

Alternative Community Nutrition Experiential Learning Opportunities for Dietetic Interns During COVID-19

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Abstract

In response to the COVID-19 pandemic, collaboration among faculty in the Department of Dietetics and Human Nutrition at the University of Kentucky yielded two, four-week virtual experiential learning opportunities with Cooperative Extension for 19 dietetic interns. Remote experiences focused on development of new programming regarding the role of nutrition in the prevention/management of the most prevalent chronic diseases affecting Kentuckians and translating an existing social marketing program that promotes quality family time through preparation of nutritious, affordable home-cooked meals. Weekly assignments took ~10 hours, included individual and groupwork, and came together to create program packages encompassing commonly used products (e.g., podcast, recipe demonstration). Interns perceived improvement in professional competencies and transferable skills – notably adaptability, multitasking, and cooperation. They also reported gains in competency with software programs and awareness of the diverse roles for registered dietitian nutritionists in community settings. Lessons learned include: the need for streamlined coordination and communication of timelines across overlapping tasks; more support to transition to remote work environments including virtual shared workspaces, group work, and tech support, and the value of providing interns purposeful learning experiences during times of uncertainty. Extension-based projects, in-person or virtual, can provide opportunities for valuable experiential learning that build professional competencies and transferable skills.

Introduction

Supervised Practice Programs (SPP) are designed to provide experiential learning opportunities for dietetic interns to attain core competencies necessary to practice as an entry-level dietitian. Upon completion of an internship program, interns are eligible to sit for a registration examination to become credentialed Registered Dietitian Nutritionists (RDNs) (Accreditation Council for Education in Nutrition and Dietetics, 2020). The University of Kentucky Dietetics and Human Nutrition SPP is a nationally accredited program that promotes critical thinking and integration of hard skills learned in the classroom with soft skills required in a professional setting. The internship experience provides opportunities for hands-on learning and creativity in, application of, and reflection on linking theory to practice.

The COVID-19 pandemic disrupted the 2020 SPP at the University of Kentucky, challenging the fundamental nature of experiential learning. Problem-solving and flexibility were required to develop innovative approaches to enable interns to meet core competencies through alternative supervised learning experiences, specifically related to community nutrition, in a virtual setting. To maintain the timeline to graduation for dietetic interns, the internship program quickly expanded the breadth of its online experiences by leveraging internal and external collaborators (Combs and Schwartz, 2020). Through soliciting input from department faculty members regarding their availability to facilitate virtual community nutrition experiences, a partnership with faculty working with the Cooperative Extension Service (Extension) emerged.

The COVID-19 pandemic similarly disrupted traditional face-to-face programming for Extension and prompted the

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transition to remote delivery. There was an imminent need for program materials for Family and Consumer Sciences Extension Agents that could be delivered through virtual platforms. In response to the remote experiential learning needs of interns and virtual community-based programming needs of Extension, faculty affiliated with the SPP and Extension collaborated through video calls, email, and online project and learning management systems (i.e., OneDrive and Canvas, respectively) to, within a month, design an alternative community nutrition supervised learning experience.

The goal of the Extension Virtual Health Programs project was to provide an opportunity to develop core competencies expected during an SPP and develop soft skills, or transferable skills, that could be transferred into the workplace as an entry-level dietitian. The purpose of this study was to evaluate changes in dietetic interns' professional competencies and transferable skills after completion of the Extension Virtual Health Programs project. A secondary aim was to evaluate the impact on perceived career opportunities for RDNs working in community nutrition and Extension.

Methods

Extension Virtual Health Programs Project

During May and June of 2020 (8 weeks), interns contributed to Project 1: Virtually Impacting Every Kentuckian, a new Extension program, and Project 2: Cook Together, Eat Together, an existing packaged curriculum (Mullins et al., 2020). Through the design, implementation, and evaluation of nutrition communication and education pieces, interns had pragmatic experiences to advance professional competencies and enhance transferable skills. Although the projects had different requirements (described below), components of both projects were evaluated collectively.

