The Journal of Extension

Volume 62 | Number 4 Article 12

11-16-2024

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Andrew Toelle
University of Florida, aeto1@ufl.edu

Ed Osborne
University of Florida

Nick Place
University of Georgia

Hannah Carter
University of Maine

Dale Pracht
University of Florida

Recommended Citation

Toelle, A., Osborne, E., Place, N., Carter, H., & Pracht, D. (2024). Competencies Essential for Early Career 4-H Agent Success. *The Journal of Extension, 62*(4), Article 12. https://doi.org/10.34068/joe.62.04.12

JOURNAL OF Extension

Research in Brief

Volume 62, Issue 4, 2024

Competencies Essential for Early Career 4-H Agent Success

Andrew Toelle[1], Ed Osborne[1], Nick Place[2], Hannah Carter[3], and Dale Pracht[1]

AUTHORS: [1]University of Florida. [2]University of Georgia. [3]University of Maine.

Abstract. The purpose of this study was to identify the competencies essential for Florida early career 4-H agent success. This four-round Delphi study asked three expert panels to identify the competencies required for Florida early career agent success in years one and three. The Delphi procedure is a multi-round consensus building process, with the preceding round dictating the questions asked in subsequent rounds (Werner, 2017). The panels identified 55 year-one and 67 year-three competencies that fell into 15 competency areas. These competencies can be used to develop professional training programs to meet the needs of early career agents.

INTRODUCTION

Dalton et al. (1977) developed a career-stage model that described four stages that a person moves through during their career: entry, colleague, counselor, and advisor. This model was adapted by Kutilek et al. (2002) and expanded by Benge et al. (2011) to include a pre-entry stage, or competencies that a person brings to a position before being hired. The modified model stages are, in career order, pre-entry, entry, colleague, and counselor/advisor. The University of Florida Extension system has a well-defined entry stage: Years 1–7. During this time, agents are working toward permanent status, a status similar to tenure (Tenure and Promotion, 2018).

The University of Florida has used various methods to prepare early-career 4-H agents to successfully move to the colleague stage of their careers, including new agent training, mentors, and professional support. The goal of each of these methods is to develop the competencies needed for career success in Florida 4-H. Yet Hensley (2017 found that the median time that a 4-H agent remained in the University of Florida/Institute of Food and Agricultural Science (UF/IFAS) extension system was 5.52 years.

Competences have been described as the "application of knowledge, technical skills and personal characteristics leading to outstanding performance" (Stone & Bieber, 1997, p. 1). In 2004 and updated in 2017, 4-H developed the 4-H Professional, Research, Knowledge and Competencies (PRKC) model to describe the competencies needed for success as a 4-H agent (Stone & Rennekamp, 2004; Swanson et al., 2017). This framework contains six domains, with each domain containing three to five topics, and each topic containing two to six competencies. Harder and Dooley (2007) discovered many competencies that were not part of the 4-H PRKC model and were, instead, based on job experience. Further, the competencies listed in the 4-H PRKC are not listed in any priority order, based on where 4-H professionals are within their career. However, the first 3 years are critical to the success of new agents (Brodeur et al., 2011). Many competencies have been identified for agent job success (Berven et al., 2020; Brodeur et al., 2011; Harder, 2015), yet the competencies required for Florida early-career 4-H agent success have not been identified.

THEORETICAL OR CONCEPTUAL FRAMEWORK

Systems theory originated in the post–World War II era. The early work in systems theory was completed by von Bertalanaffy (1968). Since this publication, systems theory has developed into a multidisciplinary approach that has been used in management, social sciences, natural sciences, institutions, technologies, and ecosystems (Mele et al., 2010; von Bertalanffy, 1972). Applied to career development, the individual is at the center of the systems, with a plethora of internal and external "systems" at the individual, micro (workplace), and macro (political decisions) scale influencing career growth.

Competencies were introduced by McClellen in 1973. Stone and Bieber (1997, p. 1) made the call for competency modeling in Extension when they stated, "One of the most critical strategic issues facing the Cooperative Extension System is how to create an infrastructure that promotes innovation and continuous learning." Stone and Rennekamp (2004) published the seminal work for 4-H competencies, which became known as 4-H PRKC. Still relevant, the 4-H PRKC model was updated by Swanson et al. (2017).

