

Comparing Challenges Faced by School-Based Agricultural Education Teachers by Region

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Introduction/Theoretical Framework

Teacher shortages have negative consequences on SBAE programs and student learning nationwide (Clemons & Lindner, 2019). An identified cause of teacher shortages is the negative impact of daily challenges faced by SBAE teachers on their ability to do their job (Boone & Boone, 2009). These perceived challenges include relationships with school and community personnel, classroom factors and activities, agriculture program factors and responsibilities, miscellaneous activities and responsibilities, professionalism and advancement factors and activities, and personal factors and responsibilities (Boone & Boone, 2009; Clark et al., 2014; Greiman et al., 2005; Walker et al., 2004). Needs assessments have been completed as they relate at individual state and national levels, but not based on region where roles of SBAE teachers can vary (Connors, 1998). The lack of regional specific literature leads to the need and purpose of this study. The purpose of this study was to compare challenges faced by SBAE teachers by AAAE region. This study addresses priority five of the AAAE's national research agenda, "Efficient and Effective Agricultural Education Programs" (Thoron et al., 2016).

Human capital theory served as the basis for this study. According to Becker (1993), investments such as education and on-the-job training both serve as sources to increase human capital. Increases in human capital can yield returns to individuals and society (Becker, 1993). The increased value in human capital can be used to describe teachers in public school systems (Smylie, 1996). When human capital increases, competence for performing trade or vocation increases (Heckman, 2000). Agricultural teacher education programs may be able to improve human capital by identifying challenges faced by SBAE teachers on a regional level.

Methods

As part of a larger experimental study, a 131-item questionnaire was sent to 1,096 SBAE teachers across the United States. Teachers were randomly sampled and stratified proportionate to the number of FFA chapters in the state compared to the country. The questionnaire consisted of a demographics section and individual scale items making up the following six constructs: 1) SBAE relationships, 2) classroom activities, 3) SBAE program activities, 4) miscellaneous activities, 5) professionalism activities, and 6) personal activities. Individual items were rated on a Likert-type scale of 1 = *very negative influence* to 6 = *very positive influence*. A panel of seven professors in SBAE teacher education at five different institutions in three different states helped establish content and face validity. After conducting a pilot test with 40 SBAE teachers, a Cronbach's alpha was calculated for scale items comprising each construct. All constructs had an alpha coefficient of $\alpha = 0.86$ or greater and were acceptable according to Field (2018). All participants selected to participate in this study were mailed either a paper copy of the questionnaire or given access to an identical Qualtrics questionnaire. After IRB approval was obtained from Texas Tech University, a total of five contacts were used to solicit responses with each contact one week apart (Dillman et al., 2014). Contacts were made through the mail for contacts one and four with the remaining contacts sent through email. An overall response rate of 40.85% ($N = 444$) was achieved. A comparison of average construct scores was calculated for both early and late respondent groups to control for nonresponse error. No significant differences

were found between groups for each construct. All data for this study were analyzed in IBM SPSS version 26.0. All items were averaged to obtain a construct score for individual participants. All participant construct scores were then averaged within Western, North Central, and Southern AAAE regions.

Findings

Each average construct score was lowest for SBAE teachers in the North Central AAAE region. The construct with miscellaneous items had the most negative influence on teachers' ability to do their jobs in the North Central region ($M = 3.86, SD = 0.65$) and Southern region ($M = 4.07, SD = 0.75$). Personal factors had the most negative influence ($M = 4.05, SD = 0.90$) for participants in the Western region. The construct with the most positive influence of SBAE teachers' ability to do their jobs was relationship with school and community personnel for all three AAAE regions. Refer to Table 1 for a complete breakdown of average construct scores by region.

Table 1
Average Construct Scores by AAAE Region (N = 444)

Construct	Western (n = 75)		North Central (n = 183)		Southern (n = 186)	
	M	SD	M	SD	M	SD
1. Relationships	4.77	0.45	4.75	0.44	4.80	0.47
2. Classroom	4.61	0.49	4.45	0.54	4.53	0.60
3. SBAE Program	4.76	0.56	4.50	0.60	4.72	0.68
4. Miscellaneous	4.08	0.63	3.86	0.65	4.07	0.75
5. Professionalism	4.62	0.64	4.52	0.69	4.59	0.78
6. Personal	4.05	0.90	3.98	0.85	4.08	1.05

Note. Scale was 1 = very negative influence, 2 = negative influence, 3 = slightly negative influence, 4 = slightly positive influence, 5 = positive influence, 6 = very positive influence.

Conclusions/Implications/Recommendations

As presented in the findings, teachers in the North Central region are most negatively influenced by factors which affect their ability to do their jobs. This indicates geographical location may differently influence the how challenges faced by SBAE teachers affect their ability to do their jobs. Miscellaneous and personal factors had the most negative influence across all three regions, indicating a need for tools to aid SBAE teachers' to navigate personal or miscellaneous factors. Potential action may include physical and mental health retreats, guides, and other efforts to foster confidence in their ability to deal with personal and miscellaneous factors. This could also present an opportunity to visit with seasoned, long-career SBAE teachers to gather data on how they combat external stress. Creating a clear plan or guide to assist teachers with these issues will potentially improve retention and help foster AAAE's research agenda by maintaining well-trained and highly qualified instructors. Further research would need to be conducted to indicate how this may be improved and to more conclusively define what the specific personal and miscellaneous factors are. In addition, more research may be necessary to determine how to best provide professional development on a regional level.

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