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Online Certificate Program Moves Participants to Advanced Stages of Concern for Social Marketing

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Abstract

Social marketing is an underused strategy that agricultural educators can employ to bring about behavior change. We designed an online certificate program for Extension professionals and other educators based on an identified need for social marketing professional development. The Concerns-Based Adoption Model (CBAM) served as the conceptual framework and stages of concern explained changes in concerns among Cultivating Community Change online certificate program participants. The purpose of the study was to describe participants' stages of concern profile before and after the certificate program and identify how participants' perceptions changed as a result of involvement in the certificate program. We collected quantitative data using the stages of concern questionnaire and qualitative data from participants' open-ended discussion answers. Participation in the certificate program moved participants to advanced stages of concerns for application of social marketing in their work. The certificate program helped to broaden participants' understanding and application of this technique and changed their perceptions positively toward social marketing. We consider the certificate program successful, and we recommend agricultural education professionals use online certificate programs to build Extension professionals' and other educators' skills to change behavior of their target audiences.

Keywords: evaluation; nonformal education; online certificate program; social marketing; stages of concern

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Introduction

As reflected in the American Association for Agricultural Educations' current research priorities (Roberts, Harder, & Brashears, 2016), the agricultural education profession is distinctively positioned to address today's complex problems, which include food security and water scarcity. To solve complex issues on a global scale, agricultural education professionals are encouraged to go beyond increasing their audience's knowledge and use strategies informed by the behavioral sciences to bring about "widespread behavior change" (Roberts et al., 2016, p. 59). One proven but underused strategy agricultural educators can use to bring about change is social marketing (Rogers, 2003; Warner & Murphrey, 2015).

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Social marketing is the application of commercial marketing principles and tools to education programs by developing strategies leading to the adoption of behaviors that benefit the individual, the environment, or the community to which they belong (McKenzie-Mohr, 2011; Rogers, 2003). Social marketing works by using extensive audience research to develop educational strategies presenting a behavior change such that it is acceptable and valuable to the audience, or makes an offer the audience members cannot refuse (Lee & Kotler, 2011; McKenzie-Mohr, 2011). As a strategy for behavior change, social marketing is compatible with agricultural and extension education because it is audience-focused and incorporates planned evaluation processes (Lee & Kotler, 2011; Warner, 2014).

Both Extension professionals (Warner, 2014) and social marketing experts (Warner, Stubbs, Murphrey, & Huynh, 2016) have described inadequate knowledge and skills among agricultural educators as barriers to applying social marketing within an agricultural education context. Informal science educators also have a continuing general need for professional development, particularly as a component of efforts to professionalize their discipline and to improve its members' pedagogical knowledge (Tran & King, 2007, 2011). It is likely that similar needs apply to a broader array of Extension and other community-based educators, whether they are labeled non-formal, informal, or free-choice educators (Stofer, 2015). Bringing such educators together has the potential to strengthen collaborations and reduce redundancies in program creation.

Thus, professional development in the application of social marketing techniques and principles may be critical to addressing the complex issues addressed by Extension as well as other agricultural education and outreach professionals. However, very few opportunities exist for agricultural education professionals to seek professional development in the use of social marketing (Warner, 2014; Warner & Murphrey, 2015). For this reason, we developed an educational program to provide such development for Extension professionals along with other agricultural education and outreach professionals.

We selected an online education format because this approach potentially allows agricultural education professionals to provide more people with better education (Murphy & Terry, 1998), it is cost-effective (Nelson, 2008), and provides a self-paced experience for learners (Diaz, 2002). Online education provides a means to globalize agricultural education programs and "offers previously unimagined opportunities for collaboration and resource sharing" (Harder & Lindner, 2008, p. 69). Online education solves some of the barriers associated with in-class instruction and provides an attractive alternative to traditional educational methods (Bruce & Johnson, 2004; Harder & Lindner, 2008).

Online Certificate Program

Based on the need for social marketing professional development for a large number of educators and considering the advantages of online education, we designed an online certificate program. The certificate program consists of eight online modules, each designed to take approximately one hour to complete. Each module begins with introductory text outlining its objectives and corresponding activities. The main content is presented through a video presentation of no more than twenty minutes consisting of slides with voice-over narration. Other module components include text summaries of important concepts, knowledge quizzes, reflective discussion activities where learners are asked to apply the principles of the module to a program they would like to implement or revise to include social marketing, and a list of resources and references. Discussion activities allow learners from various disciplines and traditions to learn from similar experiences they might have not considered as having overlap with their own. Participants

access the certificate program through the University of Florida web site, which was opened for enrollment beginning in August of 2015.

