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

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Abstract

Teacher attrition has reached critical levels in the US and globally, with one in every four teachers not remaining in the profession past year three. For 32 years, research surrounding school-based agricultural education (SBAE) teacher needs has been studied, finding that program management, administrative tasks, public relations, SAE development, instructional technology, behavior management, and work-life balance have been recurring needs, yet nothing has been done to proactively address these needs to increase job satisfaction. One-size-fits-all professional development, training, and workshops are ineffective at providing the human capital development needed to meet these needs. The Conceptual Model of Support for SBAE Teachers guided this study in determining the current needs of SBAE teachers in Oklahoma through the distribution of a 42-item instrument. Thirty-six of the 42 items achieved a mean score indicating a need. A statistically significant difference was found between SBAE teachers' self-reported need scores based on the personal and professional characteristics of participants. It is recommended that purposeful professional development in-service and practical resources be developed to address the unique and specific needs of SBAE teachers.

Introduction and Review of Literature

Teacher attrition has reached critical levels in the US and globally, with one in every four teachers not remaining in the profession in the past year three (OECD, 2021). Attrition rates increase for teaching positions with greater responsibilities like special education, science, technology, engineering, and mathematics (STEM), and agricultural education (Nguyen & Springer, 2019). Since 1917, school-based agricultural education (SBAE) has reported a lack of teachers to meet program demands (Eck & Edwards, 2019). Further exacerbating the concerns was the large percentage of SBAE teachers approaching retirement and early-career SBAE teachers not remaining in the profession to retirement (Smith et al., 2018). Begging the question: How do we make actionable changes to this trend and increase SBAE teacher career retention?

For 32 years, research surrounding SBAE teacher needs has found program management, administrative tasks, public relations, SAE development, instructional technology, behavior management, and work-life balance as recurring needs, yet nothing has been done to address these needs to increase job satisfaction proactively (DiBenedetto et al.,2018; Doss et al., 2022; Shoulders et al., 2021). These historic gaps in specific human capital skills and community networks have been further compounded by the stress and anxiety SBAE teachers face while attempting to manage a complete program (Marsh et al., 2023; Shoulders et al., 2021).

Nationally, school district policies have adopted measures to alternatively and emergency-certify teachers to help alleviate the pressure of filling positions with quality professionals (NCES, 2018; US Department of Education [USDOE], 2016). Emergency certified teachers represent 1% of the teaching population in Oklahoma, as this number has risen from 32 individuals in 2011 to over 3,000 with emergency credentials in 2019 (NCES, 2018; Oklahoma State Department of Education [Oklahoma DOE], 2022; US Department of Education, 2016). Leaving novice

emergency teachers facing barriers that limit their effectiveness if they do not receive content, pedagogy, and experience before being placed in the classroom (Mobra & Hamlin, 2020).

Alternatively and emergency certified teachers can be presented with unique challenges, just as other personal and professional characteristics of SBAE teachers contribute to differences in an individual's level of need (Marsh et al., 2023). For example, female SBAE teachers have identified SAE and FFA tasks to be high-stress responsibilities, with 60% finding that proficiency application preparation and 57% finding that FFA Banquet planning were high to very highly stressful events (King et al., 2013). In addition, classroom responsibilities like reports and paperwork were found to be highly stressful by 57% of female SBAE teachers (King et al., 2013). Teacher age and career tenure seem to reduce the stress level reported by female SBAE teachers, although Smalley and Smith (2017) found time to be a major stressor for individuals trying to balance work and life responsibilities.

According to Huberman's (1989) *teacher career cycle model*, the early-career, mid-career, and late-career phases have distinctive characteristics that influence teachers' needs. Early-career SBAE teachers are characterized by *survival and discovery*, motivating them to abandon their personal boundaries to succeed in the profession and limiting their work-life/balance, leaving them to struggle in silence (Huberman, 1989; Steffy & Wolfe, 2001; Traini et al., 2020). While the mid-career phase is the most extensive of career phases, characterized by *stabilization, experimentation, reassessment, and self-doubt* influenced by teachers' reflection on their progression within the profession. Obstacles identified during the mid-career phase include lack of time, work-life balance, content and curriculum resources, professional development, and networking to improve and energize practice (Huberman, 1989; Smalley & Smith, 2017; Steffy & Wolfe, 2001). Late-career teachers have been characterized by *serenity, conservatism, or disengagement,* with the need to find meaningful ways to engage and challenge themselves to continue growing (Huberman, 1989; NAAE, 2015; Steffy & Wolfe, 2001). These personal and professional characteristics make each SBAE teacher unique, resulting in varying needs to be successfully retained within the profession (Marsh et al., 2023). Furthermore, Klassen and Chiu (2010) found that one-size-fits-all professional development, training, and workshops are ineffective at providing the human capital development needed to meet these needs. Considering the disparity between SBAE teachers' unique needs, how do we adequately support these teachers to retain them throughout their careers?

