapts to handle unexpected implementation challenges.
1  2  3  4  5

Additional comment about clarity or suggestions for changes:
18 Comments about this competency overall:

OSU Extension Competency Study

19 Interpersonal relationships

Successfully interacts with diverse individuals and groups, creating partnerships, networks, and dynamic human systems; relates well to all kinds of people. Builds trust by interacting with others in a way that gives them confidence in one’s intentions and OSU Extension. Develops and uses a network of collaborative relationships with internal and external contacts to leverage efforts and accomplish results. Handles conflict constructively.

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20 Use the following scale to rate the importance of each key action for this competency.

Key action: Understands the importance partnerships play in the success of Extension work.

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Additional comment about clarity or suggestions for changes:

Key action: Networks with others (builds and maintains relationships with others).
Additional comment about clarity or suggestions for changes:

Key action: Develops partnering relationships to support Extension work.
Additional comment about clarity or suggestions for changes:

Key action: Maintains confidentiality (keeps private or sensitive information about others confidential).
Additional comment about clarity or suggestions for changes:

Key action: Assesses interpersonal situations (e.g., conflict in one-on-one or group settings) and adapts accordingly.
Additional comment about clarity or suggestions for changes:

Key action: Diffuses high-tension situations.
Additional comment about clarity or suggestions for changes:

Comments about this competency overall:

Page 9 of 18
OSU Extension Competency Study

22 Knowledge of Extension

Understands the history and philosophy of the land-grant mission and OSU Extension's role, situated in the College of Food, Agricultural, and Environmental Sciences and The Ohio State University; has a basic knowledge of current organizational structure, function, and funding as well as formal and informal culture; puts knowledge into practice.

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23 Use the following scale to rate the importance of each key action for this competency.

Key action: Articulates the land-grant mission and OSU Extension's role in that mission.

1

Additional comment about clarity or suggestions for changes:

Key action: Acts or makes decisions with an understanding of current structure and function for OSU Extension and one's role in the organization.

1

Additional comment about clarity or suggestions for changes:

Key action: Knows current programs and priorities and informs clientele of programs and resources available.

1

Additional comment about clarity or suggestions for changes:

Key action: Describes the importance of local, state, and national funding partners to stakeholders.

1
25 Professionalism

Demonstrates behaviors that reflect high levels of performance and a strong work ethic; has a focus on results, ethical decisions, and balance. Professionalism involves personal characteristics (positive attitude, integrity, honesty, trust, manners/etiquette), commitment to Extension work (the mission, vision, and goals of OSU Extension), productive work habits (organizational skills, setting and managing priorities), and balancing all aspects of personal and professional life.

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26 Use the following scale to rate the importance of each key action for this competency.

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Key action: Is dependable; does what one says one will do.

Additional comment about clarity or suggestions for changes:

Key action: Demonstrates a strong work ethic; is willing to go the extra mile.

Additional comment about clarity or suggestions for changes:

Key action: Demonstrates courtesy with colleagues and clientele.

Additional comment about clarity or suggestions for changes:

Key action: Demonstrates ethical behavior (acts responsibly with the larger organization and community in mind).

Additional comment about clarity or suggestions for changes:

Key action: Demonstrates belief and commitment in the mission, vision, and goals of OSU Extension by acting in ways that promote organizational goals or needs.

Additional comment about clarity or suggestions for changes:

Key action: Effectively manages multiple priorities.

Additional comment about clarity or suggestions for changes:

Key action: Maintains a conscious balance between work and personal life so one doesn’t dominate the other – attends to both and gets what one wants from both.

Additional comment about clarity or suggestions for changes:
27 Comments about this competency overall:

---

**OSU Extension Competency Study**

28 Resource management

Creatively identifies and efficiently uses time, materials, and people to add value to OSU Extension products or services; promotes stewardship and ethical use of resources; leverages resources and expertise available. Acts with accountability in mind; is accountable to supervisor, clientele, and key stakeholders.

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29 Use the following scale to rate the importance of each key action for this competency.

Key action: Identifies and manages resources to achieve maximum impact.

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Additional comment about clarity or suggestions for changes:
Key action: Leverages fiscal and human resources available (e.g., utilizes resources in Extension, the University, and/or partners; shares knowledge and expertise).
1 2 3 4 5
Additional comment about clarity or suggestions for changes:

Key action: Understands and applies University policies and procedures appropriate for one's work.
1 2 3 4 5
Additional comment about clarity or suggestions for changes:

Key action: Links programmatic or organizational needs to specific solutions (resources needed to meet objectives).
1 2 3 4 5
Additional comment about clarity or suggestions for changes:

Key action: Documents and reports results and/or impact of Extension work.
1 2 3 4 5
Additional comment about clarity or suggestions for changes:

30 Comments about this competency overall:

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Submit

OSU Extension Competency Study
### Self-direction

Demonstrates the ability to think and work independently; shows initiative by identifying what needs to be done and doing so without being asked; is confident in one’s abilities; sifts through others’ input and expectations; accesses one’s own thoughts, then reaches conclusions and takes action that make sense for one’s work efforts and those of the organization.

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### Use the following scale to rate the importance of each key action for this competency.

1. **Key action:** Performs effectively with minimal supervision, support, or approval and without direct supervision.

   Additional comment about clarity or suggestions for changes:

2. **Key action:** Seeks out and utilizes appropriate support for one’s work.

   Additional comment about clarity or suggestions for changes:

3. **Key action:** Identifies what needs to be done and takes action before being asked.

   Additional comment about clarity or suggestions for changes:

4. **Key action:** Takes initiative to get involved with teams, committees, and professional associations.

   Additional comment about clarity or suggestions for changes:

5. **Key action:** Challenges existing work unit or organizational policies, procedures or plans when such action is in the best interest of organizational success.

   Additional comment about clarity or suggestions for changes:
OSU Extension Competency Study

34 Teamwork and leadership
Effectively participates and contributes as a member of a team, making contributions to organizational efficiency and effectiveness. Makes decisions and positively influences diverse groups and individuals.

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35 Use the following scale to rate the importance of each key action for this competency.

1. Not important
2. Slightly important
3. Moderately important
4. Very important
5. Essential

Key action: Develops constructive and cooperative working relationships with others.

Additional comment about clarity or suggestions for changes:
Key action: Delivers individual contributions and carries a fair share of the workload.

Additional comment about clarity or suggestions for changes:

Key action: Identifies and draws upon team members' strengths to achieve common goals.

Additional comment about clarity or suggestions for changes:

Key action: Is focused on success of the team over personal recognition; shares or gives credit to others.

Additional comment about clarity or suggestions for changes:

Key action: Uses interpersonal skills and Area(s) of Expertise to develop and coach others.

Additional comment about clarity or suggestions for changes:

Key action: Assumes a leadership role when necessary.

Additional comment about clarity or suggestions for changes:

Key action: Brings out the best in those around them by inspiring, motivating, and guiding others toward a goal.

Additional comment about clarity or suggestions for changes:

36 Comments about this competency overall:

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OSU Extension Competency Study

37 Technology adoption and application

Demonstrates a sound understanding of information technology tools, systems, and operations; has current technology skills for communicating, conducting business, creating, and delivering educational programming with a broad range of colleagues and clientele; actively learns new ways of using technology to enhance Extension work.

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38 Use the following scale to rate the importance of each key action for this competency.

Key action: Understands and effectively uses information technology tools needed for Extension work.

1 | 2 | 3 | 4 | 5

Additional comment about clarity or suggestions for changes:

Key action: Selects and applies appropriate technology to one's work.

1 | 2 | 3 | 4 | 5

Additional comment about clarity or suggestions for changes:

Key action: Learns new ways of using technology to improve quality or efficiency of work.

1 | 2 | 3 | 4 | 5

Additional comment about clarity or suggestions for changes:
Key action: Models technology adoption.

Additional comment about clarity or suggestions for changes:

---

Key action: Identifies and solves routine problems involving the use of technology.

Additional comment about clarity or suggestions for changes:

---

Comments about this competency overall:

---

OSU Extension Competency Study

40 Thinking and problem solving

Prevents and solves problems by acquiring information then using thinking skills including creativity, analytical thinking (logical thinking, breaking a project or program down, anticipating and planning), and conceptual thinking (seeing connections and patterns, putting together information from different places); is able to think critically and constructively with an orientation toward solutions; thinks quickly when necessary.
41. Use the following scale to rate the importance of each key action for this competency.