The course begins with modules outlining the basics of social marketing in the context of Rogers' (2003) diffusions of innovations. Consistent with our intention to integrate social marketing in Extension program planning, the latter half of the course describes integration of social marketing in the Extension program planning steps recommended by Boone, Safrit, and Jones (2002). For example, the first step in Extension program planning is planning, which includes designing objectives, creating a logic model, and understanding the audience. Our certificate illustrates ways to create logic models for social marketing programs and integrate traditional audience research results into the design of a social marketing campaign. Later modules describe the implementation phase of program planning by presenting the tools of social marketing, including communication, incentives, prompts, and commitment. The final module outlines evaluation of social marketing campaigns in the context of Boone et al. (2002) evaluation and accountability phase of program planning.

Conceptual Framework

We used the Concerns-Based Adoption Model (CBAM; Fuller, 1969) as the conceptual framework to evaluate potential success of the *Cultivating Community Change* online certificate program. The success was operationalized as advancement of participants to higher stages of concerns compared to lower stages of concerns for the use of social marketing in their work. Concerns towards an innovation can be defined as the feelings and perceptions of people about a specific innovation (Hall & Hord, 2006). We applied this framework to the current study by considering social marketing an educational innovation. With the introduction of an innovation, individuals may progress through a series of feelings and perceptions towards innovation in a developmental pattern, or an increasing progression of concerns, and this process is known as the stages of concern (Hall & Hord, 2006).

Fuller (1969) proposed that with an increase in experience with an innovation, potential adopters move through four levels of concern: *unrelated*, *self*, *task*, and *impact*. When people are unaware of the innovation they have no concern about the innovation (unrelated); once they are exposed to the innovation they experience personal (self) concerns as to how they are going to interact with the innovation (Fuller, 1969; George, Hall, & Stiegelbauer, 2013). When familiarity and comfort with the innovation increases, people begin to experience concerns regarding the specific use of innovation (task), and, finally, people are concerned about impact of innovation on their work or collaboration with others (impact; Fuller, 1969; George et al., 2013).

Building upon Fuller's concerns theory (1969), Hall, George, and Rutherford (1977) proposed seven stages of concern. In stages of concern, *stages* indicate that individuals experience these concerns in a growing progression (see Table 1) where with exposure to and increased comfort with an innovation individuals move from lack of concern (e.g., *Stage 0 – Unconcerned*), to a low level of concern (e.g., *Stage 1 – Informational*), and so on to higher levels of concern, such as *Stage 3 – Management* (George et al., 2013), as they learn more about the innovation and its relevance to them.

Table 1

Seven Stages of Concern and Their Definitions

Stage	Definition
Stage 0: Unconcerned	with limited exposure to innovation, little or limited concern indicated by an individual for the innovation
Stage 1: Informational	the individual at this stage indicates general awareness of innovation and exhibit interest to learn more about it, but the individual seemed to be little worried about innovation
Stage 2: Personal	the individual at this stage shows uncertainty about demand of innovation and concerned about how to meet innovation demands and role played by him/her with the innovation
Stage 3: Management	at this stage, the individual focus his/her attention toward process and task of using the innovation and how to efficiently use available information and resources
Stage 4: Consequences	the individual at this stage concerned about impact of innovation on his/her work and immediate sphere of influence
Stage 5: Collaboration	at this stage, the individual concerns move towards coordination and cooperation with others regarding use of innovation in his/her work
Stage 6: Refocusing	this is the final stage at which the individual focus on applying innovation to a broader scale, including overhauling the existing innovation or completely replacing the existing innovation with a new innovation

Note. Adapted from "Measuring implementation in schools: The stages of concern questionnaire" by A. A. George, G. E. Hall, and S. M. Stiegelbauer, 2013, SEDL, p. 8. Copyright 2006 by the SEDL.

