

Determining the Professional Development Needs of School-Based Agricultural Education Teachers in Oklahoma

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Introduction/Need for Research

Teacher attrition has reached critical levels in the United States and globally, with one in every four teachers not remaining in the profession past year three (OECD, n.d.). Attrition rates increase for teaching positions with greater responsibilities like; special education, science, technology, engineering, mathematics (STEM), and agricultural education (Nguyen & Springer, 2019). For 32 years, research surrounding school-based agricultural education (SBAE) teacher needs have been studied, finding that program management, administrative tasks, public relations, SAE development, instructional technology, behavior management, and work-life balance have been identified as recurring needs, yet these needs have not been addressed to make an actionable change for SBAE teachers (DiBenedetto et al., 2018; Doss et al., 2022; Shoulders et al., 2021).

These historic gaps in specific human capital knowledge and skills, as well as school and community relationships, are further compounded by the stress and anxiety that SBAE teachers face while attempting to manage a complete 21st century program and work-life balance (Shoulders et al., 2021). The purpose of this study was to determine the current needs of SBAE teachers in Oklahoma. Two research questions guided this study; 1) what are the current needs of SBAE teachers in Oklahoma based on the needs developed by SBAE teacher supporters, and 2) do those needs differ based on SBAE teachers' personal and professional characteristics?

Conceptual Framework

The *Conceptual Model of Support for SBAE Teachers* framed this study to provide a human lens for evaluating the depth of 21st century program needs (Marsh, 2022). The conceptual framework is grounded in *Maslow's Hierarchy for Teachers* (Fisher & Royster, 2016), *The Three-Component Model for Agricultural Education* (FFA, n.d.), and *The Effective Teaching Model for SBAE Teachers* (Eck et al., 2019), which provides researchers a lens to identify the level of SBAE teachers needs within their professional roles and responsibilities to provide opportunities to develop their career-specific human capital and increase job satisfaction and career retention. Evaluating SBAE teachers' individual needs based on personal and professional characteristics can influence how professional development opportunities, resources, tools, and skills are developed and implemented to make a more impactful change and satisfy the needs of Oklahoma SBAE teachers.

Methodology

SBAE teachers in Oklahoma who attended one of the five area Chapter Officer Leadership Training (COLT) conferences hosted by the Oklahoma FFA Association ($n = 372$) served as the accessible population (Privitera, 2020) for this study. The 42-item instrument was developed utilizing a previously validated list of items representing the perceived needs of 21st century SBAE teachers by expert SBAE supporters (Marsh, 2022). SBAE teachers attending the COLT conferences were asked to scan a QR code to complete the survey questionnaire, of which, 127 teachers completed the questionnaire, resulting in a 34% response rate. The response rate generated by this study is statistically in line with other response rates from online or digital survey questionnaires (Wu et al., 2022). Statistical Package for the Social Sciences (SPSS) Version 25 was used for the data analysis, including descriptive statistics and an analysis of variance (ANOVA).

Findings

Research question one sought to determine the current needs of SBAE teachers in Oklahoma. With an overall mean of 3.16 across the 42-items, there is a perceived need from Oklahoma SBAE teachers. The identified items representing the greatest need included 1) *access to essential resources* (3.50), 2) *curriculum resources* (3.50), 3) *support from local school administration* (3.48), and 4) *work-life balance* (3.46). The lowest perceived needs included *support for hybrid teaching* (2.87), *pedagogical content knowledge* (2.87), *diversity, equity, and inclusion (DEI) training* (2.78), and *lesson planning training* (2.72).

The second research question aimed to determine if SBAE teachers' needs differ based on their personal and professional characteristics. Composite needs scores had a potential range from a low of 42 to a high of 168. Females had a higher mean need score of 135.7 as compared to male respondents at 117.5. This finding is statistically significant, with the lower bound of the 95% confidence interval for female respondents at 127.3 as compared to the upper bound for male respondents at 125.4. Analysis by career phase showed that early-career teachers had a higher need score when compared to late-career teachers ($F(3,149) = 74.389, p < .05$). Comparing early-career to mid-career and mid-career to late-career showed no statistical difference.

Conclusions, Implications, and Recommendations

Thirty-six of the 42 items achieved a mean indicating a need associated with SBAE teachers in Oklahoma. The top two items included *access to essential resources*, and *curriculum resources*, aligning to an ongoing need for content, curriculum, and practical resources to support their programs (Doss et al., 2022). In addition, items such as *support from local school administration*, *work-life balance*, and *respect* represent the human need to establish relationships, boundaries, and a level of respect within their professional role as SBAE teachers (Shoulders et al., 2021).

A statistically significant difference was found in SBAE teachers self-reported need scores based on personal and professional characteristics of participants. Early-career SBAE teachers participants corresponded with a higher percentage of female SBAE teachers in the Oklahoma, which represents the population of participants with higher self-reported need scores. While this finding was statistically significant, it also speaks to the practical significance of developing professional development training, curriculum resources, and instructional tools that meet the individual personal and professional characteristics of Oklahoma SBAE teachers. Further connecting to the need to evaluate teachers through a human lens using the *Conceptual Model of Support for SBAE Teachers* (Marsh, 2022).

It is recommended that instructional tools and curriculum resources that are easy to access and provide a structured plan for ease of implementation for SBAE teachers be developed. Additionally, professional development opportunities should focus on furthering the human capital of the complete person for SBAE teachers in Oklahoma. Future research should further investigate the impact of such professional development. Furthermore, the perceived expectations of SBAE teachers from superintendents and school administrators should be evaluated to potentially address the value, respect, and workload of Oklahoma SBAE teachers.

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