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<td>very important</td>
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</tbody>
</table>

**Key action:** Continuously gathers, evaluates, and uses diverse, relevant sources of information to create opportunities and solve problems.

1. [ ] 2. [ ] 3. [ ] 4. [ ] 5. [ ]  
Additional comment about clarity or suggestions for changes:

**Key action:** Listens; seeks to understand proposed solutions.

1. [ ] 2. [ ] 3. [ ] 4. [ ] 5. [ ]
Additional comment about clarity or suggestions for changes:

**Key action:** Analyzes needs and proposes solutions (generates new ideas).

1. [ ] 2. [ ] 3. [ ] 4. [ ] 5. [ ]
Additional comment about clarity or suggestions for changes:

**Key action:** Proactively identifies areas of improvement, anticipates what is needed, and solves problems before they become a crisis.

1. [ ] 2. [ ] 3. [ ] 4. [ ] 5. [ ]
Additional comment about clarity or suggestions for changes:

42. Comments about this competency overall:

Submit

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Survey Page 16
OSU Extension Competency Study

43 Understanding stakeholders and communities

Understands the basics of the community one works in, its dynamics and the role OSU Extension plays within the community with individuals and organizations; understands the political, social, and economic context of one's community, has the ability to identify and monitor variables and issues important to a community; applies this knowledge to Extension work.

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44 Use the following scale to rate the importance of each key action for this competency.

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<th>2 slightly important</th>
<th>3 moderately important</th>
<th>4 very important</th>
<th>5 essential</th>
</tr>
</thead>
</table>

Key action: Demonstrates an understanding of the relationships between OSU Extension and communities in which OSU Extension operates as well as the variety of stakeholder groups we partner or could partner with.

Additional comment about clarity or suggestions for changes:

Key action: Understands and appreciates the complex dynamics of organizations and communities (place, politics, and people).

Additional comment about clarity or suggestions for changes:

Key action: Uses knowledge of stakeholders and communities to identify issues, build and nurture relationships, and support Extension programming.

Additional comment about clarity or suggestions for changes:
45 Comments about this competency overall:

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Submit

OSU Extension
Competency Study

46 Future importance

Please consider the competencies you have just rated. Select the top three you believe will be the most important for your job performance in the next three years.

Please select exactly three.

- Communication
- Continuous learning
- Customer service
- Diversity
- Flexibility and change
- Interpersonal relations
- Knowledge of Extension
- Professionalism
- Resource management
- Self-direction
- Teamwork and leadership
- Technology adoption and application
- Thinking and problem solving
- Understanding stakeholders and communities
47. Any final comments or suggestions about the competency model?

Final Page

This is the final page of the OSU Extension Competency Survey. Hitting submit at the bottom of this page will close your entry. Be sure you are done before hitting submit.

Thank you.

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APPENDIX J
GROUP INTERVIEW WITH ADMINISTRATIVE CABINET AND CPT

Administrative Cabinet Group Interview (similar for CPT)

Setting the Stage (Overview/Plan for the Session)

- Thank you – Over the last few months, I’ve met with about 80 employees to either collect data for the competency modeling effort or to talk about competency-based HR. Each time, I’ve started by saying…Much is happening right now…
  In spite of all the changes going on, as I’ve continued to work on developing a competency model, employees who have been involved are very positive…this work is more important than ever in a changing environment.

- Introduce assistant moderator.

- Purpose for today:
  - Provide an update on steps we have used so far in developing our competency model, including a very brief summary of results from a recent survey.
  - Provide opportunity to validate results and gather final feedback (done this with exemplary performers; now with leadership of the organization).

- Reminder on what we are trying to describe…(approach to competency modeling)

- Where I am now with this research… Research Process & Updates
  - Review steps used to develop the OSUE Competency Mode Draft 4.
  - Share some results of focus group and survey data. Some examples of changes made include (give examples).

- How information from today will get used and next steps…
  - Ideas you provide today and additional data from the Competency Project Team will be used to make final revisions to the competency model that I’ll present in my dissertation.
  - Next steps for project – integration with HR functions, communication & training, additional modeling.
• Group Interview Process & Ground Rules
  o This is a research project. I will be recording our discussion.
  o Speak up.
  o For our discussion today, there are no right or wrong answers. I am interested in all your comments and ideas. Please speak up even if you disagree with someone else.
  o For the remainder of our time together, I’ll ask questions and facilitate group discussion about the draft that you reviewed.
  o Have a copy of the model to reference (extras if you need one)

Line of Questions
A few comments and reminders before we begin our discussion:
• Core competencies are a broad set of competencies relevant across job groups. They are the basic knowledge, attitudes, skills, and observable behaviors that lead to excellence in the workplace. A competency model is a narrative description of the critical competencies required for successful or exemplary performance. Competency models should be high leverage, that is, they include only the most important competencies that really have an impact on excellent performance.
• Focus for discussion should be on feedback and suggestions for this final draft to ensure competencies align with strategic direction, language is clear, and the model will be effective for you and other employees using it as a communication tool.

Questions:
• You had an opportunity to review the OSU Extension Competency Model Final Draft. Initial reactions to content in Draft 4? (thumbs up/down and why)
• What feedback or suggestions to you have related to the competencies supporting the strategic direction of the organization? (How well does the current model describe competencies needed for organizational success? Gaps?)
• Comments about clarity or suggestions for changes to language that would be more acceptable for the organization? (What should be changed? Why? What do others think about this suggestion?)
• Anything else about the competency model that you wanted to say?

Wrap Up
• Thank you.
• Additional thoughts – I’ll email later today and provide an opportunity to share anything you think of after we leave today. Will need this info by the end of the day on Friday.
CPT Final Session
Via WebEx

PowerPoint - Setting the Stage (overview/plan for the session)
- Over the last few months (SLIDE 1)
- Purpose for today
- Role call & WebEx Features we will be using (EXTRA PAGE)
- Reminder on what we are trying to describe…(SLIDE 2)
- Where I am now with this research… Research Process & Updates (SLIDE 3, 4, 5)
- How information from today will get used and next steps… (SLIDE 6)

Group Interview Via WebEx - Process & Ground Rules
- Because this is a research project, we are recording our WebEx session.
- Speak up so we can all hear you on the call.
- For our discussion today, there are no right or wrong answers. I am interested in all your comments and ideas. Please speak up even if you disagree with someone else. Because we are doing this via WebEx, it is important for you to make sure I know if you would like to have a chance to talk (if you don’t feel like you are getting a chance to talk, raise your hand).
- Benefit of WebEx… use the chat feature if you want to share something that you are afraid you’ll forget. I’ll also ask periodically for feedback about what someone else has said and would like you to use the chat like you would if you were nodding your head to agree (type “I agree”, “makes sense”, “I don’t agree”, etc.).
- Have a copy of the OSUE Competency Mode Final Draft available to reference.
- I’ll have a copy on WebEx that you can review or we can look at a section together.

Line of Questions
You had an opportunity to review and contribute to draft models at several stages in my research, including the OSUE Competency Model Final Draft. For the remainder of our time together, I’ll ask questions and facilitate group discussion about the document that you reviewed. A few reminders about competencies in this research and our focus before we begin our discussion:
• Core competencies are a broad set of competencies relevant across job groups. They are the basic knowledge, attitudes, skills, and observable behaviors that lead to excellence in the workplace. A competency model is a narrative description of the critical competencies required for successful or exemplary performance. Competency models should be high leverage, that is, they include only the most important competencies that really have an impact on excellent performance.

• Focus for discussion should be on feedback and suggestions for this final draft to ensure language is clear, and the model will be effective for you and other employees using it as a communication tool.

Questions:
• Initial reactions to content in the final draft? (Why?)

• What feedback or suggestions to you have related to the competencies supporting the strategic direction of the organization? (How well does the current model describe competencies needed for organizational success? Gaps?)

• Comments about clarity or suggestions for changes to language that would be more acceptable for the organization? (What should be changed? Why? What do others think about this suggestion?)