CBAM posits that individuals' feelings and perceptions towards an innovation change as they progress through the adoption process and become more comfortable with a new technology or approach (George et al., 2013; Hall & Hord, 2006). CBAM has been used extensively to understand the adoption of educational innovations and applied to a variety of settings and innovations (Hall & Hord, 2006). Hao and Lee (2015) used CBAM to understand concerns of middle school teachers in Taiwan to integrate Web 2.0 technology in their instruction. Similarly, Warner and Myers (2011) used CBAM to assess concerns of Florida agriscience educators in implementing content area reading strategies in their classrooms.

The emergence and resolution of concerns is highly personal and requires time to reduce lower levels of concerns and progress to higher levels of concerns (George et al., 2013). Understanding changes in the *Cultivating Community Change* online certificate participants' concerns following participation in program could allow developers to design additional workshops, targeted consultations, and strategic plans to enhance the adoption of social marketing (Hall & Hord, 2006). We hypothesized that after completing the *Cultivating Community Change* online certificate program, participants would be more comfortable with applying social marketing to their work. We anticipated this would appear through resolution of their lower-level concerns (e.g., *Stages 0-2*: *Unconcerned*, *Informational*, *Personal*) and advancement to upper-level concerns (e.g., *Stages 3-6*: *Management*, *Consequences*, *Collaboration*, *Refocusing*) with respect to the impact, collaboration with colleagues, and universal application of social marketing to their work.

Purpose and Objectives

The purpose of this study was to identify changes in regard to concerns among the *Cultivating Community Change* online certificate program participants. The specific objectives were to:

1. describe the stages of concern profile of certificate program participants before they began and after completing the course; and
2. describe the change in perceptions of participants toward social marketing after completing the certificate program.

Methodology

Research Design

To achieve this study's research objectives, we employed both quantitative and qualitative research methods (Creswell & Plano Clark, 2011). Primarily, data were collected using quantitative research methods and complemented with qualitative responses for additional context. By using both methods in our research, we were able to gain a deeper understanding of our research problem by collecting, analyzing, and interpreting the research findings using the principles of quantitative and qualitative research methods in a single research investigation (Creswell & Plano Clark, 2011). To meet the needs of the study, we used a convergent parallel design to "obtain different but complementary data on the same topic" (Morse, 1991, p. 122). This design allows triangulation of findings by comparing and contrasting findings from both quantitative and qualitative research (Creswell & Plano Clark, 2011). Among the convergent parallel design variants, we used the parallel-database variant, where data were separately collected and analyzed for both quantitative and qualitative approaches (Creswell & Plano Clark, 2011). We compared and synthesized the findings from two data sets during the discussion and conclusion sections of the study (Creswell & Plano Clark, 2011). On approval from the Institutional Review Board of the University of Florida, we collected data using a quantitative questionnaire and a qualitative, open-ended discussion board in the certificate program.

Sampling and Recruitment of Certificate Program Participants

The target population of the study was all professionals who work for promoting change in specific behavior of their target audiences. The respondents were the Extension professionals, agricultural education professionals, and other change agents who participated in the certificate program. The respondents were selected using non-probability sampling procedure because participants self-selected enrollment in the certificate program. The certificate program was advertised via postcard mailings and through Twitter to local, state, and national agricultural, energy, environmental, and science education and outreach groups such as the National Association of Agricultural Educators, Florida Museum of Natural History, the Association of Science-Technology Centers, the League of Environmental Educators in Florida, and the Association of Zoos and Aquariums. From August 2015 to November 2016, 162 participants started the certificate program and among them 155 (95.7 %) provided complete data on the study's pre-test. At the time of this study 58 individuals had completed the certificate programs and 57 (98.3%) provided complete data at the end of certificate (post-test). Partial missing data existed for two cases each for both pre-test and post-test, which we managed using single imputation to complete the missing entries with plausible values (Schafer & Graham, 2002). Due to participants' anonymity, we were unable to match participants at the beginning and completion of the certificate program.

Quantitative Data Collection and Analysis

To quantitatively measure participants' concerns regarding their use of social marketing, we adapted the Stages of Concern Questionnaire (SoCQ) questionnaire (Hall et al., 1977) by considering social marketing as the innovation. SoCQ has been regarded as the most rigorous, reliable, and primary tool to determine at what stage of concern an individual is regarding an innovation (George et al., 2013; Hall & Hord, 2006). The SoCQ questionnaire was composed of 35 eight-point, Likert-type scale items which were equally distributed (five items each) among the seven stages of concern. The eight-point scale coding ranged from 0 to 7 and examples of scale were 0 = *this statement seems irrelevant to me*, 1 = *this statement is not at all true of me at this time*, 4 = *this statement is somewhat true of me now*, and 7 = *this statement is very true of me at this time*. Example statements from SoCQ are reported in Table 2. In addition to 35 concern statements, the questionnaire also included five demographic questions asking participants' age, sex, education level, state in which they worked, and the discipline of their primary work. The demographic questions were included only in the pre-test SoCQ questionnaire.

