Training AGvocates in Secondary Classrooms: Texas Agricultural Science Teachers' Needs for Integrating Agricultural Communications Curriculum into Current Instruction

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Introduction and Conceptual Framework

Preparing students to become skilled advocates of agriculture begins in the classroom. It is critical to integrate agricultural communications skills training into agricultural science courses and equip school-based agricultural educators (SBAEs) with the resources they need to effectively teach these skills that extend beyond public speaking (Corder & Irlbeck, 2018; Murphrey et al., 2023; Swenson, 2021). Challenges SBAEs face when it comes to teaching agricultural communications skills include time constraints, lack of training, and lack of access to resources (Parrella et al., 2022). To better understand SBAEs' perspectives and experiences in navigating these specific challenges, we framed this study around the concept of subjective experiences. By exploring SBAEs' interests and needs regarding agricultural communications curriculum integration, we sought to identify common viewpoints that can inform targeted interventions and support systems, enabling SBAEs to teach students communication skills.

Methods

We used Q methodology to investigate the subjective experiences of SBAEs and identify common viewpoints regarding the integration of agricultural communications curriculum into their instruction. Using the literature, we developed the study's 16-statement Q set, which represented SBAEs' perceptions of integrating agricultural communications curriculum into their instruction (Brown et al., 1999; Parella et al., 2021). Our P set consisted of 11 SBAEs who attended the Agriculture Teachers Association of Texas summer conference (Watts & Stenner, 2012). To collect data, participants sorted the statements onto a distribution board, with leftmost column indicating *least like me* (-3), the middle column indicating a *neutral* sentiment (0) and the rightmost column indicating *most like me* (+3).

Results

We extracted four factors, each of which represents a common viewpoint of Texas SBAEs. Factor one explained 31% of the variance within six defining variables, a composite reliability of 0.88, and an eigenvalue (EV) of 3.36. Factor two explained 17% of the variance with six defining variables, a composite reliability of 0.92, and an EV of 2.22. Factor three explained 21% of the variance within six defining variables, a composite reliability of 0.92, and an EV of 2.09. Factor four explained 21% of the variance with six defining variables, a composite reliability of 0.88, and an EV of 1.05. Table 1 includes the distinguishing statements for each factor and their associated Q sort values and *z* scores.

Table 1

Distinguishing Statements for Each Factor with their Associated Q Sort Value and Z Score

Statement	Value	*Z* Score
Factor One		
I would be the one purchasing the resources needed to teach agricultural communications in my class.	3	1.43*
I am comfortable teaching agricultural communications curriculum.	2	1.26
I currently teach some form of agricultural communications in my class.	1	0.89
I have time to implement agricultural communication curriculum in my class.	-2	-1.01*
Factor Two		
I would attend agricultural communications workshops if they were offered at the ATAT conference.	2	1.66*

My school district has the resources for me to teach agricultural communications.	2	0.75*
My students have a basic understanding of what agricultural communication skills are.	0	-0.07*
I would like to find time in my daily instruction to implement agricultural communication curriculum.	-1	-0.59*
Factor Three		
I would like to find time in my daily instruction to implement agricultural communication curriculum.	3	1.61
My students have a basic understanding of what agricultural communication skills are.	2	1.04*
I am comfortable teaching students how to disseminate critical information regarding agricultural topics using 21st century methods.	1	0.59*
I currently teach some form of agricultural communications in my class.	-2	1.41*
Factor Four		
I am knowledgeable about the career opportunities that the agricultural communications field provides.	2	1.30*
There is a need for agricultural communications curriculum in my class.	-2	-0.93*

Note. * indicates $p < .01$.

Conclusions and Recommendations

Results revealed four common viewpoints rooted in Texas SBAEs subjective experiences. We used the distinguishing statements to create a label describing each viewpoint. We named SBAEs representing the first factor Resource and Feasibility Educators. These educators are characterized by their motivation to acquire agricultural communications curriculum, their comfortability teaching agricultural communications skills, and the time constraints they face in integrating new curriculum. We named SBAEs representing the second factor Professional Development Motivated Educators. These educators seek opportunities to learn more about teaching agricultural communication skills, but they are somewhat disinterested in finding time to integrate teaching such skills into their instruction. We named SBAEs representing the third factor Aspiring Agricultural Communications Educators. Similar to Resource and Feasibility Educators, they face time constraints, and unlike Professional Development Motivated Educators, they desire strongly to overcome them. We named SBAEs representing the fourth factor Opportunity Aware Educators. Similar to Professional Development Motivated Educators, they are less inclined to integrate agricultural communications curriculum into their current instruction, despite feeling knowledgeable about agricultural communications career opportunities. We recommend professional development opportunities for SBAEs focusing on 1) the importance of integrating agricultural communications skills training into agricultural science education; 2) the development of user-friendly curriculum to develop students' communication skills in applied agricultural contexts; 3) strategies to overcome the time constraints they experience in teaching agricultural communication skills; and 4) experiential learning opportunities for students to practice their agricultural communication skills in real-world scenarios (Murphrey et al., 2023; Parrella et al., 2022; Swenson et al., 2021).

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