• I have some wrap up comments to make but before I do that, is there anything else about the competency model that you wanted to say?

Next Steps – Competency Project and Project Team
• Competency Project
• CPT – their initial commitment ends with this WebEx. Invitation to continue and what that would involve. They will receive a follow-up email in the next few weeks.

Wrap Up:
• Thank you.
APPENDIX K
CPT SESSION #1 –DATA FROM MODIFIED NOMINAL GROUP PROCESS

During CPT Session #1, data from idea generation and prioritization were captured on flip charts. See Table K.1, Table K.2, and Table K.3 for transcripts of ideas generated and priority voting during each round. Number of priority votes collected during prioritization is indicated in parentheses.
<table>
<thead>
<tr>
<th>TRENDS/Implications</th>
<th>IMPLICATIONS</th>
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<tbody>
<tr>
<td>More distance education</td>
<td></td>
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<tr>
<td>Declining budgets (8)</td>
<td>Forced to make decisions on staffing, new models; How to keep best people from “jumping ship”</td>
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<tr>
<td>Need to be more flexible</td>
<td>More competitive funding; Increase utilization of outside grants; Additional program opportunities but grants dictate what you can do; Changes in relationships with other partners, agencies, groups- both working with them and competing against them; Creative funding at the county level; More time spent on funding; We need to be team players more than ever; Need to be willing to do whatever needed to make us more effective and valuable to our clientele</td>
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<tr>
<td>Less funding from traditional sources/ Less funding from Federal and State level (1)</td>
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<td>More competing sources of information (2)</td>
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<td>Increased use of technology (11)</td>
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<tr>
<td>Clientele is busier</td>
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<tr>
<td>Diverse workforce (3)</td>
<td>Brings about new thinking; Multicultural workforce; Need for accessible training for us and clientele</td>
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<tr>
<td>New and younger workforce that work differently</td>
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<td>Shift to knowledge economy</td>
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<td>Growing green industry</td>
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<tr>
<td>Competition for clientele time (2)</td>
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<tr>
<td>Competition with other organizations and sources</td>
<td>Need to be user friendly, flexible, need to accommodate</td>
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<tr>
<td>Clientele using diverse communication methods</td>
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<tr>
<td>Clientele and Extension professionals need technology training</td>
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<td>Larger area of potential impact-terms geographically</td>
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<td>TRENDS/Implications</td>
<td>IMPLICATIONS</td>
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<tr>
<td>More virtual offices</td>
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<td>Ability of program application diversity – serve many different types of youth/people (1)</td>
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<td>Need to be more diverse thinkers (1)</td>
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<tr>
<td>Partnering is required (1)</td>
<td>No matter what you’re doing-funding, programming; need to partner to do a better job to improve programming efforts</td>
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<tr>
<td>Aging of population/clientele</td>
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<td>Relationships being developed non-face-to-face (1)</td>
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<td>Large companies</td>
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<td>Teamwork</td>
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<td>Struggling public education system</td>
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<td>Baby Boomers retiring</td>
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<td>eXtension</td>
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<tr>
<td>Clientele budget issues</td>
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<tr>
<td>More autonomous in our work</td>
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<tr>
<td>Extension professionals asked and required to do more, cover larger areas, asked to juggle more with our jobs (1)</td>
<td>Need to be skilled in different areas and willing to take on more responsibility and willing to learn new tasks if needed; Larger regions make it more difficult to be sure we’re helping counties to our fullest ability; Harder to have close contact with people in each office and give them all the attention they need; Counties feel a little more disconnected with larger regions and no district offices anymore; Takes more time and money for the regional directors to meet and spend time in county offices</td>
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<tr>
<td>Clientele desire for just-in-time delivery of content (1)</td>
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<tr>
<td>Less need of printed hard copies of information</td>
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<tr>
<td>Increase in accountability and impact (2)</td>
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<tr>
<td>Relationship building (7)</td>
<td>Increase quality of customer service</td>
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<td>Fewer people to do the job (1)</td>
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<td>Different levels to access technology-clientele</td>
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<tr>
<td>TRENDS/Implications</td>
<td>IMPLICATIONS</td>
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<tr>
<td>Increased specialization/decreased generalization (2)</td>
<td>Clientele needs going unmet with general problems; Increased expectation beyond traditional boundaries; Flattening of organization; Impact to funding, both positive and negative</td>
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<tr>
<td>Local is the new organic</td>
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<tr>
<td>Innovation</td>
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<td>Technology is driving communication (1)</td>
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<td>Globalization (2)</td>
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<tr>
<td>Increased accountability (2)</td>
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<tr>
<td>Continued urbanization (2)</td>
<td>Extension needs to redefine its “home”; Traditional home-base, home within government, within academic structure</td>
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<td>Competing and conflicting standards</td>
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<tr>
<td>Conflict between disposable society vs. green society and the impact of that</td>
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<td>Need for multi-skills (2)</td>
<td>Continuing education, specialization, certification</td>
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<td>Need to narrow our scope</td>
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<tr>
<td>Changes happening at a faster rate-speed will continue to increase (1)</td>
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<tr>
<td>Conflicting accountability (6)</td>
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<tr>
<td>Too much information to discern fact from truthful data (2)</td>
<td>How do we as OSU Extension brand information as truthful, research-based; Leads to problems in society; How does Extension reposition itself to be prime information source</td>
</tr>
<tr>
<td>Need for applied research skills, need for evaluation</td>
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<tr>
<td>Legislators want to know where money is going and what we’re doing with the money</td>
<td></td>
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<tr>
<td>Increase in grant writing</td>
<td>Less time for teaching and scholarly work</td>
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<td>Increase in cost recovery (2)</td>
<td></td>
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<tr>
<td>Being entrepreneurial (2)</td>
<td></td>
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<tr>
<td>Move of industry to third world countries</td>
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<tr>
<td>Fact of several different cohorts in workforce</td>
<td>They have different expectations and work differently</td>
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<tr>
<td>Want it-Want it now generation</td>
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<tr>
<td>Unification of university system of Ohio</td>
<td>Partnering to improve efforts</td>
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<tr>
<td>Polarization of societal resources</td>
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<td>TRENDS/Implications</td>
<td>IMPLICATIONS</td>
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<tr>
<td>Boomer will redefine retirement (1)</td>
<td>How we maintain and transfer organization knowledge;</td>
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<tr>
<td></td>
<td>Developing programs to meet life-long learning demands of retirees;</td>
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<td></td>
<td>Developing new models of volunteer management;</td>
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<td></td>
<td>Developing new models of employee management;</td>
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<td></td>
<td>How are we as an organization going to replace retirees</td>
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<tr>
<td>Technology changes (6)</td>
<td>Need to work differently with people with less face-to-face;</td>
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<tr>
<td></td>
<td>How quickly new technology is adopted;</td>
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<td></td>
<td>Imbalance of keeping up with new technology and the population behind trends,</td>
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<td>both non-adopters and those with no ability to adopt;</td>
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<td>Need to work more efficiently using technology;</td>
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<td>More time needed to adapt to new technology-Extension professionals;</td>
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<td>How to measure accountability and impact with web-based materials versus</td>
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<td>traditional publication;</td>
</tr>
<tr>
<td></td>
<td>How to reward different kinds of publications in new technology within</td>
</tr>
<tr>
<td></td>
<td>university system;</td>
</tr>
<tr>
<td></td>
<td>Research and scholarly works needed in this work;</td>
</tr>
<tr>
<td></td>
<td>Rewarding different kinds of scholarship;</td>
</tr>
<tr>
<td></td>
<td>Requires more training;</td>
</tr>
<tr>
<td></td>
<td>More money to keep technology current;</td>
</tr>
<tr>
<td></td>
<td>Expanded use of WebEx (less travel cost)</td>
</tr>
<tr>
<td>Less guidance and direction from the</td>
<td>Requiring more teamwork from neighboring counties, independence</td>
</tr>
<tr>
<td>regional/state level</td>
<td></td>
</tr>
<tr>
<td>Different cohorts in workforce</td>
<td>Work-Life balance;</td>
</tr>
<tr>
<td></td>
<td>Work load balance;</td>
</tr>
<tr>
<td></td>
<td>Not as invested in work, more distracted;</td>
</tr>
<tr>
<td></td>
<td>Decreased quality;</td>
</tr>
<tr>
<td></td>
<td>Workforce development for Extension</td>
</tr>
<tr>
<td>Flattening of organization</td>
<td></td>
</tr>
</tbody>
</table>