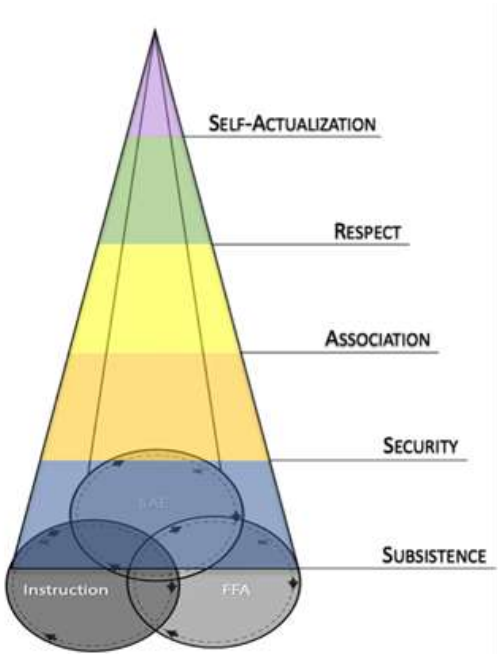
Theoretical/Conceptual Framework

The conceptual model of support for SBAE teachers was developed to provide a human lens for evaluating 21st Century program needs (Marsh et al., 2023; see Figure 1). The framework (see Figure 1) integrates *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), providing researchers a lens to evaluate the level of SBAE teachers needs within their professional roles and responsibilities to provide opportunities to develop their career-specific human capital (i.e., education, training, skills, and experiences), ultimately increasing job satisfaction and career retention (Eck et al., 2019; Heckman, 2000; Smith, 2010). Evaluating SBAE teachers' individual needs based on personal and professional characteristics can influence professional development opportunities, resources, tools, and skills

being developed and implemented to make a more impactful change and satisfy the needs of SBAE teachers (Marsh et al., 2023; DiBenedetto et al., 2018; Klassen & Chiu, 2010).

Figure 1

Conceptual Model of Support for School-Based Agricultural Education Teachers



Purpose and Objectives

The purpose of this study was to determine the current needs of SBAE teachers in Oklahoma. The research questions guiding this study were:

1) What are the 21st Century needs of SBAE teachers in Oklahoma, and
2) Do needs differ based on SBAE teachers' personal and professional characteristics?

Methods

SBAE teachers in Oklahoma attending 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 instrument was developed utilizing a previously validated list of 42-items representing the perceived needs of 21st Century SBAE teachers. The instrument was established by an expert panel of SBAE supporters using a three-round Delphi approach (Marsh et al., 2023). The instrument was adapted to include a four-point Likert-type scale ranging from strongly disagree (1) to strongly agree (4), based on the recommendations of (Marsh et al., 2023). SBAE teachers attending the COLT conferences were asked to scan a QR code to complete the survey questionnaire, of which 121 teachers completed the instrument, resulting in a 34% response rate.

SPSS Version 25 was used for the data analysis of this study. Data were exported to an SPSS compatible file that would allow for descriptive statistics and the analysis of variance (ANOVA) tests to be run comparing different variables from the study. The main comparable variables considered for analysis were (1) gender, (2) career stage, (3) total need score, and (4) need score mean. An ANOVA and normality of distribution were conducted on the data, resulting in not normally distributed data with unequal variances. Therefore, a Kruskal-Wallis test and a Welch test were run to identify if the significance of these findings would hinder the data usage for ANOVA tests (Field, 2018). Both tests were found not to be significant for the gender and career phase, indicating that the data was fit to have ANOVA tests and the Tukey-Kramer Post Hoc analysis conducted (Field, 2018). Regional responses and certification held by the participants indicated unequal tests of normality and homogeneity of variances, indicating the need to run the Games-Howell Post Hoc test to adjust the data for these unequal data points (Field, 2018).

The personal and professional characteristics of participants are outlined in Table 1. Career phases were broken down into early (1 to 6 years; $n = 60$), mid (7 to 15 years; $n = 30$), and late-career (16 or more years; $n = 38$), based on the recommendations of Huberman (1989).

