

Preparing Future Professionals for Holistic Family and Consumer Sciences Programming

Abstract

It is critical that the value of Extension family and consumer sciences as a broadly focused profession be recognized both in and out of Extension. Establishing universally recognized competencies and assuring that agents possess those capabilities are vital steps to securing and maintaining the integrity of the profession and its value to those it serves. University of Tennessee Extension has developed a process for assessing basic competencies of newly hired agents and responding to their competency gaps with targeted training.

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Introduction

Universally acknowledged competencies provide the foundation for maintaining the integrity of the various program areas associated with Extension and preserving and elevating their credibility among academic colleagues and stakeholder groups (Lakai, Jayaratne, Moore, & Kistler, 2012). However, relatively little has been written about how Extension disciplines identify and agree on professional competencies. This article documents one state Extension system's process for identifying and validating competencies in family and consumer sciences (FCS) and using competency identification to strengthen agent preparation for Extension work. The process also has been used as a model for development of competencies needed in other Extension program areas, including "soft skills" needed by all Extension professionals.

Challenges of a Systems Approach

Some Extension program areas address focused subject matter well matched to an academic discipline that prepares students to work as local educators teaching that subject matter. Others—FCS, resource development, and 4-H youth development—pull from a broader range of academic disciplines. In these program areas, it can be difficult to know whether potential or new employees have the competencies needed to become successful Extension educators in the broad program areas to which they are assigned.

Historically, a strength of such broad programming has been its capacity to integrate social, personal, economic, and environmental approaches for educating people in community settings (McGregor, 2014). The discipline of FCS through its evolution has remained inclusive of a broad range of subject matter and theory (Baugher et al.,

2000; Bubolz & Sontag, 1993; Nickols et al., 2009). Over years of programming, Extension FCS educators have been able to use a holistic approach for leading change due to having knowledge in broad subject matter areas. In states that continue to program across FCS subject matter areas, local educators need competencies that span several disciplines to address individual, family, and community issues in a comprehensive way.

FCS degree programs of the past effectively prepared graduates for entry into Extension in states that offer broad FCS educational programming. Higher education institutions typically either offered the option of more generalized degrees or required a "core" of basic courses from disciplines such as nutrition, human development, family finance, resource management, textiles, housing, home equipment, and educational methodology. Students benefited from having exposure to basic knowledge and concepts in several disciplines before beginning careers as Extension agents. In contrast, current FCS higher education programs produce graduates specialized in narrow fields of study (Kandiah & Saiki, 2012). Furthermore, many institutions have struggled to maintain FCS degree programs due to departments closing or merging with other departments, thus losing their identities as stand-alone FCS academic programs (Firebaugh, Nickols, Atilas, & Turkki, 2010). Some state Cooperative Extension FCS programs reflect these changes, with focuses that include just one or two FCS knowledge areas, with nutrition education often being the main area of emphasis. However, for states that continue to promote the holistic aspects of FCS programming, the movement toward specialized degree programs presents a challenge related to agent competency and confidence. It is becoming increasingly difficult to find FCS professionals—new graduates or those experienced in the field—who have the broad knowledge to successfully program from a holistic framework.

Tennessee's Directive

University of Tennessee (UT) Extension is one organization that continues to take a broad approach to FCS programming. Its administrators recognize the importance of hiring FCS agents with degrees that combine the foundation of the socioecological framework with broad-based FCS competencies. They believe this combination equips UT Extension FCS agents with the knowledge and skills to meet the complex needs of families (Bronfenbrenner, 1994; Bubolz & Sontag, 1993). Preparing agents for success in their jobs is a complex undertaking. In a study by Lakai et al. (2012), agents identified demanding workloads and time constraints as the top barriers for acquiring competencies needed for their jobs. Overcoming those barriers requires recognition of and respect for agents' time demands and an efficient training method. Targeted, relevant training based on individual needs is essential to agent success and important for retention (Brodeur, Higgins, Galindo-Gonzalez, Craig, & Haile, 2011).