Project 1: Virtually Impacting Every Kentuckian.

This 4-week experience focused on development of programming regarding the relationship between nutrition and chronic disease as well as the application of nutrition principles for the prevention or management of the most prevalent chronic diseases affecting Kentuckians (i.e., cancer, cardiovascular disease, chronic obstructive pulmonary disease, dementia, hypertension, prediabetes/diabetes). Assignments focused on building and refining science communication skills and were estimated to take an average of 10 hours each week. Weekly assignments included individual and groupwork and were packaged together to create a final program encompassing commonly used products when Extension Agents implement programs locally – information releases, podcast episode, and online lesson components. For context, information releases are distributed to Extension Agents to use as they need in a variety of platforms, including newsletters, newspapers, social media posts (e.g., Facebook Notes) or scripts for radio or TV spots. Using evidence-based and professional resources, and in 200 – 600 words, interns translated key messages related to nutrition and chronic health conditions

to a sixth to eighth grade reading level. They then used information releases to generate scripts for an interview-style podcast and worked with a partner to record a 10–15-minute podcast episode. Each intern had an opportunity to play the role of expert guest and podcast host. Interns were encouraged to apply creativity when learning and practicing editing skills for their final product. The experience culminated with the development of an online lesson and presentation. Interns worked in small groups (2-3 people per group) to create and deliver a 25 – 30-minute nutrition education lesson to a live audience via Zoom. Content for the presentation expanded upon information presented in the information releases and podcast scripts. Elements of this assignment included a slide deck with detailed notes; a related handout/takeaway that could be shared with participants; a facilitator's guide providing background for the purpose, planning, and delivery of the program, and a video training guide for Extension Agents to supplement the facilitator's guide.

Project 2: Cook Together, Eat Together.

Additionally, the University of Kentucky Dietetics and Human Nutrition department chair spearheaded a collaboration for interns to learn about a social marketing project, Cook Together, Eat Together, and to apply that knowledge to create resources for Extension Agents. Cook Together, Eat Together is a curriculum available to Extension Agents that utilizes in-person, hands-on cooking classes to encourage preparation of healthy, home-cooked meals (Mullins et al., 2020). This experiential learning opportunity for dietetic interns included the creation of virtual nutrition education resources including podcasts, Facebook Live Events, and other products that would allow Extension Agents to transition the program to a virtual format. The capstone project for this collaboration was to create and produce a high-quality recipe demonstration video (8-10 minutes in length) with marketing (social media posts, radio scripts) and evaluation (online surveys) tools. In addition to the assigned tasks, interns interacted with Extension Agents and participated in discussions based on assigned readings. In addition to being challenged to create resources for virtual nutrition education program implementation, interns were also asked to reflect and report on the application of these experiences to clinical, community, and food service dietetics practice.

Implementation Support from Extension Faculty/Staff.

Interns had access to an online learning management platform (Canvas) that housed all instructions and communication for these experiences. Interns received written instructions and deadlines for each assignment/task and had eight weekly virtual meetings with Extension faculty and staff from May-June 2020. Virtual meetings included orientation to upcoming assignments, reflections on previous assignments, group discussions, and break out rooms for group work. During the first four weeks of the project, an office hour was held by Extension faculty later in the week to provide time for interns to seek additional feedback and guidance for tasks and assignments. Interns received written feedback from faculty on written assignment

submissions and provided peer feedback for the podcast assignment.

Research Design

After completion of the Extension Virtual Health Programs project, a pragmatic approach was used to evaluate interns' perceptions of change in competencies and transferable skills and opportunities for RDNs working in community nutrition and Extension. The Institutional Review Board at the University of Kentucky approved the study protocol under expedited review (Protocol #60550). A waiver of written documentation of consent was granted for this anonymous survey. A cover letter preceded the survey; completion of the survey was considered consent to participate.