Table 2

Sample Items for Stages of Concern and Corresponding Cronbach's Alpha Coefficients for Each Stage at Beginning (Pre-Test) and Completion (Post-Test) of the Certificate Program

Concern stage	Pre-test Cronbach's Alpha	Post-test Cronbach's Alpha	Sample Statements
Stage 0: Unconcerned	0.66	0.88	I am not concerned about the use of social marketing
Stage 1: Informational	0.83	0.88	I have a very limited knowledge of social marketing
Stage 2: Personal	0.76	0.88	I would like to know the effect of using social marketing on my professional status
Stage 3: Management	0.88	0.92	I am concerned about not having enough time to organize myself each day
Stage 4: Consequence	0.88	0.82	I am concerned about stakeholders' attitudes toward the use of social marketing
Stage 5: Collaboration	0.85	0.88	I would like to help other Extension educators in their use of social marketing
Stage 6: Refocusing	0.82	0.84	I am concerned about revising my use of social marketing

Validity of the SoCQ scale was established using correlation matrices and factor analysis and seven scales of the SoCQ measured seven independent constructs corresponding to seven stages of concern as proposed by CBAM (George et al., 2013). Several researchers have tested the

scale for its internal consistency with a variety of innovations and found that Cronbach's alpha coefficients were acceptable, i.e., 0.7 or above (Santos, 1999), for the seven stages of concern except in the case of Stage 0 (Bellah & Dyer, 2009; Hall et al., 1977; Hall, Loucks, Rutherford, & Newlove, 1975; Shoulders & Myers, 2011; Stair, Warner, & Moore, 2012; Warner & Myers, 2011). George et al. (2013) stated Stage 0 items have been under revision to improve their reliability. We calculated post-hoc reliability coefficient for seven stages of concern at both the beginning (pre-test) and completion (post-test) of the certificate program (see Table 2) and found acceptable Cronbach's alpha coefficients (Santos, 1999) for all stages of concern, except *Stage 0 – Unconcerned* for participants who completed the pre-test.

We administered SoCQ to certificate participants twice in the form of a web-questionnaire, once before the start of certificate program as a pre-test and then on completion of certificate program as a post-test, and analyzed data using frequency and percentages. We created overall stages of concern profile at the beginning of the certificate program (pre-test, 155 participants) and at the completion of the certificate program (post-test, 57 participants) using the Microsoft Excel SOCQ–075 Graph and Print program (Scott & Persichitte, 2006). In the Microsoft Excel SOCQ–075 Graph and Print program, we summed the raw scores for items representing each stages of concern. Later, we converted summed raw scores for each stage of concern into percentile scores using George et al.'s (2013) conversion chart where "the percentile score indicates the relative intensity of concern at each stage" (George et al., 2013, p. 32). We interpreted higher percentile scores corresponding to higher concerns within a given stage. The percentile scores were not interpreted as absolute numbers, but were relative to scores of an individual or group at the other stages (George et al., 2013). For instance, the 55 percentile may have been the highest score and most intense stage of concern (e.g., *Stage 1: Informational*) for one group, it may be the lowest score for another group for a different stage of concern (e.g., *Stage 3: Management*). According to George et al. (2013), this conversion chart is well validated by different studies examining various innovations. For the interpretation of SoCQ data for a group, most commonly, overall stages of concern profiles are created (George et al., 2013). Concern profiles are visual line graphs representing mean concern intensities for a group of people.

Qualitative Data Collection and Analysis

We collected qualitative data through a discussion activity in the final module before the post-test. We asked participants to provide their views by answering one open-ended question: *how has your perception about social marketing changed over the course of this program?* A total of 52 (89.7%) participants provided a comprehensive response to this question, adequate for this level of analysis, as we did not aim for data saturation, only description of our population. We used content analysis of this text to describe participants' beliefs (Creswell, 2005).