Dalton et al. (1977) proposed a model of four distinct stages of careers, with each stage representing a different set of tasks that must be mastered for successful career progression. Stage I is the apprentice, a learning stage and helping stage often under the tutelage of individuals farther along the career-stage model. Stage II is the colleague, defined by being ready to become more independent and with a reputation of competence. Stage III agents assume the role of mentor. Stage IV is the sponsor. Sponsors have successfully moved through all the previous stages and can be described as the influencers of organizational direction. Rennekamp and Nall (1994) proposed that Extension should look to the Dalton et al. (1977) model. The model was later expanded to include a pre-entry stage for county Extension agents (Benge et al., 2011).

The theoretical model used in this study was combined with general systems, career stage, and competency theory to create the conceptual model found in Figure 1. The community, university, and county are the systems in which the model functions. The next level of education, work experience, mentoring, new agent training, and professional support are the formal vehicles by which competencies are learned. The two directional arrows represent the interactive nature of the learning. The progression from stage to stage has a broken line, representing that progression is not assumed between stages.

PURPOSE

The purpose of this study was to identify the competencies essential for Florida early-career 4-H agent success. The objectives of the study were to:

1. Identify the essential competencies for Florida early career 4-H agent success in Years 1 and 3, as perceived by entry-level 4-H agents.
2. Identify the essential competencies for Florida early-career 4-H agent success in Years 1 and 3, as perceived by agent mentors.
3. Identify the essential competencies for Florida early-career 4-H agent success in Years 1 and 3, as perceived by regional specialized agents (RSAs).

METHODS

A four-round Delphi technique was used for this study. The Delphi procedure is a multi- round or iterative process in which a panel of experts answers questions from a researcher, with the preceding round dictating the questions asked in subsequent rounds (Warner, 2017). The process continues until the panel attains consensus, as defined by the researcher. Previous research has suggested that two or three iterations are necessary to achieve consensus (Delbecq et al., 1975; Ludwig, 1997). Consensus in this study was when two-thirds (67.7%) of the panel members agreed or strongly agreed with an item. This study followed the Tailored Design Method (Dillman et al., 2014). More specifically, pre-notice was sent before Round 1. Follow-up reminders were sent after 3 days, and a final reminder was sent 10 days after the first reminder. The response rate was 75%, 56%, 62%, and 63% for the entry-level agents for each round, respectively; 63%, 100%, 73%, and 73% for each round, respectively, for the agent mentors; and 75%, 100%, 100%, and 100% for the RSAs. All surveys and calculations used in this study were developed and administered through Qualtrics.

POPULATION AND SAMPLE

Three separate panels were convened: early-career 4-H agents, 4-H agent mentors, and 4- H regional specialized agents. The early-career agent panel was a census of 4-H agents who had completed Years 3–6 as a Florida 4-H agent. 4-H agents were defined as those with a majority of their appointment assigned to 4-H programming. In total, 16 early-career 4-H agents were identified. All agents who composed the sample received every round of the questionnaire, even if they had not participated in the preceding round.

The mentor panel consisted of all Extension agents who (a) had a majority assignment in 4-H programming, (b) had been assigned as a mentor to new 4-H agents in the current year or past year, and (c) had completed the UF/IFAS Extension Mentoring Program. Eleven agents were identified for the Delphi mentor panel.

RSAs were agents in permanent-track status who served one of the five administrative districts in Florida. One of the primary job roles for these faculty was to mentor and train new 4- H agents. Four RSAs were identified for this panel (one of the RSA positions served two districts at the time of this study). For complete demographic information on respondents, see Tables 1–3.

DELPHI INSTRUMENT

The Round 1 questionnaire asked each panel to identify five or more competencies (knowledge, skills, and characteristics) essential for 4-H agents in their first 3 years of