In early 2010, UT Extension FCS developed a framework for identifying preparation gaps and providing training to bring agents to basic competency in all FCS knowledge areas. UT Extension FCS formed a committee to lead this process. As three state Extension FCS specialists and a regional FCS program leader, we comprised that committee. Our initial undertaking was to identify steps in the development and implementation of the framework, components of which included

- identification of the essential competencies and skills needed for an FCS agent to be successful,
- development of an assessment tool for determining an individual agent's degree of competency, and
- use of the findings of the assessment to develop individual agent's training plans and to guide UT Extension FCS training offerings.

Identifying Competencies

Stone and Bieber (1997) defined competency as "application of knowledge, technical skills and personal characteristics leading to outstanding performance" (para. 2). Demonstrable and measurable competencies are an important foundation for assessing individual performance, determining areas for improvement, and identifying professional development needs (Scheer, Cochran, Harder, & Place, 2011). In the early 2000s, the Southern Region Program Leaders' Network, the Southern Region Extension Directors, and the Association of Extension Administrators started the Cooperative Extension Curriculum Project (CECP) to identify competencies for Extension professionals for the purpose of developing resources for online training. Through this project, Extension professionals developed essential, intermediate, and advanced competencies in several FCS knowledge areas.

Using the CECP competencies as a starting point, UT Extension FCS faculty in five knowledge areas identified key information and skills important for agents to be successful. The five knowledge areas are family economics, community health, housing and environmental safety, human development, and nutrition and food safety. Faculty worked with statewide leadership teams to refine each list of competency statements. Leadership teams included agents, administrators, specialists, and Extension assistants.

For each knowledge area, faculty identified three levels that represented different capacities to apply knowledge:

- *Level one, or awareness.* The agent understands basic concepts and can answer simple questions or easily find resources related to the topic.
- *Level two, or application and use of knowledge.* The agent understands basic concepts, can apply and use knowledge to plan and deliver programs, and can answer more difficult questions.
- *Level three, or integration, synthesis, and critique.* The agent has advanced training or degree in subject matter; can mentor others; and is able to integrate, synthesize, and critique current research findings to determine potential applications for community education.

Faculty determined that all UT Extension FCS county agents should be at level one in all knowledge areas within 3 years of employment.

As an initial step in validating the process and the competency statements identified, we surveyed all FCS agents in Tennessee. Agents self-assessed their levels of competency relative to each of the identified competency statements. The survey consisted of 119 statements reflecting the knowledge associated with the competencies and was administered through MrInterview—the SPSS online survey tool. The five sections of the survey represented the five UT Extension FCS knowledge areas: family economics, community health, housing and environmental safety, human development, and nutrition and food safety.

Each knowledge area section began with a question about overall level of competency. Additional questions referred to level of competency for each specific statement. The response scale for the overall competency question and the specific statements ranged from 1 (*limited knowledge*) to 4 (*could mentor others*). Additional questions addressed college level courses taken and additional training received in each area and number of years employed with Extension.

Most agents indicated that they were competent at level two or higher in each knowledge area, meaning that they could apply information to deliver effective programs in the knowledge area. An agent's response to the overall question for a knowledge area generally aligned with the level of competency indicated for each associated individual statement. For example, agents who indicated being at level three in family economics tended to rate themselves as at or close to level three on the individual family economics statements. For two of the knowledge areas, human development and nutrition and food safety, advanced training and years of experience did not appear to be related to self-assessment of level of competency. Taken together, these findings suggested that both specialists who developed the competencies and agents who took the assessment had similar ideas regarding the knowledge and skills needed in the knowledge areas but that some of the individual competency statements did not fully capture distinctions between the knowledge of trained, experienced personnel and the knowledge of those with little training and experience.

