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Matt Benge

University of Florida, mattbenge@ufl.edu



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Competency Needs Assessment of 4-H Youth Development Professionals

MATT BENGE¹

AUTHOR: ¹University of Florida.

Abstract. Understanding and identifying the professional development needs of 4-H youth development professionals should be the first step in developing the Extension workforce. However, 4-H professionals find it challenging to use the Professional, Research, Knowledge and Competencies (PRKC), which consists of 348 unique competency items, to guide professional development trainings. The purpose of the study was to determine the professional development needs of National Association of Extension 4-H Youth Development Professionals (NAE4-HYDP) members. A Borich model was used to create a top 10 prioritized list of each PRKC domain to guide professional development of NAE4-HYDP members.

INTRODUCTION

Investing in human capital through education, training, and professional development is the most important investment an organization can make (Becker, 1994). Extension has created and revised various competency frameworks over the years; the most recent are Harder et al.'s (2010) Extension competency framework and Suvedi and Kaplowitz's (2016) Core Competency Handbook. The 4-H profession requires very specialized competency considerations, such as those related to volunteerism, working with youth, organizing and running club and afterschool programs, and maintaining a heightened focus on equity and inclusion. 4-H professionals tend to rely on their state 4-H program, state development specialist(s), and the National Association of Extension 4-H Youth Development Professionals (NAE4-HYDP) for continued training and development for their work in Extension (S. Ellison, personal communication, April 10, 2021). Professional associations such as NAE4-HYDP serve valuable functions for those who are like-minded and similarly employed (Markova et al., 2013), such as providing professional identity (Messmer, 2005), support networks (Hovekamp, 1997), and social recognition (Abbott, 1988).

The NAE4-HYDP is "the professional's organization for those dedicated to promoting, strengthening, enhancing and advocating for the 4-H youth development profession" (NAE4-HYDP, 2021, para. 1). The association, consisting of more than 4,000 youth development professionals, provides

professional development, opportunities for networking and idea-sharing, and integrating scholarship, research, and practice to its members (NAE4-HYDP, 2021). The association also hosts an annual conference, awards, and scholarships for its members. The NAE4-HYDP has adopted the 4-H Professional, Research, Knowledge and Competencies (PRKC) as a competency framework to build and enhance a 4-H youth professional's skillset.

The PRKC is a "framework for professional competencies that are vital to the success of the 4-H professional" (NIFA, 2017, p. 4). It acts as a roadmap and guide for youth development worker development, job description creation, career development, and learning plans and performance standards (Stone & Rennekamp, 2004). Originally developed in 1987 as the 4-H Professional Research and Knowledge Base (PRK) (Hutchins, 1990; Rennekamp, 1987), the PRKC underwent reviews in both 2004 and 2017 (NIFA, 2017; Stone & Rennekamp, 2004), yielding six competency domains and 348 competency items (see Table 1).

The PRKC has been used in a variety of ways, such as to build professional development programs, offer in-service training, and conduct research. Rennekamp (1987) used the original PRK model to understand how college major was associated with preparation for 4-H professional careers. Western 4-H program leaders have used the PRKC to create an on-going regional in-service training program (Astroth, 2002; Astroth & Lindstrom, 2008; Varrella et al., 2016). Heck et al. (2009) used the PRKC to assess the weakest compe-

Table 1. Description of Domains in 4-H Professional, Research, Knowledge, and Competencies (PRKC)

PRKC Domain	Domain Descriptions	Number of Items in each PRKC Domain
Access, Equity and Opportunity	Interacting effectively and equitably with individuals and building long-term relationships with diverse communities. Culture is defined as the intersection of one's national origin, religion, language, sexual orientation, socioeconomic class, age, gender identity, race, ethnicity, and physical and developmental ability.	74
Volunteerism	Building and maintaining a volunteer program management system for the delivery of youth development programs.	43
Partnerships	Engaging youth in community development and the broader community in youth development.	61
Organizational Systems	Using systems to build capacity of the organization and its people to work effectively with and on behalf of young people.	77
Youth Development	Utilizing knowledge of the human growth and development process to create environments that help youth reach their full potential.	46
Youth Program Development	Planning, implementing, and evaluating programs that achieve youth development outcomes.	47

tency areas of California 4-H professionals, and Stark et al. (2012) identified the access, equity, and opportunity domain as the PRKC domain where 4-H professionals spend the least amount of time in their job.