Numbers indicted in parentheses ( ) represent the number of votes by dots
### Table K.2
Competency Idea Generation Data From Round 2 Nominal Group Process

<table>
<thead>
<tr>
<th>Competency idea</th>
<th>Additional detail or competencies clustered with idea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication skills (13)</td>
<td>Written, oral, listening Daily and formal communications Professional correspondences Using technology Communications at clientele level</td>
</tr>
<tr>
<td>Time management (4)</td>
<td>Organized Setting priorities</td>
</tr>
<tr>
<td>Conflict resolution abilities (1)</td>
<td></td>
</tr>
<tr>
<td>Strong relationship builder (4)</td>
<td></td>
</tr>
<tr>
<td>Ability to solve problems</td>
<td></td>
</tr>
<tr>
<td>Focused on goals and objectives</td>
<td></td>
</tr>
<tr>
<td>Passion to learn (4)</td>
<td></td>
</tr>
<tr>
<td>Thinks weird (6)</td>
<td>Novel Innovative Diverse thinker Critical thinker Thinking brilliantly Forward thinker Visionary</td>
</tr>
<tr>
<td>Ability to work in team environment (3)</td>
<td></td>
</tr>
<tr>
<td>Ability to identify problems (1)</td>
<td></td>
</tr>
<tr>
<td>Ability to work with diverse audiences (2)</td>
<td></td>
</tr>
<tr>
<td>Money savvy</td>
<td></td>
</tr>
<tr>
<td>Customer service (4)</td>
<td></td>
</tr>
<tr>
<td>Manage resources (6)</td>
<td>Time Money Human resources</td>
</tr>
<tr>
<td>Willingness to get your hands dirty</td>
<td></td>
</tr>
<tr>
<td>*Work Ethic (11)</td>
<td>Dedicated Hard worker Self-Starter Passion for job We need people to be loyal to their job and value what they’re doing and give it their all</td>
</tr>
<tr>
<td>Ability to gather information systematically</td>
<td></td>
</tr>
<tr>
<td>Technology savvy (1)</td>
<td></td>
</tr>
<tr>
<td>Competency idea</td>
<td>Additional detail or competencies clustered with idea</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Strong leadership skills</td>
<td></td>
</tr>
<tr>
<td>Flexibility/Adaptability (6)</td>
<td>We need people willing to move on and willing to give up on things that are not working and be willing to try new concepts, too many want to drag their feet and slow down any progress toward the strategic plan</td>
</tr>
<tr>
<td>Ability to accept criticism, concern, suggestions (1)</td>
<td>Utilize criticism, concern, suggestions</td>
</tr>
<tr>
<td>Accepting people for who they are</td>
<td></td>
</tr>
<tr>
<td>Willing to fail</td>
<td></td>
</tr>
<tr>
<td>Ability to work in changing technology environment</td>
<td></td>
</tr>
<tr>
<td>Train others, coach, reward</td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial thinker</td>
<td></td>
</tr>
</tbody>
</table>
| Strong character (7) | Integrity  
Honesty  
Trustworthy |
| Understanding systems (1) | Organizations, communities  
Educated in the job they will be filling. It’s hard to teach someone skills along with the Extension concept and structure. They need to have the skill set needed when hired |
| Understanding who it is you work for |  |
| Cultural competencies (4) | Understanding  
Technology  
Recognizing what we don’t know about others’ experiences  
Appreciation  
Globalization  
Working with diverse audiences |
| Ability to set priorities (2) |  |
| Applied research skills |  |
| Specialized knowledge –base (7) | Need knowledge in a particular area  
Subject matter expertise |
| Work independently (6) |  |
| Ability to juggle work and personal life (4) |  |
| Establishing credibility |  |
| Willingness/ability to make decisions (1) |  |
| Transparent |  |
Table K.2 continued

<table>
<thead>
<tr>
<th>Competency idea</th>
<th>Additional detail or competencies clustered with idea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manages multiple demands and projects well (2)</td>
<td></td>
</tr>
<tr>
<td>*Professionalism (4)</td>
<td></td>
</tr>
<tr>
<td>Negotiate and interpret (1)</td>
<td></td>
</tr>
<tr>
<td>Prepared</td>
<td></td>
</tr>
<tr>
<td>Ability to measure and report impacts</td>
<td></td>
</tr>
<tr>
<td>Program management expertise (1)</td>
<td></td>
</tr>
<tr>
<td>Ethical and honest</td>
<td></td>
</tr>
<tr>
<td>Positive attitude (7)</td>
<td></td>
</tr>
<tr>
<td>Ability to think on your feet and change</td>
<td></td>
</tr>
<tr>
<td>Being able to deal with difficult people (2)</td>
<td></td>
</tr>
<tr>
<td>Open to diversity in individuals/ Acknowledgement of different views</td>
<td></td>
</tr>
<tr>
<td>Ability to balance between leadership and management (4)</td>
<td></td>
</tr>
<tr>
<td>Trustworthy</td>
<td></td>
</tr>
<tr>
<td>Self-management Prioritize Ability to follow through</td>
<td></td>
</tr>
<tr>
<td>Ability to justify your position/opinion</td>
<td>Present your case</td>
</tr>
<tr>
<td>Teaching skills (6)</td>
<td></td>
</tr>
<tr>
<td>Planning programs effectively (1)</td>
<td></td>
</tr>
<tr>
<td>High energy/drive</td>
<td></td>
</tr>
<tr>
<td>Organized (3)</td>
<td></td>
</tr>
<tr>
<td>Team player/ Team oriented</td>
<td>Top performers aren’t worried about the amount of time they put in to do the job right or do their best-they’re in it for the long haul and they care about how they’re doing their job, they are team players too</td>
</tr>
<tr>
<td>Technical</td>
<td></td>
</tr>
<tr>
<td>Motivating</td>
<td></td>
</tr>
<tr>
<td>Accountable</td>
<td></td>
</tr>
<tr>
<td>Competitive (1)</td>
<td>Driven to succeed</td>
</tr>
<tr>
<td>Social interaction skills (6)</td>
<td>Being able to get along with others Listen and share Networking</td>
</tr>
<tr>
<td>Sense of humor</td>
<td></td>
</tr>
<tr>
<td>Competency idea</td>
<td>Additional detail or competencies clustered with idea</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Social responsibility</td>
<td>Committed to community/state</td>
</tr>
<tr>
<td></td>
<td>Committed to making world a better place</td>
</tr>
<tr>
<td>Stress-tolerant</td>
<td></td>
</tr>
<tr>
<td>Visionary (7)</td>
<td></td>
</tr>
<tr>
<td>Business office functions</td>
<td>Accounting</td>
</tr>
<tr>
<td></td>
<td>Record keeping</td>
</tr>
<tr>
<td></td>
<td>Understand and apply policies</td>
</tr>
<tr>
<td>Mediator/Facilitator</td>
<td></td>
</tr>
<tr>
<td>Emotional Intelligence (7)</td>
<td>Empathy</td>
</tr>
</tbody>
</table>

*indicated those items circled as terms strongly liked by the group
Numbers indicted in parentheses ( ) represent the number of votes by dots
Table K.3
Competency Generation Data from Round 3 Nominal Group Process