Participant Recruitment

This convenience sample included senior- and graduate-level dietetic interns enrolled in the University of Kentucky Dietetics and Human Nutrition SPP in the summer session of 2020. All interns enrolled in this course were eligible for participation. During the last week of the summer session, an Extension faculty member, not an instructor of the course, attended a virtual class to explain the research study and survey. An e-mail announcement followed to invite interns to participate. All interns received a follow-up e-mail invitation one week after the first e-mail.

Measures and Data Collection Procedures

Data collection occurred in August 2020, at the end of the internship. Interns were invited to complete an online survey. Due to the anonymous nature of the survey, no compensation was offered. Using a 5-point-scale (e.g., 1 – much worse, 5 – much better), interns were asked to rate perceived change in selected core competencies of dietetic internships (9 items), confidence regarding competencies (9 items), transferable skills (9 items), familiarity with and likelihood of pursuing a career in Extension and community nutrition (6 items) and understanding roles of RDNs in a community setting (4 items). The survey also included seven open-response questions to obtain more detailed information about the most valuable and challenging aspects of these projects, personal growth in transferable skills, impressions of opportunities within Extension and community nutrition, and suggestions for improving this type of experiential learning. On average, the survey took 15 minutes to complete.

Analysis

Frequencies were calculated to evaluate interns' responses. All analyses were conducted in September 2020 in IBM SPSS Statistics for Windows, version 26.0 (IBM Corp., Armonk, NY, USA). To allow for elaboration of quantitative responses, and to identify trends and points of emphasis, responses to open-ended questions were organized into matrices that displayed qualitative results in relation to quantitative trends of related topics (Averill,

Results and Discussion

Seventeen interns completed the survey (89% response rate). Although demographic information was not collected as part of the survey, the potential sample was representative of annual enrollment of the SPP at the University of Kentucky and included mostly white, female, and first degree-seeking students. Most interns (n=13, 76%) somewhat or strongly agreed the Extension Virtual Health Programs project helped them have a better understanding of the competencies needed to become a RDN. When asked about perceived change in specific competencies, the majority indicated competencies were somewhat or much better after the project, compared to before (Table 1). Similarly, a majority indicated somewhat or much better confidence for individual competencies after the project compared to before (Table 1). Interns did not report declines in professional competencies or confidence.

Most of the interns reported perceived gains in transferable skills while working on the Extension Virtual Health Programs project (Table 2). All interns reported somewhat or much better ability to effectively respond to new information, changed circumstances, or risk (i.e., adaptability). Nearly all interns thought their ability to effectively handle several problems or tasks at once had improved (i.e., multitasking). Some further commented this was a skill they would use in the future – “We were working on a lot of different projects, assignments, and internship responsibilities. We had to produce quality work in a timely manner which is an important skill in a job.” Fifteen (88%) interns indicated their ability to listen and respond constructively to other team members' ideas (i.e., cooperation) had improved. Similarly, several interns noted the “high ability to work within a team” to coordinate schedules and “develop concrete materials for an audience” was an acquired or improved skill that will benefit them in the future. Many interns indicated working through technology was the most applicable skillset for future use. Comments indicated increased proficiency with technology and confidence in using various platforms and programs to develop materials and communicate with audiences in a variety of ways – “Well, I learned how to utilize technology to create and edit a podcast. That was a first for me!...It (recipe demonstration) really pushed me to be creative and use technology more than I usually would.”

Nearly all interns (n=15, 88%) somewhat agreed or strongly agreed their participation in the Extension Virtual Health Programs project expanded their perceived scope of opportunities for RDNs working in community nutrition – “I knew that community nutrition has a lot to offer, but I now know even more what I can do within the field.” Prior to the Extension Virtual Health Programs project, 71% (n = 12) of interns were not at all, slightly, or moderately familiar with Extension; that decreased to 18% (n=3) after the experience. Interns specifically indicated a “larger appreciation and understanding” of Extension. “Before our project, I had no idea how dietitians were utilized in Extension. I honestly didn't really have a good understanding of what Extension did. I now feel like I understand how much of an impact RDs have in Extension and other community settings.” Participation

