Describing Agricultural Communication Content Training for SBAE Teachers

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Introduction

Characteristics related to instruction are the largest segment of characteristics suggested for effective school-based Agricultural Education (SBAE) teachers identified by Roberts and Dyer (2004). Specifically, having an "excellent knowledge of the subject matter" is a key characteristic (Roberts & Dyer, 2004, p. 91). Van Driel and Berry (2010) stated there is often a separation in teacher preparation programs between subject matter knowledge and pedagogy. This separation has resulted in an emphasis on the procedures of teaching the subject matter rather than working to ensure pre-service teacher understand the content (Van Driel & Berry, 2010). King et al. (2013) posited that creating new curriculum and lack of teaching materials are often the top stressors for some SBAE teachers.

The quantity of SBAE programs that teach agricultural communication content have been increasing (Miller et al., 2015) though these are newer curriculums for SBAE teachers. Calico et al. (2014) stated that curriculum focused on preparing students for agricultural communication-related careers is important. It was also identified that the areas of most interest to secondary SBAE students in agricultural communications courses were design, multimedia, writing, and careers respectively (Calico et al., 2014). Universities providing coursework in agricultural communication report a steady increase in enrollment, supporting the need for students to be aware of career opportunities through SBAE (Miller et al., 2015).

Purpose and Objectives

The purpose of this study was to describe agricultural communication content utilization by SBAE teachers. The following research questions guided this study: 1) What agricultural communication content is being taught in secondary SBAE programs? 2) What is the SBAE teachers' espoused level of comfort for teaching agricultural communication content? 3) What training have SBAE teachers received in agricultural communication content?

Theoretical Framework

Shulman's (1986) theorization of Pedagogical Content Knowledge (PCK) guided this study. PCK has been described as the application of contextually specific quality pedagogical choices to the subject or content (Shulman, 1986). PCK has also been framed as "…subject specific pedagogical knowledge that enables teachers to represent the subject matter that so that it will be accessible to students," (Darling-Hammond, 2006, p. 82). Types of content in agricultural communication are operationalized as content knowledge. The various trainings that teachers accessed, and espoused comfort are operationalized as representations of PCK. With the variety of content areas in SBAE, it is important to assess the comfortability, knowledge, training opportunities offered to SBAE teachers to ensure the content being taught is accurate and delivered effectively.

Methodology

This non-experimental study used a descriptive, survey research design. The target population was current SBAE teachers, which is roughly 14,000. A cluster sample of 1887 teachers was surveyed. The unit of cluster was U.S. states, and up to 40 randomly selected teachers per state were included. All teachers for states with fewer than 40 teachers were included. Emails were acquired through the National FFA Organization. The Tailored Design

Method (Dillman et al., 2014) guided recruitment to participate in the study via electronic mail Qualtrics links. Agricultural communication content teaching, level of comfort, and trainings were assessed using a researcher-developed instrument. Cognitive interviews were conducted with members of the target population who were not in the sampling frame to ensure that the questionnaire was understandable and met the needs of the research (Dillman et al., 2014). In all, 284 complete responses were returned, resulting in a response rate of 15.1%. Low response rate for this population has been documented (e.g., Hile, 2019; McKim & Sorensen, 2020).

Results

Of the responses, 165 (58.1%) reported teaching agricultural communication content in their SBAE program. For objective one, of those who teach agricultural communication content, the top three areas taught were: (1) *Demonstrate oral communication skills* (95.8%), (2) *Utilize printed agricultural media* (78.2%), and (3) *Utilize photography and graphics* (68.5%). Content areas taught least were *Create an agricultural communications campaign* (27.8%) and *Modify photography and graphics* (30.9%). For objective two, teachers reported feeling the most comfort teaching the agricultural communication content area of *Demonstrate oral communication skills* ($M = 4.34$, $SD = 0.96$), somewhat comfortable teaching to *Utilize printed agricultural media* ($M = 3.95$, $SD = 0.94$), and slightly less comfortable teaching to *Utilize photography and graphics* ($M = 3.90$, $SD = 0.92$). Teachers were least comfortable teaching *Investigate agricultural cooperatives structure and function* ($M = 3.47$, $SD = 1.02$). For objective three, almost half the time when an agricultural communication content area is being taught, teachers reported no training in that area (47.2%). When they reported having training in a content area, the most common response was *preservice* (53.0%), with all other options being less than 20%.

Conclusions, Implications, and Recommendations

Agricultural communication is taught by a majority of SBAE teachers, which is congruent with the projected increase of agricultural communication content in SBAE classrooms by Miller et al. (2015). University faculty, and SBAE support organizations should be conscientious of this increase when designing pre-service and in-service professional development. For objective one, SBAE teachers teach oral communication and utilization of various media sources most often, which mirrors content found to be interesting to students in post-secondary programs (Calico et al., 2014). For objective two, SBAE teachers espouse the most comfort when teaching students oral communication and utilization of print and visual media. As Shulman (1986) describes, PCK can be improved with comfortability of the content leading to a greater ability of a teacher to instruct students in the content area. For objective three, SBAE teachers utilized *preservice coursework* as the predominate training mode. Teacher preparation programs are therefore the primary source for developing PCK, specifically learning to make content accessible to students (Shulman, 1986). It is recommended that research explores association of demographic variables, such as teacher age and location of program, and quality of trainings to content taught since Miller et al. (2015) documented post-secondary programs and noted regional differences of access to those programs.

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