Table 1

Personal and Professional Characteristics of Participants ($n = 121$)

Characteristic		*f*	*%*
Gender	Female	45	37%
	Male	76	62%
Career phase	Early Career (0 - 6 years)	59	48%
	Mid-Career (7 – 15 years)	31	25%
	Late Career (16 – 39 years)	31	25%
Certification pathway	Traditional	108	89%
	Alternative	11	9%
	Emergency	2	1%
Region of Oklahoma	Region I	32	26%
	Region II	43	35%
	Region III	11	9%
	Region IV	22	18%
	Region V	13	10%

For the total need score, the 42 items were each ranked on a four-point scale of agreement, with all items being weighted equally, as McDonald (1997) recommended equally weighted summative scores to be optimal when analyzing multiple components, as no weighted method can provide a better estimate. Therefore, total need scores had a potential range of 42 (little or no need) to a maximum of 168 (high need). It is recommended that individual item mean scores be

considered as follows: 1.0 to 1.5 (not a need), 1.6 to 2.0 (low need), 2.1 to 2.5 (somewhat need), 2.6 to 3.0 (moderate need), 3.1 to 3.5 (high need), and 3.6 to 4.0 (essential need).

ANOVA tests and post-hoc analysis consisting of (1) gender v. total need score mean, (2) teaching certification vs. total need score mean, (3) career phase v. total need score mean, and (4) Oklahoma teacher association region vs. total need score mean were conducted to address the second research question. Two Post-hoc analyses were used in the ANOVA comparisons. A Tukey-Kramer test was used when group sizes were found to be normally distributed and have equal variances (i.e., gender and career phase), while the Games-Howell test was conducted for group sizes that did not have normally distributed data and was found to have unequal variances to account for the disparities in the normality and variances of the data (e.g., teaching certification and Oklahoma teaching association region), allowing for a more accurate analysis of the data when comparing abnormal group sizes to different variables being studied (Field, 2018).

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 (see Table 1). Thirty-six of the 42-items had a mean need score of 3.00 or higher (i.e., moderate to high need), with the remaining six items falling below 3.0 mean score (moderate need). 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), (4) *work-life balance* (3.46) and (5) *respect* (3.37) with a statistical power of 0.99. The effect size for the top five identified items ranged from 0.50 to 0.44. The lowest perceived needs included *training on effective online delivery techniques* (2.91), *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 effect size of the bottom five identified items ranged from 0.20 to 0.11.

Table 2

*Current Needs of SBAE Teachers In Oklahoma (*n = *121)*

Identified Need	*M*	*SD*
Access to essential resources	3.50	.55
Curriculum resources	3.50	.59
Support from local school administration	3.48	.70
Work-life balance	3.46	.67
Respect	3.37	.75
Purposeful professional development	3.34	.57
Assistance/resources for training FFA teams	3.34	.61
Parent support	3.33	.69
State level support	3.32	.64
Community support	3.31	.72
Classroom/Laboratory Support	3.30	.57
FFA Support	3.26	.66

Identified Need	*M*	*SD*
Skills and techniques for working with students with special needs	3.26	.57
Resources to help students overcome various levels of public speaking anxiety	3.26	.65
Assistance/resource to develop FFA officer teams	3.26	.61
Relevant evaluations that reflect their complete program	3.23	.73
Their planning period (i.e., not being required to cover other classes/duties during this time)	3.22	.82
Resources to recruit traditional and non-traditional ag students	3.18	.72
Agricultural mechanics skills	3.17	.62
Resources to integrate experiential learning opportunities for students	3.16	.63
Resources for awarding and recognizing SAEs	3.16	.73
Resources on FFA integration within a complete program (i.e., Program of Activities, National Chapter Award, Proficiency Awards)	3.15	.71
Accessibility training	3.14	.67
Laboratory safety resources	3.13	.68
Classroom management skills	3.12	.66
Agricultural content knowledge	3.12	.71
Greenhouse management skills	3.12	.75
Support for teacher mental health	3.11	.77
Training of “SAE for ALL” implementation	3.11	.75
Support to aligning lab facilities to program curricula	3.09	.68
SAE Support	3.08	.53
Tools to address student mental health issues	3.07	.70
Support in providing equal opportunities to all students	3.04	.72
Support to identify student mental health issues	3.03	.67
Emotional health support	3.01	.78
Laboratory management training	3.00	.72
Training to implement a variety of formative evaluation techniques	2.98	.66
Training on effective Online delivery techniques	2.91	.76
Support for hybrid teaching (i.e., in-person, virtual, simultaneous)	2.87	.84
Pedagogical content knowledge	2.87	.77
Diversity, equity, and inclusion (DEI) training	2.78	.90
Lesson planning training	2.72	.88

Note. Strongly Disagree = 1, *Disagree* = 2, *Agree* = 3, *and Strongly Agree* = 4.

