

**Oklahoma School-Based Agricultural Education Teachers'
Engagement in Production Agriculture**

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Introduction and Theoretical Framework

John Dewey (1938) described experiences as a key element of learning, stating “amid all uncertainties there is one permanent frame of reference: namely, the organic connection between education and personal experience” (p. 25). Experiences and learning have long been connected in literature (Kolb 1984; Lewin, 1951; Dewey, 1938). This connection has given rise to the utilization of experiential learning as a model for agricultural education (Knobloch, 2003; Roberts, 2006; Baker et al., 2012).

Kolb’s (1984) experiential learning theory defined learning as “the process whereby knowledge is created through the transformation of experience” (p. 41). This theory identified four stages of learning: concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb et al., 2001; Roberts, 2006). According to Kolb (1984), learning may begin at any of these four stages. Additionally, the experience is the distinguishing factor in the model (Kolb et al., 2001). Roberts (2006) discussed the link of experiential learning to constructivism and gaining meaning from experiences. With this thought in mind, it can be postulated non-classroom experiences of school-based agricultural education (SBAE) teachers help them to gain meaning as well.

Bowen and Shume (2018) stated teachers gaining a traditional certification often miss the opportunity to gain real life work experience, thus creating a challenge for teachers to connect classroom content to industry applications. These researchers went on to say when teachers have a meaningful connection to industry, such as personal experiences, value is brought to the classroom in the form of problem-solving, collaboration, and communication. Considering the positive impacts of these connections and experiences, scarce research exists regarding SBAE teachers’ engagement in production agricultural enterprises. Therefore, the purpose of the study was to describe Oklahoma school-based agricultural education teachers’ personal engagement in production agriculture. The specific objectives were to identify the percentage of teachers with personal agricultural operations and the nature of those operations.

Methodology

The instrument for this study was based on the 2017 National Agricultural Statistics Service (NASS) Census of Agriculture questionnaire (NASS, 2019). This census is designed to inventory agricultural operations by the NASS and asks questions regarding type and scope of operation. The adapted instrument used for this study was formatted and administered through Qualtrics. Data were collected during the second session of the Agricultural Education Division at the Oklahoma Career and Technical Education Summer Summit held in Oklahoma City on August 3, 2021. Teachers accessed the questionnaire using a weblink or QR code displayed during the session. The population (N) for this study was 458. Completed instruments were collected from 326 teachers. Of those, 319 were usable. To deal with non-response error, Lindner et al. (2001) recommended gathering data from at least 20 non-respondents and comparing data from that group to the initial respondents. Personal emails were sent to 35 teachers in the non-respondent group and data were gathered from 28 of those individuals. No significant differences were detected between that group and the initial respondents, so data from the late respondents were added to the initial group for a 75.80% response rate.

Findings

The average age of respondents was 37.86 years, their average teaching experience was 11.03 years, and more than two-thirds (71.89%) of the SBAE teachers were male. Almost three-fourths (74.20%) of the respondents were white and 17.68% were Native American. More than 80% of the teachers were certified through an accredited, university-based program. Of the 338 respondents providing usable data, 280 (82.84%) indicated they were engaged in one or more personal agricultural operations. The total number of acres in these operations was 86,091 for an average of 307.48 acres per operation.

More than 78% (265) of the teachers participating in this study indicated they were engaged in one or more animal agriculture operations. Three teachers had 6 different types, 57 had 3 different types, and 88 had 2 different types of animal agriculture operations. The most common animal agriculture operations were beef cows ($f=189$), hogs or pigs ($f=79$), and horses or ponies ($f=73$).

One-hundred sixty-five (48.82%) of the respondents were engaged in one or more field crop enterprises. One teacher had 10 different types of operations in this category and an additional 124 raised 3 or more crops. The most common crop enterprises of SBAE teachers were hay or forage crops ($f=134$) and wheat ($f=9$). Sixty-four teachers (18.93%) indicated they were engaged in one or more personal horticultural operations. The most common horticultural enterprises were bedding/garden plants ($f=10$), summer squash ($f=9$), and native or seedling pecans ($f=6$).

Conclusions, Implications, and Recommendations

Results of this descriptive study indicate it is common for SBAE teachers in [State] to be engaged in one or more production agricultural enterprises. Teacher engagement in agriculture includes a wide diversity of plants and animals and the size of operation varies greatly. Of special note was the involvement of 134 SBAE teachers farming 41,199.64 total acres in hay and forage crop production and 189 SBAE teachers raising 10,178 total head of beef cattle. The commonality of these enterprises among SBAE teachers aligns with overall commonality of these enterprises in the state.

These conclusions suggest SBAE teachers have a personal interest in the subject they teach. This ongoing connection to the agricultural industry is bound to impact their teaching in a variety of ways. It likely enriches their knowledge and skills in several areas of the SBAE curriculum. Their experiences in agriculture might also contribute to their credibility with SBAE students, the local agricultural community, and other stakeholders of the SBAE program.

Future studies should explore links between SBAE teachers' engagement in production agriculture and their self-efficacy as a teacher and FFA Advisor, personal well-being, job satisfaction, and retention in the profession. Connections between teachers' engagement in production agriculture and various measures of student success should also be investigated.

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