Table 1. Self-reported change in competence and confidence regarding entry-level competencies of dietetic interns (n=17) after participating in the Extension Virtual Health Programs Project

Competency	Perceived Change in Competence n (%)			Perceived Change in Confidence n (%)		
	<i>About the Same</i>	<i>Somewhat Better</i>	<i>Much Better</i>	<i>About the Same</i>	<i>Somewhat Better</i>	<i>Much Better</i>
Apply evidence-based guidelines, systematic reviews, and scientific literature	3 (18)	10 (59)	4 (23)	4 (24)	10 (59)	3 (18)
Incorporate critical-thinking skills in overall practice	4 (24)	8 (47)	5 (29)	5 (29)	9 (53)	3 (18)
Demonstrate professional writing skills in preparing professional communications	1 (6)	9 (53)	7 (41)	4 (24)	10 (59)	3 (18)
Demonstrate active participation, teamwork, and contributions in group settings	2 (12)	7 (41)	8 (47)	3 (18)	9 (53)	5 (29)
Apply leadership skills to achieve desired outcomes ^a	3 (18)	8 (47)	6 (35)	3 (18)	9 (53)	4 (24)
Demonstrate effective communications skills for clinical and customer services in a variety of formats and settings	0 (0)	9 (53)	8 (47)	2 (12)	9 (53)	6 (35)
Develop nutrition education materials that are culturally and age appropriate and designed for the literacy level of the audience	0 (0)	10 (59)	7 (41)	1 (6)	10 (59)	6 (35)
Develop and deliver products, programs or services that promote consumer health, wellness, and lifestyle management	0 (0)	6 (35)	11 (65)	2 (12)	9 (53)	6 (35)
Deliver respectful, science-based answers to client questions concerning emerging trends ^a	3 (18)	5 (29)	9 (53)	2 (12)	9 (53)	5 (29)

^a One missing response for perceived change in confidence

Table 2. Self-reported change in transferable skills by dietetic interns (n=17) after participating in the Extension Virtual Health Programs Project

Transferable skill	<i>About the Same</i> n (%)	<i>Somewhat Higher</i> n (%)	<i>Much Higher</i> n (%)
Adaptability. The ability to react to change in order to effectively respond to new information, changed circumstances, or risk	0 (0)	6 (35)	11 (65)
Multitasking. Can effectively handle several problems or tasks at once	1 (6)	8 (47)	8 (47)
Cooperation. Listens and responds constructively to other team members' ideas.	2 (12)	8 (47)	7 (41)
Dependability. Carries out responsibilities in a timely fashion	4 (24)	6 (35)	7 (41)
Professional attitude. Responsible, prepared, and on-task while upholding a respect for colleagues' time and viewpoints that may be different than your own	1 (6)	10 (59)	6 (35)
Verbal communication skills. The use of words to share information with other people	1 (6)	10 (59)	6 (35)
Written communication skills. Any type of interaction that makes use of the written word	1 (6)	8 (47)	8 (47)
Creativity. The use of the imagination or original ideas, especially in the production of work	2 (12)	9 (53)	6 (35)
Self-confidence. Feeling of trust in one's abilities, qualities, and judgment	2 (12)	8 (47)	8 (47)

in the Extension Virtual Health Programs project supported interest in career opportunities in community nutrition and Cooperative Extension. The likelihood of pursuing a career in community nutrition was consistent before (n=10, 59%) and after the project (n=12, 71%). Notably, the likelihood of interns pursuing a career in Extension increased from four (24%) to 11 (71%) interns.