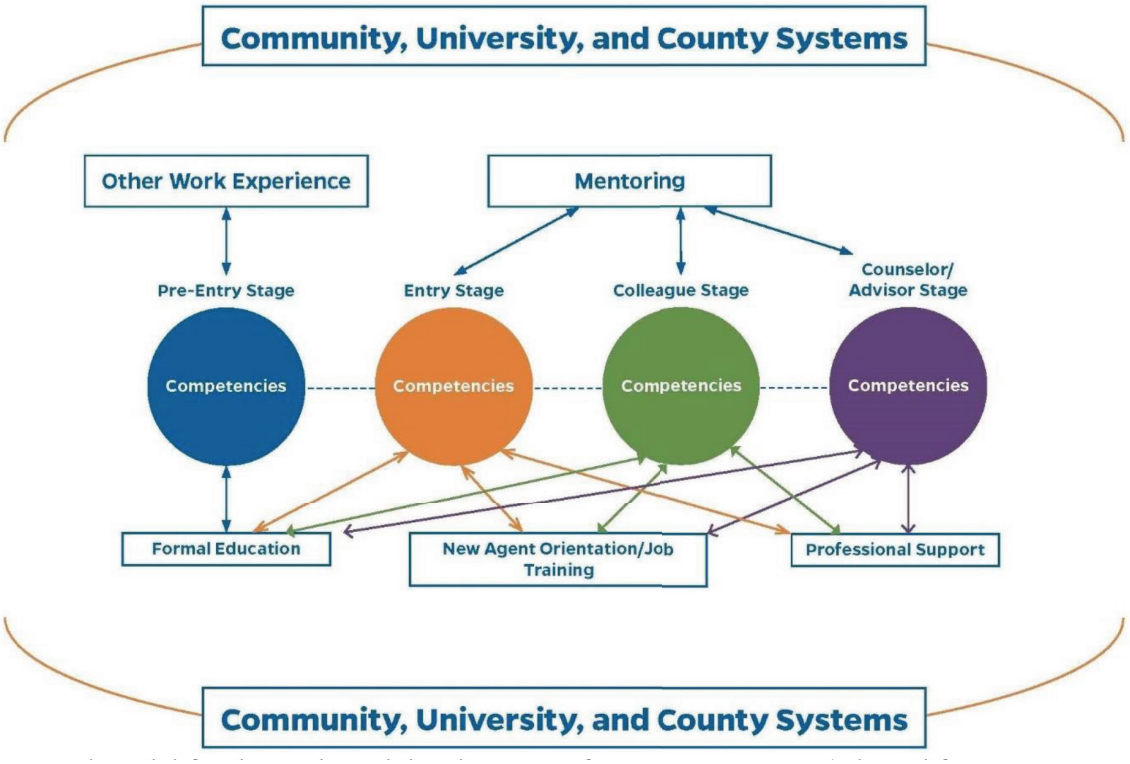

Figure 1. Conceptual model for 4-H agent competency building. Conceptual model for the study and development of 4-H agent success (adapted from Benge et al., 2011; Dalton et al., 1977; Rennekemp & Nall, 1994; von Bertalanffy, 1972).

employment. Duplicate responses were removed and used as the basis for the Round 2 survey. The Round 2 survey was delivered by using a 4-point, Likert-type scale (1 = *strongly agree*, 2 = *agree*, 3 = *disagree*, and 4 = *strongly disagree*). An opportunity to add any additional competencies was also included. Competencies that did not achieve consensus were retained for use in Round 3. The Round 3 survey was delivered by using the same Likert-type scale. Responses that reached consensus were added to the list of competencies identified in Round 2. The combined list was used to develop the Round 4 survey, which asked for yes/no responses as to whether each identified competency was essential for 4-H agent success in Year 1.

FINDINGS

The competencies identified in Round 1 varied by panel. The entry-level panel provided 42 competencies, while the mentor panel provided 35, and the RSA panel provided 28. These responses were then compiled by panel and presented in the Round 2 instrument. Consensus was not reached on all competencies in Round 2, and several new competencies were identified. Round 3 had the panelist rate the competencies generated from the Round 2 open-ended response. The panels were tasked to reconsider the competencies from Round 2 that had not reached consensus.

The Round 4 survey presented the panelists with the competencies that had reached consensus in Rounds 2 and 3. Panelists were asked to identify a competency as essential for 4-H agent success in the first year on the job by responding "yes" or "no." A thematic analysis was conducted on the findings that determined that the competencies fell into 16 competency areas. The summary of the overall competencies needed in Year 1 and competencies not needed until Year 3 are summarized in Table 4, matched with the identified competency area.