The second research question aimed to determine if SBAE teachers’ needs differed based on their personal and professional characteristics. Composite needs scores had a potential range from a low of 42 to a high of 168, which were compared to each of the personal and professional characteristics (i.e., *gender*, *career phase*, *certification pathway*, and *regions of Oklahoma*).

Females (n = 45) had a higher mean need score of 135.7 compared to male respondents (n = 76) at 117.5. This finding was statistically significant, with the lower bound of the 95% confidence interval for female respondents at 127.3 compared to the upper bound for male respondents at

125.4. Due to the gap in the identified need score range between males and females, there was a statistically significant difference in the need scores between genders F (2,150) = 122.034, p<.05. Four of the top five needs items were found to be similar for both males and females, with females identifying *purposeful professional development* and males identifying *respect* and their fifth need (see Table 3).

Table 3

Identified Needs by Gender (n =121)

Gender	Identified Need	*M*	*SD*
Female Respondents	Support from local school administration	3.48	.72
	Access to essential resources	3.44	.54
	Work-life balance	3.44	.62
	Curriculum resources	3.43	.62
	Purposeful professional development	3.40	.53
Males Respondents	Curriculum resources	3.54	.57
	Access to essential resources	3.52	.52
	Work-life balance	3.50	.64
	Support from local school administration	3.47	.70
	Respect	3.44	.72

Analysis by career phase showed that early-career teachers had a higher mean need score of 131.8 and a need score range of 123.4 to 140.1, followed by mid-career teachers with a mean score of 127.7 and a need score range of 116.2 to 139.2, and late-career teachers with a mean score of 106.4 and a need range of 92.8 to 119.9. It was found that the maximum need score of the late-career teacher and the minimum score of the early-career teachers had a gap of 3.5 points. Due to this gap in need score means, early-career teachers were found to be statistically different 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.

All career phases identified *access to essential resources* and *curriculum resources* in the top five identified needs. The early-career teachers had further overlapping identified need for *work-life balance* being shared with mid-career teachers and *support from local school administration* shared with late-career teachers. A total of nine unique needs items were found as the top five needs regardless of career phase (see Table 4)

Table 4

Identified Needs by Career Phase (n = 121)

Career Phase	Identified Need	*M*	*SD*
Early-career	Work-life balance	3.58	.67
	Access to essential resources	3.57	.53
	Curriculum resources	3.56	.56

Career Phase	Identified Need	*M*	*SD*
	Support from local school administration	3.52	.75
	Classroom/Laboratory support	3.47	.53
Mid-career	Curriculum resources	3.61	.49
	Work-life balance	3.51	.56
	Access to essential resources	3.45	.56
	Purposeful professional development	3.41	.50
	State level support	3.38	.61
Late-career	Support from local school administration	3.54	.62
	Access to essential resources	3.38	.49
	Assistance/resources for training FFA teams	3.30	.53
	Respect	3.30	.79
	Curriculum resources	3.29	.69

Further analysis was warranted to identify the top five needs of the three teaching certifications held by the participants (see Table 5). Traditionally certified teachers were found to have a total need score mean of 125.02 with a range from 90.00 to 168.00 points. Alternatively, certified teachers were found to have a total need core mean of 126.58 with a range from 116.00 to 168.00 points. Emergency certified teachers had a total need score mean of 138.00, ranging from 136.00 to 140.00 points (see Table 5). After analysis of the one-way ANOVA, it was found that differences in total need score mean and the certification type held by the participants were not statistically significantly different (F (1,1) = .540, p > .05).

Analysis by teacher certification pathway showed all participants addressed their top five needs between *agree* and *strongly agree*. Emergency certified teachers indicated *strongly agree* for their top five identified needs. However, it should be noted that there were only two emergency certified teachers among the participants, indicating both participants strongly agreed (a score of 4 on the instrument) for their top five needs. Two items were found to have been a top five need within all three certification groups i.e., *support from local school administration* and *work-life balance*. An additional two items were found in at least two certification groups, i.e., *respect* (alternatively and emergency certified teachers) and *access to essential resources* (alternative and traditionally certified teachers; see Table 5).