PURPOSE AND OBJECTIVES

The purpose of this study was to determine the professional development needs of National Association of Extension 4-H Youth Development Professionals (NAE4-HYDP) members. The objective of the study was to compare importance and ability levels for each PRKC item in order to determine the highest priority training needs for NAE4-HYDP members within each PRKC domain. I received approval from the University of Florida's Institutional Review Board (IRB) and the NAE4-HYDP Executive Board prior to conducting this study.

METHODS

For this study, I used a descriptive design. The target population was active NAE4-HYDP members; I removed both lifetime and student NAE4-HYDP members from the target population as they are either retired or not working as 4-H youth development professionals. The Executive Director of the NAE4-HYDP provided the population list. The PRKC needs assessment was conducted over a three-year period between 2019–2021; however, the assessment was paused in 2020 due to COVID-19. The assessment was conducted in three waves: 2019, spring of 2021, and fall of 2021. I used a systematic sampling procedure to split the NAE4-HYDP

population in two groups, with each group having equal state representation and each member receiving only one survey at a time. Table 2 provides a summary breakdown of when each PRKC domain was assessed, the year, the number of respondents, and the response rate for each survey.

I created the questionnaires using Qualtrics and followed the Borich model design to assess NAE4-HYDP members' perceptions of the PRKC statements. The Borich model asked participants to rate their perceived ability in, and their perceived importance of, each PRKC competency statement using a five-point Likert scale (Borich, 1980). Extension agents and professionals commonly use the Borich model to assess competencies and professional development needs (e.g., Benge et al., 2021; Hall & Broyles, 2016). The response options were coded: 1 = *not important/none*, 2 = *of little importance/below average*, 3 = *of average importance/average*, 4 = *very important/above average*, 5 = *absolutely essential/high*.

I considered all 348 items in the PRKC to understand the professional development needs of 4-H youth development professionals. The PRKC has been reviewed throughout the years, most recently in 2017 (NIFA, 2017). A 4-member panel of experts reviewed and assessed the questionnaires for construct and face validity prior to the assessment (Ary et al., 2006). The panel consisted of 4-H Extension professionals at both the county and state level from each of four different NAE4-HYDP regions. The expert panel did not make any changes to the instruments. I used Dillman's (2009) Tailored Design Method (TDM) protocol because it yields high response rates, develops trust with respondents, reduces sampling error, and allows researchers to follow research- and scientifically founded survey procedures (which mini-

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Table 2. Descriptions of each PRKC Domain Survey, Total Populations, and Response Rates

PRKC Domain	Year	N	n	Response Rate
Access, Equity, and Opportunity	2019	1,658	432	26%
Volunteerism	2019	1,658	468	28%
Partnerships	2021 (spring)	1,489	512	34%
Organizational Systems	2021 (spring)	1,488	536	36%
Youth Development	2021 (fall)	1,489	340	23%
Youth Program Development	2021 (fall)	1,488	424	28%

mizes nonresponse) (Sivo et al., 2006). A pre-notice message appeared in the NAE4-HYDP newsletter to inform association members of the study and thank them in advance for their participation. I used Qualtrics' personalized email function to distribute the instruments to the target population of active NAE4-HYDP members in all three waves of the assessment.

Following Borich's (1980) analysis method, I calculated a mean weighted discrepancy score (MWDS) for each PRKC item. MWDS are based on calculating the difference between how important a respondent believes a competency to be and how able the respondent perceives themselves to be at performing that competency. The discrepancy score is then weighted based on how important the entire sample believes the competency to be, which helps to correct for potential errors in an individual's judgment. Finally, all weighted discrepancy scores across the sample are averaged; this is the MWDS for a competency. Competencies were ranked by MWDS to determine priorities for professional development within each PRKC domain. A negative MWDS would indicate that respondents' perceived ability of a competency is higher than their perceived importance, indicating that competency is not a professional development need. A positive MWDS would indicate the respondents' perceived importance of a competency is higher than their perceived ability, indicating that competency is a professional development need. Competencies that have higher MWDS signify a greater need for professional development than competencies that have lower MWDS.