<table>
<thead>
<tr>
<th>Competency idea</th>
<th>Additional detail or competencies clustered with idea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teamwork (8)</td>
<td>Not worrying who gets credit</td>
</tr>
<tr>
<td>Cognitive ability (2)</td>
<td>Conceptual thinking</td>
</tr>
<tr>
<td></td>
<td>Technical and professional expertise</td>
</tr>
<tr>
<td>Educational programming</td>
<td></td>
</tr>
<tr>
<td>Demonstrates subject matter expertise/technical expertise (8)</td>
<td>Need to know the material</td>
</tr>
<tr>
<td></td>
<td>Examples: food preservation, agriculture, technology</td>
</tr>
<tr>
<td>Drives change</td>
<td></td>
</tr>
<tr>
<td>Work diligently towards goals (2)</td>
<td></td>
</tr>
<tr>
<td>Communicating effectively with others (6)</td>
<td>Ability to communicate effectively with co-workers and clients; see also TAEX definition</td>
</tr>
<tr>
<td>Adaptability (4)</td>
<td></td>
</tr>
<tr>
<td>Learns continuously (1)</td>
<td></td>
</tr>
<tr>
<td>Knowledge of organization (5)</td>
<td></td>
</tr>
<tr>
<td>Thinking strategically (3)</td>
<td></td>
</tr>
<tr>
<td>Impact and influence relationship building (4)</td>
<td></td>
</tr>
<tr>
<td>Engagement and Outreach (1)</td>
<td>How to best respond to individuals and communities</td>
</tr>
<tr>
<td>Analyzing needs and proposing solutions (1)</td>
<td></td>
</tr>
<tr>
<td>Diversity pluralism and multiculturalism (4)</td>
<td></td>
</tr>
<tr>
<td>Organizational commitment</td>
<td></td>
</tr>
<tr>
<td>Organizational effectiveness</td>
<td></td>
</tr>
<tr>
<td>Interpersonal competencies (13)</td>
<td>Trust</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td>Ability to influence stakeholders</td>
</tr>
<tr>
<td></td>
<td>Networking</td>
</tr>
<tr>
<td>Professionalism (4)</td>
<td>One participant – used NCCE definition</td>
</tr>
<tr>
<td>Understanding social systems and procedures (2)</td>
<td>Understanding organizations, communities, churches, programs</td>
</tr>
<tr>
<td></td>
<td>“Street Smarts”</td>
</tr>
<tr>
<td></td>
<td>Community social action process/change manager</td>
</tr>
<tr>
<td>Personal effectiveness (3)</td>
<td>TAEX model</td>
</tr>
<tr>
<td>Creativity (1)</td>
<td></td>
</tr>
<tr>
<td>Networking and Partnering (5)</td>
<td></td>
</tr>
<tr>
<td>Information and education delivery</td>
<td></td>
</tr>
<tr>
<td>Influence stakeholders (1)</td>
<td></td>
</tr>
</tbody>
</table>

Table K.3 continued

344
<table>
<thead>
<tr>
<th>Competency idea</th>
<th>Additional detail or competencies clustered with idea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delegate authority</td>
<td></td>
</tr>
<tr>
<td>Develop/invoke/coach others (4)</td>
<td></td>
</tr>
<tr>
<td>Technology expertise (12)</td>
<td></td>
</tr>
<tr>
<td>Professional development (10)</td>
<td>Learns continuously Willingness to learn</td>
</tr>
<tr>
<td>Establishes high standards (2)</td>
<td>Sharp model</td>
</tr>
<tr>
<td>Multiculturalism (2)</td>
<td></td>
</tr>
<tr>
<td>Trust building</td>
<td></td>
</tr>
<tr>
<td>Extension teaching / Information and education delivery(12)</td>
<td>Teaching excellence Teaching effectiveness Experiential teaching Lead/facilitate discussion Enthusiasm Prepared Customer/student/clientele oriented Passionate</td>
</tr>
<tr>
<td>Leadership (7)</td>
<td>Ability to influence Diversity pluralism and multiculturalism Role Model</td>
</tr>
<tr>
<td>Balance (1)</td>
<td>Balance between personal life and work life Personal effectiveness</td>
</tr>
<tr>
<td>Management skills/Facilitate leadership (8)</td>
<td></td>
</tr>
<tr>
<td>Action orientation (2)</td>
<td>TAEX model</td>
</tr>
<tr>
<td>Scholarly orientation</td>
<td></td>
</tr>
<tr>
<td>Evaluation, applied research,  and reporting/scholarship (5)</td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td></td>
</tr>
<tr>
<td>Volunteer and employee management (7)</td>
<td></td>
</tr>
<tr>
<td>Evaluation and reporting (2)</td>
<td></td>
</tr>
<tr>
<td>Human relations</td>
<td>Diversity</td>
</tr>
<tr>
<td>Organizational management</td>
<td></td>
</tr>
<tr>
<td>Subject matter expertise</td>
<td>TAEX definition</td>
</tr>
</tbody>
</table>

Numbers indicted in parentheses ( ) represent the number of votes by dots
APPENDIX L
TRENDS AND IMPLICATIONS DRAFT 1 AND OSUE COMPETENCY MODEL
DRAFT 1
Trends and Implications

The 21st Century is a time of change for organizations, a time when, more than ever, the success of organizations depends on the knowledge and capabilities of their employees. As OSU Extension develops a model that will define and describe competencies for our employees, the changing environment and issues facing OSU Extension is an important topic.

During initial stages of research to develop a competency model, major trends affecting OSU Extension plus the implications those trends may have on Extension professionals were identified. These trends and implications were identified through:

- A review of numerous studies on the current environment for organizations and specifically for Extension organizations.
- A review of current context information for OSU Extension including OSU Extension’s strategic plan and supporting data.
- Interviews with OSU Extension’s HR Leader and Competency Project Team.

Trends and their implications will serve as a foundation for research to develop a competency model for OSU Extension today but also that will be relevant into the future. Identifying trends and implications is an important first step in creating a future focused competency model that describes the knowledge, skills, and behaviors that contribute to excellence in Extension work and lead to organizational success.

The trends and implications will be further refined through:

- Group interviews with Administrative Cabinet and the Competency Project Team
- Focus group interviews with employees

The Trends

1. Complex and changing conditions
   The pace and magnitude of change is increasing which requires flexibility and adaptability for individuals and organizations. The complexity of OSU Extension’s organizational structure and funding is a factor that can create tension (e.g., between local commitments and statewide issues or conflicting accountability).

   Changing social, environmental, and economic conditions are affecting OSU Extension and the work of our employees. For example, the pace of life in the 21st Century and shifting clientele needs points to alternate delivery methods for educational programming, just-in-time learning, and small chunks that fit today’s lifestyle.

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 cost containment and quality services. These pressures are driving OSU Extension to
improve efficiency and service quality while limiting costs in terms of human and fiscal resources.

In an environment where:
- clientele have more choices,
- Extension is competing with other organizations/sources of information, and
- people are busier and we are competing for their time,
a focus on customer service and quality will be important.

Limited resources and less people will increase pressures for good people who can support and deliver effective programming with fewer resources. Competitive funding will continue to be important.

Increased accountability to a wide variety of stakeholder groups is also part of the competitive environment.

3. **Changing organizational structures**
   New and emerging organizational structures are more flexible, flat, and virtual which may result in blurring - of boundaries between jobs and of the lines between where work and life occurs. As life and work can become blurred because of technology, it is important to recognize the importance of work life balance that is valued differently by new generations of Extension employees. Also, flatter organizational structures with fewer people will mean less guidance from supervisors and an increased emphasis on self-management, autonomy, and teamwork.

4. **Changing demographics**
   Increasing diversity and changing demographics means changes for Extension clientele and the workplace. Demographics of the Ohioans we serve are changing. Diversity is on the rise, the population is aging with larger numbers of baby boomers retiring, and the population is continuing to shift toward more urban/suburban settings.

OSU Extension’s workforce will see new faces and new expectations. Significant numbers of employees are reaching retirement age with young workers entering the workforce. Different generational cohorts in the organization may influence turnover, how individuals approach work and what they value (e.g., current research shows that newer generations in the workforce place a higher value on work-life balance). Finally, it is likely that OSU Extension will (and should) see an increasingly diverse workforce that reflects the changing population in Ohio. A multicultural work environment will lead to new thinking and creativity for work teams and programs.

5. **Technology and life in the e-world**
   Increased use and accelerated rates of technology change has changed the way people connect and is transforming the way we work. The right tech tools used in the right
ways improve efficiency, helping with competition and limited resources. 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.

6. **Globalization and increased accessibility to the world’s knowledge base**
Globalization and the knowledge economy have an effect on Extension work and our clientele. Geography is much less of an issue affecting Extension professionals and clientele needs. The volume, diffusion, and increased accessibility to the world’s knowledge base have changed the playing field (e.g., for some Extension professionals this may mean increased specialization and decreased generalization; for others it may mean helping clients make choices about information sources).