Table 5

Identified Needs by Certification Pathway (*n* = 121)

Certification Pathway	Identified Need	*M*	*SD*
Alternatively Certified	Support from local school administration	3.63	.50
	Their planning period (i.e., not being required to cover other classes/duties)	3.54	.52
	Respect	3.54	.52
	Work-life balance	3.54	.52

Certification Pathway	Identified Need	*M*	*SD*
	Access to essential resources [A]	3.45	.52
Emergency Certified	Community support	4.00	.00
	Parent support	4.00	.00
	Support from local school administration	4.00	.00
	Respect	4.00	.00
	Work-life balance	4.00	.00
Traditionally Certified	Curriculum resources	3.51	.55
	Access to essential resources	3.50	.52
	Work-life balance	3.46	.64
	Support from local school administration	3.45	.72
	Assistance/resources for training FFA teams	3.34	.63

Note. Alternatively certified teachers were teachers who previously held a college degree and passed the Oklahoma agricultural education teaching examination. Emergency certified teachers were self-identified to have been emergency-certified based upon Oklahoma Department of Education standards. Traditionally certified teachers were teachers who attended an institution(s) that prepared agricultural education teacher educators and successfully met all requirements for degree completion and teacher certification in agricultural education. [A]Alternatively certified participants identified eight needs with the same need score mean and standard deviation. The fifth item listed in Table 5 was the first identified in instrument order, followed by *parent support, classroom/laboratory support, support in providing equal opportunities to all students, agricultural mechanics skills, resources for awarding and recognizing SAEs, resources to help students overcome various levels of public speaking anxiety* and *assistance/resource to develop FFA officer teams*.

The five regions represent the Oklahoma FFA association and are identified by their geographical location within the state. Region I had 32 responses to the instrument with a total need score mean of 126.50, while Region II had 43 responses and a total need score mean of 126.60, Region III with 11 responses and a total need score mean of 118.08, Region IV with 22 responses and a total need score mean of 133.91, and Region V with 13 responses with a total need score mean of 137.77, respectively. After analysis of the regional total need score means and performing a one-way ANOVA test, it was found that the regional total mean need scores were not statistically significantly different between the regions (F (2,2) = 5.405 p > .05).

Four items (i.e., *access to essential resources, curriculum resources, support from local school administration,* and *work-life balance)* were found to have been identified as a top five need in at least four of the regions. Three items (i.e., *respect, community support, and accessibility training)* were found to have been identified as a top five need in two of the regions. Nineteen unique items were found as a top five need item in at least one Oklahoma region (see Table 6).

Table 6

Identified Needs by Region of Oklahoma (n = 121)

Region of Oklahoma	Identified Need	*M*	*SD*
Region I	Curriculum resources	3.71	.45
	Access to essential resources	3.56	.50
	Parent support	3.53	.71
	Support from local school administration	3.46	.76
	State level support	3.43	.71
Region II	Access to essential resources	3.46	.50
	Work-life balance	3.45	.67
	Support from local school administration	3.41	.73
	Respect	3.38	.62
	Purposeful professional development	3.37	.57
Region III	Work-life balance	3.45	.68
	Support from local school administration	3.36	.67
	Access to essential resources	3.27	.46
	Respect	3.27	.90
	Community Support[A]	3.18	.40
Region IV	Support from local school administration	3.81	.39
	Curriculum resources	3.66	.48
	Access to essential resources	3.63	.49
	Work-life balance	3.63	.58
	Community support	3.61	.49
Region V	Classroom/Laboratory support	3.53	.51
	Work-life balance	3.53	.51
	Tools to address student mental health issues	3.53	.51
	FFA support	3.46	.51
	Skills and techniques for working with students with special needs[B]	3.46	.51

Note. [A]Region III participants had seven items identified with the same need score mean. The fifth item listed in the table above had the lowest standard deviation, followed by *1. their planning period (i.e., not being required to cover other classes/duties), 2. curriculum resources, 3. agricultural content knowledge, 4. resources to help students overcome various levels of public speaking anxiety, 5. assistance/resource to develop FFA officer teams, and 6. assistance/resource for training FFA teams.* [B]Region V participants had three items with the same need score mean and standard deviation. The fifth item listed in Table 6 is the first identified in instrument order, followed by *1. accessibility training and 2. curriculum resources.*