There were three limitations of this study. First, respondents may have misinterpreted the questions, which would result in decreased validity. Second, I assumed the respondents in the study provided honest and accurate answers; this assumption always has the potential to cause errors as it isn't controllable. The third limitation was the low response rates. To address the limitation of a low response rate, Lindner et al. (2001) and Sivo et al. (2006) recommend comparing early to late respondents to minimize nonresponse error. I found no significant differences between early and late respondents when comparing importance and ability scales of all 348 PRKC items.

RESULTS

Tables 3 through 8 show the highest prioritized MWDSs for each PRKC domain. The five competencies with the highest need across all PRKC domains for professional development are: "regarding work-life integration: manages demands of personal and professional commitments" (MWDS = 6.15), "regarding work-life integration: incorporates wellness practices into personal lifestyle (exercise, healthy eating, and adequate sleep)" (MWDS = 5.68), "utilize appropriate programmatic adaptation for youth with special physical needs" (MWDS = 5.52), "regarding work-life integration: manages boundaries effectively" (MWDS = 5.02), and "understands best practices for engaging first generation volunteers" (MWDS = 4.99). The MWDS scores for Youth Program Development (YPD) were significantly lower than the other PRKC domains, with the highest priority need being "understands and utilizes appropriate theories of change to describe how a program will achieve its intended outcomes" (MWDS = 3.28).

IMPLICATIONS & RECOMMENDATIONS

Understanding and identifying the professional development needs of Extension professionals is crucial to training and developing the Extension workforce (Benge et al., 2021; Harder et al., 2010). As communities grow, adapt, and diversify, so too does the need for targeted and intentional workforce development (Henning et al., 2014; Warner & Christenson, 1984), and the results of this study can guide such training for NAE4-HYDP members.

The Organizational Systems (OS) PRKC domain had three of the five highest-priority needs amongst NAE4-HYDP members. Interestingly, these three competencies do not pertain specifically to the 4-H job itself; they are general skillsets that professionals outside of Extension must also have or develop. A 4-H professional's ability to successfully integrate their work and personal lives has been a consistent theme within Extension research (Ensle, 2005; Kutilek, 2000; Myers, 2011) and professional development offerings. The

Table 3. Top 10 Competency Needs for 4-H Extension Professionals regarding the Youth Development Domain of PRKC

Competency Items	MWDS
Utilizes appropriate programmatic adaptation for youth with special physical needs	5.52
Identifies how ethical standards, social norms, and the well-being of self and others influence responsible decision-making	4.48
Implements personal and group strategies to deal with inappropriate behavior in appropriate, affirming ways	3.91
Uses trauma-informed strategies and techniques when working with youth and adults	3.87
Recognizes behaviors that are indicators of mental health issues	3.85
Ability to refer young people to necessary professional services	3.84
Knowledge of and the ability to identify common mental health issues	3.82
Designs programs that maximize protective factors such as self-confidence, managing strong feelings and impulses to handle adverse situations or events	3.75
Develops programming utilizing a trauma-informed approach	3.63
Displays an understanding of trauma and its effect on brain development	3.53

Table 4. Top 10 Competency Needs for 4-H Extension Professionals regarding the Youth Program Development Domain of PRKC

Competency Items	MWDS
Understands and utilizes appropriate theories of change to describe how a program will achieve its intended outcomes	3.28
Utilizes the appropriate methods and techniques for gathering community perspectives	3.26
Shares findings with appropriate stakeholders	3.23
Develops meaningful evaluation questions	3.23
Communicates evaluation results in a manner congruent with stakeholder needs	3.21
Incorporates evaluation planning into program design	3.19
Selects evaluation methods appropriate for the evaluation question and indicators to be assessed	3.16
Understands how to manage situations where technology is a barrier or distraction to learning	3.14
Identifies potential community partners and collaborators	3.12
Specifies appropriate indicators of change	3.11

Table 5. Top 10 Competency Needs for 4-H Extension Professionals regarding the Volunteerism Domain of PRKC

Competency Items	MWDS
Understands best practices for engaging first-generation volunteers	4.99
Identifies and engages expanded, diverse audiences as volunteers	4.90
Implements disciplinary strategies as needed including remediation, counseling, probation and dismissal	4.88
Understands and implements multiple recruitment strategies based upon role responsibilities and community demographics	4.57
Provides educational opportunities for volunteers on expansion and outreach to new and diverse audiences	4.54
Communicates program impact and value of volunteer efforts to stakeholders (both privately and publicly)	4.52
Conducts and provides regular/routine performance feedback to volunteers	4.51
Develops and conducts impact assessment of volunteer efforts	4.47
Engages volunteers in telling/sharing the program impact/public value	4.26
Identifies and address barriers to volunteering for 4-H	4.26