**The Implications**
There are a number of lessons related to the current trends.

**Be flexible, innovative, 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 where they are asked to do more with less. In this environment, Extension professionals will need to be lifelong learners who continue to improve capabilities.

**Customer driven, a focus on quality and responsiveness**
- Timely response
- Effective, quality programs
- Credibility with clients and funders

**Demonstrate the value**
In a competitive environment with limited resources, credibility and accountability to funders and other stakeholders is critical. Employees will need to be:
- Efficient – share resources, work across traditional boundaries, reduce operational expense, and
- Do more with less.

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.

**Entrepreneurial spirit/activity**
[need more added here]
Become proficient in technology use and application
Understand technology, current uses in your work, and its potential. Extension professionals will need to learn and use a wide variety of technology tools to improve efficiency of day to day operations and support programming. With more Extension teaching using e-learning, just-in-time delivery, and technology that clients want, we will need skills and creativity to increase technology use. Extension professionals may need time and training to learn new skills in how to use technology and identify the right mix for their work.

Life and work
Technology and changes in organizational structure mean employees need to be prepared to work in a flexible, flatter organization with:
- an autonomous work environment…initiative – teamwork,
- blurred lines of where an when work occurs, and
- an increased need for employees to balance work and personal lives in a way that meets their needs.

Relationships
Build relationships and network, build and maintain partnerships, and work effectively in a team environment…
- Understand the importance of and be able to network and build relationships internally and externally (e.g., with colleagues, clientele, state, and local leaders).
- Effective teamwork within offices, with clientele and with partners; interdisciplinary and cross-functional teams.
- Partnering – for funding reasons, programmatic reasons and to reduce duplication. “By partnering we can improve our programming effort and quality” ~ CPT Member.

Diversity
Successful Extension professionals will…
- Provide employment opportunities that will make the workforce more diverse.
- Have abilities to work with diverse teams.
- Understand and respond to an increasingly diverse clientele base.
Accessible training will be needed for employees and who can in turn teach clientele how to be successful in a diverse community or work environment.
OSU Extension Competency Model Draft 1

Table L.1 provides the competencies and supporting concepts from the OSUE Competency Model Draft 1. This version of the model was presented to participants in a table form as shown below.

<table>
<thead>
<tr>
<th>Potential Competency</th>
<th>Supporting Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer service</td>
<td>Focus on quality; user friendly; meeting clientele needs; responsive; people (customer, clientele, student) oriented/centered</td>
</tr>
<tr>
<td>Communication</td>
<td>The ability to communicate effectively with others. Written and oral communication; listening Co-workers, clients and other stakeholders</td>
</tr>
<tr>
<td>Building relationships and networking</td>
<td>Strong interpersonal skills</td>
</tr>
<tr>
<td>Managing resources</td>
<td>Time, money, materials, human resources</td>
</tr>
<tr>
<td>Leadership</td>
<td>Develop, coach, and lead others; ability to influence; role model</td>
</tr>
<tr>
<td>Teamwork</td>
<td>Ability to work in a team environment; team player/oriented; focus on team and organizational success</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Ability to work independently; self-management; intrapersonal skills</td>
</tr>
<tr>
<td>Flexibility/adaptability</td>
<td>Willing to change as needed; One CPT member said “We need people willing to move on and willing to give up on things that are not working and be willing to try new concepts. Too many want to drag their feet and slow down any progress toward the strategic plan.”</td>
</tr>
<tr>
<td>Thinking</td>
<td>thinks weird, innovative, diverse thinker, critical thinker, thinking brilliantly, forward thinker, strategic thinker, entrepreneurial thinker</td>
</tr>
<tr>
<td>Creativity</td>
<td></td>
</tr>
<tr>
<td>Problem-solving</td>
<td></td>
</tr>
<tr>
<td>Potential Competency</td>
<td>Supporting Concepts</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Visionary</td>
<td></td>
</tr>
<tr>
<td>Learning</td>
<td>Continuous learning, lifelong learning, professional development; accept and apply feedback</td>
</tr>
</tbody>
</table>
| Professionalism                      | Positive attitude, integrity, honesty, trust (character)  
Strong work ethic – motivated, driven  
Time and workload management - organized, sets priorities, follows through  
Balance juggle work and personal life |
| Technology adoption and application  | Tech savvy; changing technology; understand, select, and apply to work; work more efficiently using technology                                    |
| Understanding the organization       | Organizational awareness and knowledge, an understanding of the history, philosophy and mission of OSU Extension. How does the organization work? |
| Understanding systems                | Organizations and communities; analyzing needs and proposing solutions; “street smarts”                                                          |
| Diversity/cultural competencies      | Understanding and appreciation; diversity in people, viewpoints; ability to work with diverse audiences and different types of communities; recognizing what we don’t know. |
| Accountability                       | responsible use of resources; evaluation, applied research and reporting                                                                         |
| Technical/subject matter expertise   | The mastery of a discipline, body of knowledge, or technical proficiency that enhances individual effectiveness and meets organizational goals. In-depth knowledge in a particular area or areas that might include:  
  - Extension teaching (teaching excellence; effectiveness; experiential learning; facilitation; enthusiasm)  
  - Fiscal/accounting  
  - Information technology  
  - Management and supervision  
  - Volunteer management  
  - Program planning and evaluation  
  - Subject matter content |
APPENDIX M
CPT SESSION #2 – LIST OF 24 COMPETENCIES IDENTIFIED AND COMPETENCY STATEMENTS GENERATED

The following 24 competencies and 222 statements were generated during Round 3 of CPT Session #2.

1. Extension teaching, program planning
   a. Uses logic model or other systematic planning model
   b. Bases teaching on needs of clientele
   c. Uses a variety of teaching methods
   d. The ability to envision a program as a sum of all its parts which requires to think about detail as well as “big picture”
   e. Effective and exciting teaching
   f. Prepared and organized
   g. Effective in facilitation and instruction

2. Research and evaluation skills
   a. Identify problems (questions)
   b. Formulate H₁, H₂, etc.
   c. Develop line of questioning
   d. Research methodology
   e. Understand how to evaluate data, perform statistical analysis
   f. Ability to read and evaluate “quality” research
   g. Ability to identify key findings and report
   h. Ability to distill findings to teach clients what and how to change and improve
   i. Evaluate to show impact
   j. Complete research to enhance the growth of the professional along with improving society
   k. Help Extension personnel find research partners i.e. Boyles-plastic recycler
   l. Extension located sources to do statistics
   m. Develop appropriate measures
   n. Involves stakeholders
   o. Understands process
p. Follows IRB rules
q. Ability to communicate results

3. **Conflict management**
a. Can effectively mediate
b. Can approach a conflict using a solution focused approach
c. Skilled listener, problem-solver, and communicator
d. Takes issue with the opinion/behavior and not the person
e. Never raises voice or uses abusive language
f. Listens more than talks
g. Ability to be empathetic
h. Negotiates
i. Compromises
j. Generates consensus and agreement to move forward
k. Ability to function well in conflictual situations
l. Maintains professionalism
m. Listens and seeks to understand all positions
n. Remains calm and reasonable

4. **Managing resources**
a. Ability to balance management with leadership
b. Recognizes the need to hold people accountable
c. Identifying what you do have before recognizing what you don’t have
d. Balance budget
e. Follow business office procedures
f. Provide appropriate policies for managing inventory of expendable supplies
g. Review supplies and equipment requests needs and identify ways to support needs
h. Develop appropriate budget request
i. Do not over commit personnel
j. Divide duties and responsibilities
k. Review of Job Descriptions/Personnel performance to effectively utilize individual talents, resources, …

5. **Risk management**
a. Analyze the situation
b. Anticipate risks
c. Take appropriate steps to eliminate or mitigate
d. Knowledge of youth and volunteer requirements for safety
e. One who identifies high risk situations when working with public events and is able to make decisions to keep clients safe

6. Volunteer management
   a. Know OSU policies regarding volunteer selection, recruitment, training, record retention (review, retrain or retain)
   b. Develop job descriptions
   c. Follow OSU policies
   d. Work with other staff in Office/Region to follow policies
   e. Balance volunteer requests to maximize and expand programming
   f. Eliminate burnout