DISCUSSION

This study identified 55 Year 1 and 15 additional Year 3 competencies in 15 competency areas. The entry panel generated the most competences, followed by the mentor panel and then the RSA panel. Each panel reported many of the Year 3 competencies as also being required in Year 1, with the men-

Table 1. Frequency and Percentage of Respondents by Demographic Characteristics: Entry-Level Panel

Demographic characteristic	% (*n* = 10)
Education	
BA/BS	10
MA/MS	80
EdD/PhD	10
Sex	
Male	10
Age	
20–29	50
30–39	20
40–49	10
50+	20
Marital status	
Married	90
Never married	10
Ethnicity	
White	90
Hispanic/Latino	10
Years worked in Extension	
3	20
4	30
5	30
6	10
7	10
County population	
Rural, under 10,000 people	10
Town, 10,000–50,000 people	40
Suburb of city, fewer than 50,000 people	10
Central city, 50,000 people or more	

Table 2. Frequency and Percentage of Respondents by Demographic Characteristics: Mentor Panel

Demographic characteristic	% (*n* = 9)
Education	
BA/BS	11
MA/MS	78
Sex	
Male	11
Age	
30–39	33
40–49	22
50+	45
Marital status	
Married	89
Widowed	11
Ethnicity	
White	89
Indian/Alaska native	11
Years worked in Extension	
8	11
9	11
11	11
12	11
13	11
15	11
20	23
29	11
County population	
Town, 10,000–50,000 people	56
Suburb of city, fewer than 50,000 people	33
Central city, 50,000 people or more	11

tors reporting 76%, the RSAs 56%, and the entry panel 95%, respectively. The RSA panel Year 1 competencies focused on communicating, developing professionalism, and conducting safe programs. Multitasking, leadership, program design and development, and expertise were not perceived as essential until Year 3. The RSA panel competencies tended to be weighted toward professionalism and professional growth, while the entry panel responses reflected a more programmatic expression. The mentor panel was a mix of the two. The mentor panel and RSAs agreed that in Year 1, communicating, developing professionalism, and conducting safe programs were essential.

However, the mentors further identified volunteer development and management, organizational skills, and multitasking as Year 1 competencies. As the RSAs responded, leadership and expertise in an area were not expected until Year 3, while the entry panel identified all the focus areas of the mentor and RSA panels in Years 1 and 3. This major consensus in the competencies for Years 1 and 3 could lead the entry-level panel to believe that everything is important, which highlights the need for clarification as to expectations for success.

These findings were in line with previous research (Brodeur et al., 2011; Harder & Dooley, 2007), which reported that most of the competencies needed for early-career success were within the 4-H PRKC organizational-system domain. A unique competency found in the mentor and RSA panels was "accept feedback." The inclusion of the competency "demon-

Table 3. Fequency and Percentage of Respondents by Demographic Characteristics: RSA Panel

Demographic characteristic	% (n = 3)
Education	
MA/MS	100.0
Sex	
Male	66.7
Female	33.3
Age	
30–39	33.3
40–49	66.7
Marital status	
Married	66.7
Never married	33.3
Ethnicity	
White	100.0
Years worked in Extension	
12	33.3
18	66.7

strate expertise in youth development" as a Year 1 expectation was not in line with other research. Fox et al. (2013) found that the more years of experience, the more perceived competence in youth development. Perhaps this competency should be viewed as "developing" in Year 1 and continuing to grow through Years 3 and beyond.

The rejection of the competencies related to research ("conduct research" and "write for scholarly audiences") was unexpected. This response was in sharp contrast to the futuring study of Harder et al. (2010), which identified "applied research skills" as an essential competency for entry-level Extension educators. This finding was interesting in that the University of Florida 4-H agent positions are permanent-status track, a track like tenure, with an expectation of scholarship within Extension to be promoted and remain employed. More research is needed to determine whether the essentialness of these research-oriented competencies changes as agents move toward the final years of the entry stage.

The 4-H PRKC model and other studies have looked at competencies (Brodeur et al., 2011; Harder, 2015). Berven et al. (2020) identified the top three competencies for agent success and developed a training model around these competencies. This study begins to explore when new agents need to acquire competencies during their early-career stage.

The Years 1 and 3 competencies identified by the entry panel had 95% overlap. This overlap signals an expectation of early competency and a steep learning curve for competency acquisition. Setting the level of competence, such as developing, basic proficiency, and mastery, may alleviate the stress new 4-H agents feel in needing expertise in all these competencies very early in their careers.