Creating an Assessment Tool

The literature indicates that self-assessment is a relatively inaccurate measure of competency (Kruger & Dunning, 1999). Accordingly, the second phase in developing the framework included devising an appropriate way to assess competencies. As part of this endeavor, we examined existing competency assessment tools and determined that existing assessments did not adequately measure the identified competencies. Consequently, we decided to create and test a new assessment tool specific to UT Extension FCS agent competencies.

To start the process, specialists in each knowledge area created a question bank to measure the identified competency statements. For each knowledge area, faculty and professional staff developed 80 to 100 questions to measure knowledge related to the basic concepts. Faculty reviewed the questions for face validity and eliminated any items that were unclear. The result of this process was a peer-reviewed question bank of 471 questions ready for reliability and validity testing.

From 2012 to 2014, we validated the questions with FCS professionals through a variety of venues. In-person validation was conducted at two National Extension Association Family and Consumer Sciences national meetings, an Extension Galaxy conference, and a Tennessee Jump\$tart teacher conference. We randomly distributed four surveys to respondents at each of the conferences. Surveys had questions from each of the knowledge areas. In addition to conducting in-person surveys, we had FCS agents complete online surveys through the Southern Region Program Leaders' Network and the U.S. Department of Agriculture National Institute of Food and Agriculture.

We tested questions for reliability using classical test theory. To be compliant with the theory, at least 100 people had to answer each question. We calculated the difficulty level, or p value, for each item according to the proportion of individuals who chose the correct answer. Items with high p values were considered easy (many people correctly answered the item), and items with low p values were considered difficult (few people correctly answered the item). Questions had adequate reliability when p values were at or near .50—that is, half the respondents correctly answered the question and half did not (Kline, 2005). Using these scores, we created a new pool of questions that had adequate reliability and validity.

Using the new pool of questions, we created an online pilot assessment for currently employed UT Extension FCS agents. Traditionally in UT Extension, the two knowledge areas of community health and housing and environmental safety have been combined into one knowledge area; accordingly, the assessment we created included this combined knowledge area. The pilot assessment comprised a mix of items for each knowledge area

—a few "easy" questions, a few "difficult" questions, and a majority of items that were moderately difficult. We included a few easy questions, those with p values over .75, to help reduce test anxiety. We included a few difficult questions, those with p values under .25, to help distinguish respondents with high knowledge levels. The majority of items had p values near or equal to .50 and thus adequately assessed competency levels.

Eighty of 84 FCS agents completed the pilot assessment (Table 1). Results from the pilot assessment indicated that we needed to make some changes to the assessment before formal implementation. First, more accurate human development questions needed to be developed. Second, for the instrument to assess competency accurately, 50 or more questions per knowledge area needed to be included. This requirement necessitated the development and validation of additional questions for each knowledge area. Finally, because the assessment would be longer, agents needed to take the assessment over a longer period to mitigate testing fatigue.

Table 1.

Results of the Family and Consumer Science Knowledge Pilot Assessment

Knowledge area	Total no. of questions	Total no. of points possible	<i>M</i> (<i>SD</i>)	Range
Family economics	21	43	32 (2.49)	18–41
Community health/housing and environmental safety	22	53	30 (3.17)	13–45
Human development	18	37	19 (2.51)	6–30
Nutrition and food safety	24	51	35 (3.08)	17–47

Implementing Relevant Training

UT Extension now assesses all newly hired FCS agents each quarter, with the goal of having them complete all four aspects of the assessment within the first 2 years of employment. Regional program leaders supervise the agents and work with them on tailored professional development plans based on assessment results. Faculty use collective results to guide individual and group training offerings.

Moving Forward

We believe this process has culminated in a valid and reliable question bank for assessing newly hired FCS agents that is available to share with other states. In Tennessee, the next step is to systemize the process of using assessment results to write professional development plans for FCS agents based on their individual needs and to develop training offerings for the Extension FCS department.