7. Customer service
   a. This person can provide service with a smile
   b. Always direct clientele to answers
   c. This person must be accessible
   d. I try to make sure the customer gets their answer or at least a contact to follow up with
   e. Never rude
   f. Prompt with reply
   g. Returns phone calls in timely manner
   h. Friendly and upbeat
   i. Care about clientele
   j. Go the extra mile to best serve clientele
   k. Focus on our audiences that we serve
   l. I try to correct customer in non-accusatory manner
   m. User-friendly
   n. People oriented

8. Communication
   a. Effectively communicates with clientele using methods preferred by clientele (email, technology, etc.)
   b. Effectively delivers oral presentations
   c. Effective listener
   d. Seeks to understand others
   e. Effective in written communication
   f. Can write media releases
   g. Looks you in the eyes while talking to you
   h. Can write clearly and concisely
   i. Communicate regularly through email, staff meetings
j. Communicates ideas clearly (both verbally and written)

9. **Interpersonal skills**
   a. Building relationships
   b. Networking
   c. Empathetic
   d. Understanding
   e. “Listening” to understand
   f. Good communication verbal and written
   g. Body language matches words
   h. Follows through
   i. Kindness
   j. Compassionate
   k. Caring
   l. Respectful
   m. I listen to understand before speaking
   n. Use appropriate body language and other non-verbal cues
   o. Use appropriate tone in messages
   p. Builds relationships and networking i.e. work with non-traditional partners in developing our skills ex: Disney-customer skills, Harley Davidson-just in time inventory
   q. Ability to both build and maintain relationships with stakeholders (clientele, coworkers, partners, etc)
   r. Understands the importance partnerships play in the success of Extension programs
   s. They are able to build collaborations
   t. Assess needs of people/community
   u. Collaboration

10. **Leadership**
    a. They have developed credibility and can be trusted
    b. Positive attitude
    c. Forward thinking
    d. Lead the way
    e. Coaching
    f. Modeling
    g. Being honest/direct
    h. Communications
    i. Providing a vision and making it real
    j. Ability to carry everyone along
k. Works and able to drive vision
l. Walk the talk
m. Strategic and tactical
n. Motivational
o. Encouraging
p. Appropriate sense of humor
q. Taps into individuals abilities and capabilities

11. Teamwork
   a. Must be able to identify strengths of team members and utilize them to meet
group goals
   b. Completes responsibilities in a timely manner so the team’s progress isn’t
hindered
   c. Work towards the benefit of the group versus you personally
d. Important in an office, everyone should have a role
e. Thrives to make teams toward the common good
f. Goal is success of the team over personal recognition
g. Exhibits leadership and followership
h. Follows through on commitments in a timely manner
i. Seeks others to help with projects
j. Carries a fair share of the load
k. Acknowledges others who help complete a team activity
l. Team leader needs to have ability to recognize the team members strengths
   and weaknesses

12. Autonomy
   a. Completes tasks with minimal supervision
   b. Can identify a work area, determine a course of action, and complete actions
      in a timely manner without being told what to do
c. Able to work independently as needed
d. Utilizes freedom in job to develop unique program opportunities for clientele
e. Takes initiative to get involved with teams, committees, and professional
development opportunities to build expertise and contribute to organization
f. Self-motivated
g. Can seek out and find support needed
h. Has a good work ethic

13. Flexibility/adaptability
   a. Willingness/openness to change
   b. Lack of rigidity
c. Being open minded
d. Willing to listen
e. Willing to change
f. Accepting more than one way to accomplish a goal/task
g. I read/talk/process to understand a new direction and take steps to move with it rather than against it
h. Being able to change and adapt when consequences have created a whole new situation
i. Look at change positively
j. Understands the importance of having an open mind
k. Deals with change by having the ability to recognize you can’t plan for everything
l. I recognize that even when I have every detailed squared away, there are always some unexpected and that to deal with theses unexpected things I must remain open minded

14. Problem-solving
   a. Analyzing needs and proposing solutions
   b. Ability to use deductive and inductive reasoning
   c. Methodical, a to b, b to c…
   d. Step by step reasoning/thinking
   e. Can use inductive reasoning
   f. Can use deductive reasoning
   g. Can come up with possible solutions
   h. Solutions oriented
   i. Can delineate pros and cons of possible choices proposed
   j. Will make a decision and move forward
   k. Able to think innovatively and solve issues/problems before the “platform is burning”
   l. Solution oriented
   m. Listens to all possible solutions

15. Thinking, Creativity, Visionary
   a. Sees possibilities for future realities
   b. Thinking outside of the box
   c. Willing to look for and try innovative ideas even with the risk of failing
   d. Proactive, can anticipate problems associated with a particular chosen course of action
   e. Able to think critically, constructively
16. Learning
   a. Constantly learning and applying new ideas, information, etc.
   b. Spends time to gain skills/knowledge needed to complete an assigned task
   c. Open-minded
   d. Willing to learn new things

17. Professionalism
   a. Follow through
   b. I do what I say I’m going to do
   c. I’m dependable
   d. I dress and act appropriately
   e. I use good customer service skills
   f. I don’t engage in gossip
   g. I support leadership direction with words and actions
   h. Appropriate use of and timing for humor
   i. Balancing work and family life
   j. Has integrity at all times
   k. Someone who recognizes the importance of human respect
   l. Ability to work in a supportive environment
   m. Represents the agency/organization in all aspects of life
   n. Acts with honesty and truthfulness
   o. Does not take things personal but also doesn’t get personal
   p. Conflict management

18. Technology adoption and application
   a. Willingness to learn new ways of being more efficient
   b. Use new technology and tools effectively
   c. Model technology adoption
   d. I try to find examples of use of a specific technology in different program areas or application

19. Understanding the Extension Organization
   a. Knows history
   b. Knows funding sources and percentages
   c. Knows administrative flow chart
   d. Walks and talks the Extension mission/vision/values
   e. Knowledge of key components- signature programs, impact areas
   f. Does not get too involved with “rumor mill” or politics within organization

20. Understanding organizations and communities
a. Can identify important collaborators
b. Knows where to collect information to better understand community
c. Have ability to understand how key stakeholders in community/organizations work
d. How to successfully motivate these system to get things done

21. Accountability
   a. Do what I say I would do
   b. Document what I did
   c. Document the impact or lessons learned
   d. Share documented report

22. Diversity/cultural competencies
   a. Understand diversity is more than color, race, etc.
   b. Encourages non-traditional partnerships i.e. work with 1890 Schools (ex. North Carolina A&T)
   c. Ability to recognize what we don’t know and work with who does know
   d. Identifies and appreciates special needs for diverse audiences
   e. Open to several ideas
   f. Differences in opinion, thoughts, and beliefs
   g. Be able to treat all clientele the same way regardless of differences they may bring to the table.

23. Technical expertise
   a. Most bullets on handout under “organization expertise”

24. Subject matter expertise
   a. In-depth knowledge about a particular subject
   b. Has a specialization
   c. Viewed as an “expert” regardless of their position
   d. Ability to redefine scholarship?
OSU Extension Competency Model Draft 2

With the trends and implications identified as current drivers for Extension work as a foundation (See Draft #2 Trends & Implications), this draft of the OSUE Competency Model (Draft #2) was developed using a variety of internal and external sources.

For this research, the focus is on developing a competency model that includes core competencies, a competency definition, and key actions for each. In addition to the definitions already provided (see Definitions & Illustration of Competencies), two more are helpful here.

- Competency definition - A description of the knowledge, skills, abilities, and observable behaviors that represent the competency identified.
- Key actions - statements and general descriptions of behaviors that illustrate a competency. Key actions describe in behavioral terms what a high degree of each competence looks like. They personalize the competency or help bring to life what OSU Extension professionals do. The set of key actions should illustrate the different aspects of the competency identified. To best fit the broad application of the core competencies, they should be informative but general, not specific, and they should cut across jobs groups as much as possible.

Eventually, the OSU Extension competency model will include multiple layers. One layer will be the core competencies, their definitions, and key actions. Another layer developed later will be areas of expertise (AOEs), described here to clarify what may be included as core competencies and as AOEs. Other potential layers may be specific to job groups or may be developed for purposes like self-assessment or professional development planning.