We did not have any expected themes but instead looked for themes that emerged from the data (Bogdan & Biklen, 2007). We analyzed themes using inductive analysis to establish meaning using the number of times dominant and significant themes emerged from the data (Thomas, 2006). The lead researcher first read the statements multiple times to become immersed and gain a sense of the data as a whole (Creswell, 2005; Hsieh & Shannon, 2005). After gaining a deep understanding of the data, the lead researcher derived codes (Zelaya, Harder, & Roberts, 2016) by reading the data line by line for each respondent (Creswell, 2005; Hsieh & Shannon, 2005). Later, the derived codes were examined for any overlap or redundancy and finally merged together to develop broader themes (Creswell, 2005). The study findings were reported using pseudonyms. To support transferability of qualitative research findings, we provided description of data collection context and reported the data using thick rich descriptions, including actual quotes from the respondents (Dooley, 2007; Lincoln & Guba, 1985). To establish dependability and trustworthiness

of the study's findings, we maintained audit trails to document all data analysis and reasoning procedures used to derive the final themes (Dooley, 2007; Lincoln & Guba, 1985). Finally, to establish credibility of the study's findings, we compared qualitative and quantitative research results to assess alignment (Dooley, 2007).

Participants

Out of 155 participants who provided complete data on study's pre-test, 153 provided response to demographic questions. The 153 participants represented 20 states of United States with the highest proportion (66%, n = 101) of participants from Florida. The majority (77.8%, n = 119) were female, and almost 42% (n = 64) had a master's degree or more education. The average age of participants was 36.16 (SD = 11.87) years, and their primary discipline (see Table 3) was something other than the fields provided (37.3%, n = 57), followed by environment (26.8%, n = 41).

Table 3

Certificate Program Participants' Primary Discipline of Work

Primary discipline of work	*f*	%
Agriculture	4	2.6
4 - H and youth development	7	4.6
Environment	41	26.8
Family & Consumer Sciences	5	3.3
Lawn and gardens	4	2.6
Sustainable living	22	14.4
Administration	3	2.0
Staff	5	3.3
Other, please describe	57	37.3
Horticulture	5	3.3
Total	153	100.0

Results

Objective 1: Describe the stages of concern profile of certificate program participants before they began and after completing the course

A group concerns profile at the beginning of the certificate program (i.e., pre-test) revealed that the participants' highest intensity of concern was in Stage 1 – Informational (93rd percentile;

see Figure 1). The second highest intensity of concern was Stage 2 – Personal (78th percentile). When examining participants' group concern profile at completion of the certificate program, we found a somewhat similar pattern as the pre-test in terms of highest and second highest intensity of concern. However, we observed progress in the group profile at the completion of the certificate (post-test) program, suggesting participants' concerns reduced regarding the first five stages and increased for the last two stages.