CONCLUSIONS

- Entry-stage 4-H agents, new 4-H agent mentors, and 4-H RSAs see a very large number of competencies as essential for Florida early-career agent success in Years 1 and 3.
- Entry-level 4-H agents see very little differentiation between the competencies essential for
- 4-H agent success in Years 1 and 3. This response suggests that entry-level 4-H agents see nearly all identified competences as essential for agents in Year 1.
- Extension agents who mentor entry-stage 4-H agents see moderate differentiation between the competencies essential for Florida early-career agent success in Years 1 and 3.
- 4-H RSAs see a substantial difference between the competencies essential for Florida early-career agent success in Years 1 and 3—to a much greater degree than either entry-stage agents or agents who are serving as mentors to new 4-H agents.

RECOMMENDATIONS

This study suggests pre-entry and early-career training practice recommendations. Develop an internship and volunteer programs that encourage competency building for individuals interested in a 4-H agent career. Create a marketing plan to target diverse audiences for inclusion into hiring pools. Consider pre-entry competencies when screening applicants for new 4-H agent positions. As time and resources are limited for professional development, early-career training should focus on the areas of overlapping agreement from the three panels.

This study opens other areas of research, including a study of the competencies essential for early-career success for all county agents to discover overlapping and shared competencies. Exploring the preferred delivery method by competency would be helpful in presenting competencies in ways that early-career agents wish to receive training. Finally, a longitudinal study should be conducted to follow 4-H agents from Years 1–3, assessing the effectiveness of professional development efforts in helping new 4-H agents acquire essential competencies.

Table 4. Year 1 and Year 3 Competencies Essential for Early-Career 4-H Agent Success

Competency area	Year 1 competency	Competency not needed until Year 3
Budget management	Develop budgets and manage funds[e]	Develop budgets and manage funds[m]
Communication	Communicate orally[emr] Communicate in written form[emr] Communicate with youth[e]	
Conflict management	Manage conflict[em]	
Decision-making and problem-solving	Remain flexible[emr] Be open-minded[em] Make decisions[r] Exercise judgment[r] Think critically[r] Solve problems[er]	See the "gray" in black-and-white situations[r] Deal with ambiguity[r]
Extension knowledge	Understand the history, mission, and structure of Extension and 4-H[e]	Demonstrate expertise in 4-H delivery modes[m]
Initiative and productivity	Manage time[emr] Be a self-starter[emr] Multitask[m] Organize files and workspace[em]	Multitask[r] Be innovative[e] Maintain focus when moving from one task to another[r]
Interpersonal	Be people-oriented[emr] Demonstrate patience[em] Be a good listener[mr] Display confidence[e] Demonstrate compassion[m]	Work with diverse audiences[r] Be culturally competent[r]
Learning and professional development	Be willing to learn[em] Accept feedback[mr] Engage in professional development[m]	Engage in professional development[r]
Networking and collaboration	Collaborate with otherse Build relationships with clientele[e] Network[m] Develop partnerships[m]	
Professionalism	Maintain commitmente[m] Demonstrate strong work ethice[m] Maintain ethical behaviore Maintain a high standard of ethics[e] Follow through on commitment[sr] Maintain professionalis[mer]	
Programming	Market programse See programs from different perspectives[e] Set and remain focused on priorities[emr] Plan and design programs[e] Be creative[e] Report program outcomes and impacts[e] Manage risk[m] Follow safe procedures[r] Teach adults[em] Teach youth[em]	Plan and design programs[r] Report program outcomes and impacts[m] Evaluate programs[emr] Demonstrate expertise in one or more project areas[m] Demonstrate expertise in 4-H programs and programming[m]
Self-care/Resilience	Balance work/life[em] Manage personal stress[e] Maintain resiliency[m]	Maintain wellness[r]

Table 4. (*continued*)

Competency area	Year 1 competency	Competency not needed until Year 3
Team leadership	Lead people and programs[e] Participate in and lead teams[e]	Lead people and programs[r]
Technology use	Use software applications[e] Use social media[e]	
Volunteer management	Develop and manage volunteers[em]	
Youth development	Demonstrate expertise in youth development[e]	Demonstrate expertise in youth development[mr] Empower youth[r]

Note. [e] = Entry panel; [m] = Mentor panel; [r] = RSA panel

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