Areas of Expertise

Areas of expertise (AOEs) are the specific subject matter, technical, or professional knowledge and skills required for successful Extension work in individual jobs or job groups. They are above and beyond the core competencies. In order to be successful in a given job, Extension professionals must have a foundation of the appropriate core competencies and a blend of unique AOEs. While some Extension work is highly specialized, most requires expertise in several AOEs.

The AOEs will be developed later through ongoing work with Extension Administration, program areas, and professionals. Based on initial research, the AOEs would likely include some of the following:

- Information technology
- Subject matter expertise
- Program planning, development, and evaluation
- Research
- Extension teaching
- Volunteer management
- Management and supervision
OSU Extension Core Competencies

Draft #2 of the OSU Extension Competency Model includes the following core competencies:

- Communicating effectively
- Continuous learning
- Customer service orientation
- Diversity/multiculturalism
- Efficient management of resources
- Flexibility
- Interpersonal savvy
- Professionalism
- Teamwork and leadership
- Technology adoption and application
- Thinking and problem solving
- Understanding OSU Extension
- Understanding organizations and communities
- Working independently.

Communicating effectively
The ability to communicate effectively with others using the range of methods and tools available in today’s environment; in both individual and group settings; with co-workers, clientele, and other stakeholders.

Key actions
- Delivers clear messages when speaking.
- Creates clear and concise written communication.
- Demonstrates effective listening skills – listens to others, interprets message, checks understanding.
- Selects communication tools and methods based on needs of recipients.

Continuous learning
Continually improving skills and capabilities; actively identifying new areas for growth; willing to learn new things; takes the time to learn and apply newly gained knowledge and skills on the job.

Key actions
- Actively identifies new areas for learning.
- Takes responsibility to set goals and improve skills through mentoring, training, formal education, or other learning activities.
- Seeks feedback and uses other sources of information to improve.
- Applies new knowledge or skills to practical use on the job; furthers learning through trial and error.
Customer service orientation
Works constantly to provide superior services to OSU Extension clientele, making each interaction a positive one. Understands and delivers quality service through a customer-focused mindset that acknowledges the importance of and value of the person being served; acts accordingly; dedicated to meeting expectations and requirements of internal and/or external customers; uses customer information to improve.

Key actions
• Demonstrates concern for satisfying one’s own internal and/or external clientele.
• Listens and responds to clientele needs.
• Delivers friendly and courteous service.
• Provides a response that is timely and meets clientele needs.
• Looks for and makes continuous improvements.

Diversity/multiculturalism
Recognizes, understands, and appreciates differences and the impact they may have in the workplace, in interactions with clientele, or in Extension programming; works effectively with individuals having diverse styles, abilities, motivations, and backgrounds (including cultural differences); commitment, and ability to include one’s own as well as other’s different cultural perceptions, assumptions, norms, beliefs, and values.

Key actions
• Conveys respect for different perspectives.
• Expands own awareness; learns about issues of diversity and multiculturalism as they relate to one’s role and the organization.
• Adapts behavior to accommodate others; modifies behavior to help others feel accepted.
• Identifies, understands, and appreciates needs of a diverse workforce and clientele.
• Recognizes what one doesn’t know and seeks information/support when needed.
• Champions diversity; takes action to increase diversity; confronts inappropriate behavior; suggests new approaches.

Efficient management of resources
Efficient use of time, materials, and people to add value to OSU Extension products or services; responsible use of resources.

Key actions
• Identify resources available.
• Fosters an environment in which fiscal and human resources are leveraged for maximum impact.
• Establishes a link between programmatic or organizational needs and specific solutions.
Flexibility
Demonstrates adaptability, maintaining effectiveness when experiencing changes in the work environment or conditions affecting OSU Extension (e.g., social, economic, or political); openness to new and different ways of doing things; accepts change and is willing to deal with ambiguity; adjusts to new work structures, programs, or processes.

Key actions
- Displays a positive attitude about change.
- Remains open to different ideas and approaches – is able to see the merits of other ideas, has an open mind.
- Seeks to understand changes.
- Demonstrates a willingness and openness to change.
- Adjusts behavior - changes and adapts to fit the circumstances when situations change.
- Adapts to handle unexpected challenges.

Interpersonal savvy
The ability to successfully interact with diverse individuals and groups, creating partnerships, networks, and dynamic human systems. Relates well to all kinds of people. Builds trust by interacting with others in a way that gives them confidence in one’s intentions and OSU Extension. Develops and uses a network of collaborative relationships with internal and external contacts to leverage efforts and accomplish results. Handles conflict constructively.

Key actions
- Understands the importance partnerships play in the success of Extension work.
- Networks with others – builds and maintains relationships with others.
- Develops partnering relationships to support one’s work.
- Diffuses high-tension situations.

Professionalism
The demonstration of behaviors that reflect high levels of performance, a strong work ethic; focuses on results, ethical decisions, and balance. Professionalism involves personal characteristics (positive attitude, integrity, honesty, trust), productive work habits (setting and managing priorities), and balance.

Key actions
- Is dependable; does what one says one will do.
- Dedicated to the job; willing to go the extra mile.
- Demonstrates ethical behavior (acts responsibility with the larger organization and community in mind).
- Maintains a conscious balance between work and personal life so one doesn’t dominate the other – attends to both and gets what one wants from both.
**Teamwork and leadership**
The ability to work effectively in a team, making contributions to organizational efficiency and effectiveness. Ability to make decisions and to influence others positively.

**Key actions**
- Develops constructive and cooperative working relationships with others,
- Delivers individual contributions and carries a fair share of the workload.
- Identifies and draws upon team member’s strengths of others to achieve common goals.
- Is focused on success of the team over personal recognition.
- Gives credit to others.
- Uses interpersonal skills to develop and coach others.
- Brings out the best in those around them.

**Technology adoption and application**
A sound understanding of information technology tools, systems, and operations; current technology skills for communicating, conducting business, creating, and delivering educational programming with a broad range of colleagues and clientele; actively learning new ways of using technology to enhance Extension work.

**Key actions**
- Learns new ways of using technology to improve quality or efficiency of work.
- Models technology adoption.
- Selects and applies appropriate technology to one’s work.
- Identifies and solves routine problems with technology.

**Thinking and problem solving**
Prevents and solves problems using thinking skills including creativity, analytical thinking (logical thinking, breaking a project or program down, anticipating and planning), and conceptual thinking (seeing connections and patterns, putting together information from different places); able to think critically and constructively with an orientation toward solutions.

**Key actions**
- Analyzes needs and proposes solutions.
- Demonstrates creativity and thinking “outside the box.”
- Listens; seeks to understand proposed solutions.
- Is proactive – identifies and solves problems before they are a crisis.
Understanding OSU Extension
Organizational awareness and knowledge; an understanding of the history, philosophy, and mission of OSU Extension; knowledge of organizational structure as well as formal and informal culture; knows and effectively applies practices for risk management and resource management; understands current policies and rules, using that information to leverage the system to meet internal and external clientele needs.

Key actions
- Knows and can explain basic information about the history, current structure, and funding sources for OSU Extension.
- Understands current priorities at the unit and state levels and can communicate those to clientele.
- Understands the importance of local, state, and national funding partners and the funding process for one’s unit.

Understanding organizations and communities
Understanding the basics of the community one works in and the role OSU Extension plays within the community with individuals and organizations; understanding the political, social, and economic context of one’s unit or OSU Extension; the ability to identify and monitor variables and issues important to a community and use or apply those to one’s Extension work.

Key actions
- Understand linkages between OSU Extension and partners.

Working independently
The ability to be self-directed, identifying what needs to be done and doing so without being asked; self-confident, sifting through others’ input and expectations, accessing one’s own thoughts, then reaching conclusions and taking actions that make sense for one’s work efforts and those of the organization.

Key actions
- Performs effectively with minimal supervision, support, or approval and without direct supervision.
- Seeks out and utilizes appropriate support for one’s work.
- Takes initiative to get involved with teams, committees, and professional associations.
- Questions or gives suggestions to co-workers or superiors.