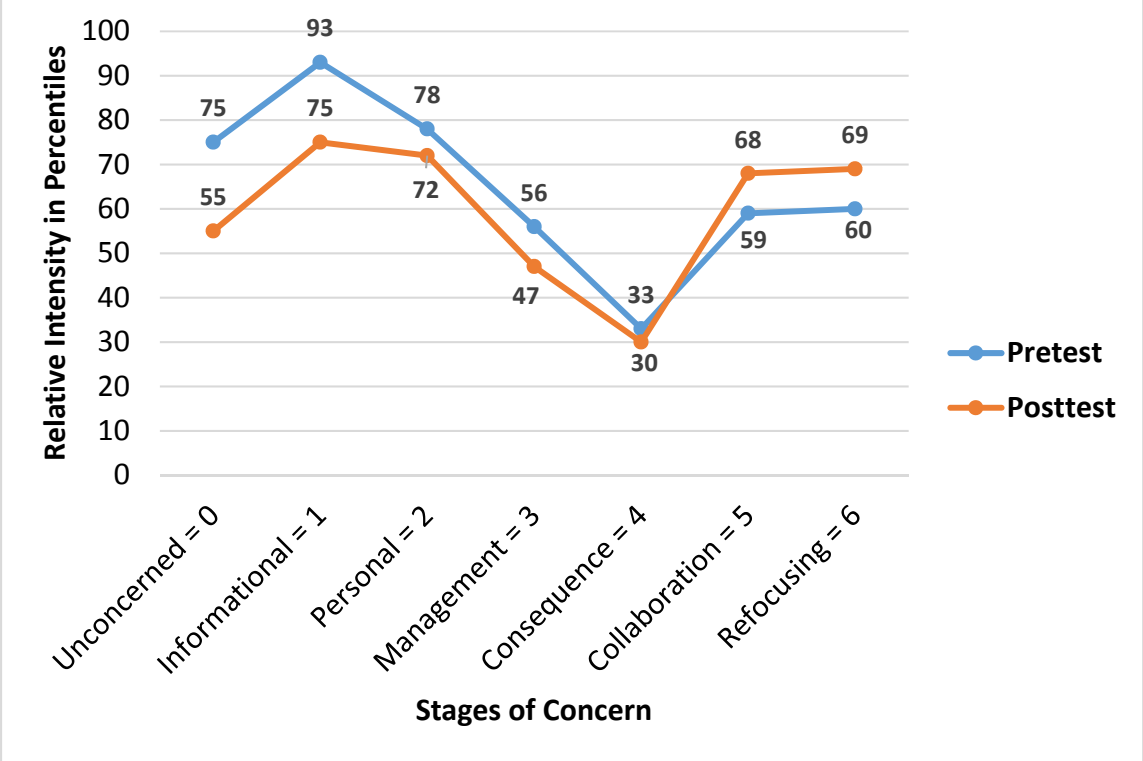

Figure 1. Group concerns profile of the *Cultivating Community Change* online certificate program participants at the beginning (pre-test) and end (post-test) of the certificate program.

Objective 2: Describe the change in perception of participants toward social marketing after completing the certificate program

Three major themes emerged describing change in perceptions of participants toward social marketing over the course of the certificate program. The themes were: social marketing is a complex process, skills and tools of social marketing, and improved understanding of the process. Next, we describe evidence of each of these three themes.

Social marketing is a complex process. Prior to start of the certificate program, participants underestimated the scope of social marketing and considered it a simple process. As a result of completing the certificate program, participants realized that social marketing is a very detailed, thoughtful, extensive, and scientific process. Joe stated, "upon learning about social marketing in greater detail, I realize that it goes very in-depth, and there are many different factors that play into a successful social marketing campaign." Similarly, James stated, "over the course of this program I have learned what social marketing is and how complex and involved creating programs can be." Jolly also stated, "I didn't realize all of the steps involved and tools available for

social marketing before taking this program," and Emily reported, "taking this course has shown me the full extent and detail that goes into the social marketing I encounter in everyday life."

Skills and tools of social marketing. After completing the certificate program, participants indicated they gained skills and a better grasp of social marketing tools, which they could use in their daily jobs. Sonya stated, "my perceptions of the possibilities of social marketing have certainly been broadened. I had not thought about marketing as a tool for sustainable change before, but I can see that it is a valuable resource." Jonathan said, "[this approach is something I] was not familiar with before, but after completing this [certificate], not only have I learned a new method of change but also some very important tools I can implement not only in my career but personal life." At the same time, Smith said, "throughout this program I have gained a better understanding of social marketing and how to implement it within my field." Ally stated, "the certificate helped me see social marketing as an approachable strategy rather than an opaque buzzword." Similarly, Corry revealed, "my perception of social marketing has been changed in that I had not previously been aware of how these concepts were applicable beyond the planning and pilot testing stages."

Improved understanding of the process. Before completing the certificate program, participants thought that social marketing was a synonym for social media or it was the sale of commercial products, but after the certificate program, they realized it was different from social media and regular marketing. To that point, Rue stated, "before the course when I would hear social marketing, I associated this term with social media and did not realize how big of a difference there is between the two." Similarly, Tony said that

> [b]efore beginning this program, I thought social marketing was simply a different term for social media. I did not realize it is a process for effecting social change through a variety of mediums, of which social media is only one choice.

The participants also gained an understanding that social marketing relates to selling of ideas not products. In this regard, Sam wrote, "I was surprised to find that social marketing wasn't always about commercial products, but about selling ideas and information to help better individuals and communities." The certificate program helped participants to understand that social marketing is a unique behavior change methodology.

Participants also discussed in the closing thought activity that they had changed their perceptions toward social marketing. Toly said, "[m]y perception of social marketing has certainly changed positively, it has taught me that one must aim to improve processes which will improve the social behaviors and not the marketer." In addition, Kayla mentioned:

> [T]o be honest, my perception about social marketing has completely changed. Before this [program] I really had never heard of social marketing and thought social marketing was people sitting in a room thinking about how they could gently tell people to change.