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Table 6. Top 10 Competency Needs for 4-H Extension Professionals regarding the Access, Equity, and Opportunity Domain of PRKC

Competency Items	MWDS
Actively recruits, supports and retains volunteers, advisory members, and partners who reflect the diversity of the community	4.76
Engages local, diverse, community-based individuals in advisory committees, volunteer opportunities, etc.	4.57
Engages the community in designing the learning opportunities	4.34
Collaborates with diverse communities/individuals to assess their needs	4.27
Gains sufficient, meaningful input from diverse communities/individuals to design programs	4.24
Resolves conflicts in culturally appropriate manner	4.21
Uses appropriate, inclusive marketing techniques such as personal marketing, relationship marketing, and/or ethnic marketing	4.10
Intervenes to explicitly address negative stereotyping and discriminatory statements or practices when they occur	4.09
Knows how to gain sufficient, meaningful input from diverse communities to design programs	4.00
Utilizes the four-fold developmental approach for engagement of diverse communities (Four-Fold Model for Acculturation)	3.91

Table 7. Top 10 Competency Needs for 4-H Extension Professionals regarding the Partnerships Domain of PRKC

Competency Items	MWDS
Understands the unique differences in family structures and culture and finds ways for all youth to be included in the program	4.85
Ensures adequate representation of young people in all areas of decision making	4.42
Builds capacity of young people to serve on governing bodies	4.36
Provides appropriate avenues for youth advocacy	4.25
Builds adult capacity for shared leadership	4.14
Provides opportunities for families to share their skills, talents and cultural backgrounds	4.09
Builds youth capacity to lead through skill-building and real-world opportunities	4.01
Builds governing structures that incorporate youth voice	4.00
Facilitates dialogue that ensures a youth voice	3.94
Manages youth-adult interactions on governing bodies	3.94

Table 8. Top 10 Competency Needs for 4-H Extension Professionals regarding the Organizational Systems Domain of PRKC

Competency Items	MWDS
Regarding Work-Life Integration: Manages demands of personal and professional commitments	6.15
Regarding Work-Life Integration: Incorporates wellness practices into personal lifestyle (exercise, healthy eating, and adequate sleep)	5.68
Regarding Work-Life Integration: Manages boundaries effectively	5.02
Communicates program impacts to stakeholders	4.74
Regarding Interpersonal Skills: Incorporates wellness practices into personal lifestyle (exercise, healthy eating, and adequate sleep)	4.44
Hires, retains and promotes diverse faculty and staff at all levels	4.35
Utilizes effective methods to collect and report program data	4.19
Regarding Work-Life Integration: Understands stress management and reduction strategies	4.15
Regarding Interpersonal Skills: Manages boundaries effectively	4.10
Has the ability to delegate tasks in order to manage time efficiently	4.08

issue might not be the availability of professional development offerings or even skillsets around this topic, but rather the nature and structure of the 4-H professional's role. Cooperative Extension must either provide more resources to its 4-H professional workforce to help alleviate this need or redefine and restructure the role of the 4-H professional in general.

Not all state Extension systems have the resources to provide intentional and targeted professional development for their 4-H Extension professionals, and those states without designated subject-matter specialists may have higher MWDS within those domains. For instance, a state 4-H program that does not have a 4-H volunteer specialist might have higher MWDS scores for the Volunteerism PRKC domain than a state that does have a 4-H volunteer specialist. In this respect, NAE4-HYDP could play an integral role within the Cooperative Extension system by providing a platform for idea-sharing and resource-sharing between states and regions. The association can use this study's lists of priority training needs to create intentional and high-need professional development offerings for its members, perhaps through the annual NAE4-HYDP conference and webinars created specifically to focus on these high-priority needs. State 4-H programs can follow suit and direct in-service trainings on topics that are most necessary for 4-H professionals.

It is important to note that the top ten prioritized competencies of each PRKC domain are generalized amongst the NAE4-HYDP population. I did not take into consideration differences regarding geographical location, years of experience, field of education, and urban and rural communities. Determining if these demographic differences impact the priority training needs of NAE4-HYDP members warrants further investigation.

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