It is critical that the value of Extension FCS as a broadly focused profession be recognized both in and out of Extension. Over time, those working in FCS need to have the capability to respond comprehensively to individual, family, and community needs and to weather the difficulties of administrative changes, funding trends, and policy focus. Establishment of universally recognized competencies and the assurance that agents possess those competencies are vital steps to securing and maintaining the integrity of the profession and its value to those it serves.

Although the example in this article is specific to FCS, the process for identifying and assessing competency is

applicable to other—both broad and narrow—fields of Extension. Since we began developing FCS competencies in Tennessee, a team of UT Extension professionals from FCS, 4-H, and agriculture has worked with representatives of administration to identify "soft skills" competencies related to county Extension work. Still another team is identifying competencies important and unique to the role of county directors. Although these additional efforts may not lead to development of assessment instruments, articulation of competencies alone can provide benefits that include

- assurance that common expectations exist not only within a disciplinary field but also across county, regional, and state administrative levels;
- common and consistent language for developing position announcements and job descriptions;
- a basis for better integrated and more focused training and programming; and
- context for development of individual professional improvement plans.

These benefits contribute to a common vision for the Extension organization and to more efficient and focused delivery of information and services.

References

- Baugher, S., Anderson, C., Green, K., Nickols, S., Shane, J., Jolly, L., & Miles, J. (2000). Body of knowledge of family and consumer sciences. *Journal of Family and Consumer Sciences, 92*(3).
- Brodeur, C. W., Higgins, C., Galindo-Gonzalez, S., Craig, D. D., & Haile, T. (2011). Designing a competency-based new county Extension personnel training program: A novel approach. *Journal of Extension, 49*(3), Article 3FEA2. Available at: <http://www.joe.org/joe/2011june/a2.php>
- Bronfenbrenner, U. (1994). Ecological models of human development. In M. Gauvain & M. Cole (Eds.), *Readings on the development of children* (2nd ed.) (pp. 37–43). New York, NY: Freeman.
- Bubolz, M. M., & Sontag, M. S. (1993). Human ecology theory. In P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Schumm, & S. K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (419–448). New York, NY: Plenum.
- Firebaugh, F. M., Nickols, S. Y., Atilas, J. H., & Turkki, K. (2010). Sustaining FCS in higher education: A 2010 perspective. *Journal of Family and Consumer Sciences, 104*(4), 17–23.
- Kandiah, J., & Saiki, D. (2012). Collaboration: Perceptions of FCS professionals in teaching, research, and service. *Journal of Family and Consumer Sciences, 104*(4), 40–45.
- Kline, T. J. B. (2005). *Psychological testing: A practical approach to design and evaluation*. Thousand Oaks, CA: Sage.
- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology, 77*(6), 1121–1134.
- Lakai, D., Jayaratne, K. S. U., Moore, G. E., & Kistler, M. J. (2012). Barriers and effective educational strategies to develop Extension agents' professional competencies. *Journal of Extension, 50*(4), Article 4RIB1. Available at:

<http://www.joe.org/joe/2012august/rb1.php>

McGregor, S. L. T. (2014). The promise of integral-informed FCS practice. *Journal of Family and Consumer Sciences, 106*(1), 8–14.

Nickols, S., Ralston, P., Anderson, C., Browne, L., Schroeder, G., Thomas, S., & Wild, P. (2009). The family and consumer sciences body of knowledge and the cultural kaleidoscope: Research opportunities and challenges. *Family and Consumer Sciences Research Journal, 37*(3), 266–283.

Scheer, S. D., Cochran, G. R., Harder, A., & Place, N. T. (2011). Competency modeling in Extension education: Integrating an academic Extension education model with an Extension human resource management model. *Journal of Agricultural Education, 52*(3), 64–74.

Stone, B. B., & Bieber, S. (1997). Competencies: A new language for our work. *Journal of Extension, 35*(1), Article 1COM1. Available at: <http://www.joe.org/joe/1997february/comm1.php>

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