Three additional participants indicated as a result of participation in the certificate program their understanding of social marketing had grown or broadened without providing more specifics.

Conclusion, Discussion, Recommendation, and Implications

The high intensity of certificate program participants in *Stage 1 – Informational* at the beginning of the certificate program indicated participants were aware of social marketing and were

keen to learn more about it, but were not immediately ready to use it. The second highest stage of concern (*Personal*) at the beginning of the certificate program demonstrated participants were concerned with how the use of social marketing would affect them individually. For example, participants were likely concerned with how use of social marketing could affect their professional status or whether they would receive any rewards for applying social marketing to their work. The complete group profile at the beginning of the certificate program (pre-test) revealed that both *Stage 1 – Informational* and *Stage 5 – Collaboration* were high, which meant the participants desired to learn what others knew and do rather than make an effort to lead a collaboration.

Many program participants were already beyond *Stage 0 – Unconcerned* when they began the certificate course. That participants were strongly in the *Stage 1 – Informational* supports other research suggesting a need for professional development on social marketing (Warner, 2014; Warner et al., 2016) and confirmed we were reaching people who wanted to learn more about this approach to behavior change. This implies that a good number of agricultural education, Extension, and other outreach professionals are actively seeking professional development on how to use social marketing. The low percentile of those in the consequence stage demonstrated overall positive attitudes toward integrating social marketing into the participants' work.

We interpreted reduction in concerns for initial stages and increase in concerns for later stages after completion of the certificate program as an indication that participants had accepted the usefulness of applying social marketing to their work and had more concerns about collaboration with others in the use of social marketing. In addition, participants were more willing to incorporate social marketing into their current behavior change methodologies.

After comparing the findings from our quantitative and qualitative data, we were able to explain how participants' concerns and perceptions towards social marketing have changed over the period of certificate program. We were unable to match participants' stages of concern at the beginning and completion of the certificate program, meaning that our observed changes in stages could be due to dropout of unconcerned participants, which is a limitation of the study. However, our qualitative data suggest that the completing participants did benefit from the program, increasing their positive attitudes toward social marketing, and enhancing their understanding and application of it. As a result of the certificate program, participants appeared to understand that if they systematically use social marketing, they could use it as a tool for promoting changes in behavior.

One of the limitations we consider in our comparison of findings was use of the same participants for collection of our quantitative and qualitative data. In quantitative data collection, the sample should be representative of population from which it was derived (random sample), while in qualitative data collection, the sample should include participants who have experienced the phenomenon under study (Morse, 1991). The transferability after comparing the findings from quantitative and qualitative research methods can be improved by use of a different sample or group of participants (Morse, 1991).

Although the certificate program was not developed for students (i.e., graduate and undergraduate) specifically, we haven't restricted students from signing up, and to date, quite a few have participated in the program. Students greatly appreciated the certificate and expressed value in the certificate program (data not presented in the study). This exhibited that a certificate program designed to meet the needs of agricultural professionals can serve both the intended audience along with other groups. Therefore, we concluded social marketing has promising applications for outreach professionals from a broad range of fields. Future studies could examine the experiences

of specific audiences of informal educator, nonformal educator, and student audiences in more detail.

We recommend agricultural education professionals use online certificate programs to build the capacity of traditional agricultural education and Extension professionals, but also non-traditional audiences (i.e., graduate students, outreach professionals in other disciplines, and aspiring Extension professionals). That many participants initially confused social marketing with social media is consistent with previous reports that social marketing is widely misunderstood (Warner, 2014). Agricultural education professionals who apply social marketing strategies should consider potential confusion about terminology and ensure stakeholders understand the concepts being used.

Future researchers can match participants' SoCQ data at the beginning and completion of the certificate program as an evaluation strategy. Using this matched data, researchers can generate individual profiles of the participants to capture a closer look for studying change in concerns for adoption of an innovation. Researchers can also examine the stages of concerns profile by dividing the participants by their roles, such as administrator, staff, or novice Extension agent, and assess whether profiles change due to different roles. Although we used an open-ended closing thoughts response item to collect data for the qualitative section of this study, future researchers could conduct personal interviews or focus groups with participants who completed certificate program to gain deeper insights about their certificate programs.

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