Lessons Learned

The quick transition to a virtual learning environment forced interns and faculty to adapt to new, different, and evolving ways of engaging with interns and facilitating experiential learning opportunities (Pretti et al., 2020). Findings from this study demonstrate that interns perceived greater ability to effectively respond to new information, changed circumstances, or risk. Adaptability, specifically the capacity to work remotely, was challenging and more resources and supports are necessary to support remote work. Quickly transitioning group work, telework, and individual workload, while simultaneously managing internship responsibilities in an online platform was a heavy burden. Successful strategies that may mitigate the burden of a heavy workload in a remote format and provide resources and supports include:

- Identify virtual shared workspaces for collaboration (e.g., Microsoft Teams, OneDrive, Dropbox, Box) and ensure interns know how to access and use
- Balance guidance for group work in a manner that facilitates interactions while allowing them to improve communication skills
- Set standards and expectations for communication with remote group work and compare/contrast with onsite expectations
- Outline general best practices for remote work (e.g., scheduling meetings, taking breaks, self-care, work environment)
- Connect interns to technical support to manage internet connectivity issues, Zoom, and other technology-related concerns

Collectively, interns indicated their ability to effectively handle several problems or tasks at once had improved (i.e., multitasking), which was a sense of pride for some and a source of frustration for others. There was expressed need to coordinate timelines with other ongoing tasks for the internship. There were suggestions to have “a more laid out plan developed ahead of time to provide to students.” The sense of urgency and expectations for quick turnaround on projects may partially be attributed to the fluid circumstances posed by COVID-19 and the quick development of projects by faculty during the abrupt shift to a fully online experience. Additionally, in June 2020, interns resumed onsite experiences and were tasked to balance remote/virtual work in addition to onsite work. Remote work entailed juggling more than usual. In addition to participating in the Extension Virtual Health Programs Project, interns had case studies and other assignments. Additional time for planning and roll out in a future scenario may avoid overlap

and overwhelm with interns.

Extension-based projects have been successful in other programmatic areas as a form of experiential learning to build transferable and professional skills (Sleipness et al., 2019). Collaborations with Cooperative Extension may diversify training experiences of dietetics interns (Morgan et al., 2019) and be a viable option for future community nutrition rotations at the University of Kentucky and other dietetic internships looking to evolve. The Extension Virtual Health Programs project took advantage of growing opportunities to connect to wider audiences through technology and aligned with the changing nature and scope of RDNs practice (Rhea and Bettles, 2012). One intern commented, “With so many resources online, and through learning about Extension, I was able to witness firsthand how so many people rely on information on an online platform and just how important it is to educate people on accurate information from professionals.” Although these changes to a virtual format were made directly in response to COVID-19, there may be lasting emphasis on telehealth or creative, novel strategies for dissemination of nutrition information to the public in the future (Hickson et al., 2018).

One of the most notable changes in intern perceptions was the expanded awareness of career opportunities in community nutrition, specifically within Extension. An intern shared, “My view on community nutrition continues to expand because of how diverse each community project can be. This sector of dietetics can be very creative and involve a lot of transferrable skills.” The “ability to create valuable resources for the community” through a virtual experiential learning opportunity demonstrated value for supporting interns’ development of entry-level competencies.

While it was a difficult experience at times, interns indicated the most valuable aspects of the Extension Virtual Health Programs project were the opportunities for creativity and trying new and varying forms of media for communicating with the public. It was noted that these skills were relevant and “virtual learning and presentations most likely won’t be going away anytime soon.” It was also mentioned that this experience provided the interns a sense of purpose, when interns were not afforded the opportunity to feel the sense of accomplishment from onsite participation - “It was the first project over quarantine that motivated me and actually felt useful for others”.

Summary

The experiences provided for dietetic interns through the Extension Virtual Health Programs project produced a mutually beneficial partnership between the University of Kentucky Dietetics and Human Nutrition SPP and Extension that resulted in scholarship deriving from the integration and application of community nutrition principles. This experience for dietetic interns was successful at improving perceived professional competencies and transferable skills in an entirely virtual format. Further, regardless of the pandemic, this project was effective at expanding awareness of community nutrition and Extension career opportunities and may be a potential form of experiential

learning for future partnerships that build professional competencies and transferable skills.

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