Conclusions, Implications, and Recommendations

Twenty-nine of the 42 items achieved a mean indicating a high need (i.e., mean score above 3.1) for SBAE teachers in Oklahoma, the remaining 13 items resulted in a moderate need. The top two items included a*ccess 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). The needs identified by SBAE teachers also reflected the importance of relationships with parents, administration, community, and state-level supporters in the surrounding school community to provide resources and meet program needs (Marsh et al., 2023; 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 (Marsh et al., 2023; Shoulders et al., 2021). Perhaps to better address the subsistent and security needs (Marsh et al., 2023) of current Oklahoma SBAE teachers, a more effective lens is necessary to create actionable change?

A statistically significant difference was found in SBAE teachers' self-reported need scores based on personal and professional characteristics of participants (F (3,149) = 74.389, $p < .05$). Early-career SBAE teachers participants corresponded with a higher percentage of female SBAE teachers in the Oklahoma, which represented 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 et al., 2023).

When considering the needs identified by personal and professional characteristic subgroups, males had a grand mean need score lower than female respondents, but males' need scores for the top five items were higher than that of the female respondents. This suggests that the top items identified were significant high needs impacting males in the profession. Males differed in the top five responses from females with *respect* to replacing *purposeful professional development*. Perhaps this was an impacting factor for males not entering or being retained in the profession because it was no longer aligning with their individual human needs to feel respected within the profession (Marsh et al., 2023). In addition, female respondents reported a higher grand mean score reflecting their increase in identified needs, which was supported by the fifth item, *purposeful professional development*, as the recognition of future human capital development to support their practice within the profession was essential (Eck et al., 2019; Marsh et al., 2023).

Early-career teachers were found to have statically significant needs when compared to the needs of late-career teachers by the grand mean score, but they still shared three of the top five needs, including *access to essential resources*, *curriculum resources*, and *support from local school administration.* Traini et al. (2020) concluded that early-career teachers' stress as they strive to achieve stability in their personal and professional careers and struggle in silence, but the review of identified needs by career phases suggests that they share needs with mid and late-career SBAE teachers. Even with early-career teachers responding with a greater need than mid and late-career teachers, perhaps connecting early-career teachers with mid and late-career teachers could improve connectedness and community by sharing resources and fostering mentorships. Mid-career SBAE teachers had the most overlap between early and late-career teachers, aligning with Huberman's (1989) *teacher career cycle model* that this was a critical phase for providing engagement, professional development, and resources targeted to support their career retention.

Reviewing identified needs by certification pathway, emergency certified teachers responded with a need score mean of 4.0 and a standard deviation of 0.00 for *community support*, *parent*

support, *local administration* support, *respect*, and *work-life balance*. The findings align with Mobra and Hamlin (2020) that emergency-certified teachers lack the support and resources needed to improve their practice and overcome the barriers to becoming successful in the classroom. Further, the needs identified by emergency and alternately certified teachers were relational focus suggesting a need for belonging within the profession through community, mentorship, and networking (Marsh et al., 2023). Interestingly, traditionally certified teachers identified as needing resources and training FFA teams may be a product of their own FFA interests, self-efficacy in pedagogy, or interest in engaging and improving leadership teams and events.

The regions of the Oklahoma had similarly identified the top five needs for *access to essential resources*, *curriculum resources*, *support from local school administration*, and *work-life balance*, which was also reflected by the overall top five identified items, suggesting that the regional and state identified needs align and that no region had a significant gap of resources. This was further confirmed by the statistical power of the study 0.99, and the lack of significant differences between regions (F (2,2) = 5.405 $p > .05$). Unique to region V was the identified need for *skills and techniques for working with students with special needs*, which may represent a specific gap between schools and school districts within the region.

Practical recommendations from this study included targeting the resource, curriculum, and professional development needs of SBAE teachers based on their unique personal and professional characteristics due to the differences found between female and male respondents as well as between early-career and mid to late-career teachers. It is recommended that instructional tools and curriculum resources be organized in an easy-to-access format and provide a structured plan for ease of implementation for SBAE teachers. Many of the identified needs overlapped between different personal and professional characteristics, which provide the opportunity for mentorship/community development between early, mid, and late-career teachers as well as alternative/emergency certified participants with traditional certified participants. Specifically identified needs as in Region V's *skills and techniques for working with students with special needs* and late-career teacher's *assistance/resources for training FFA teams*, should be addressed through professional development, communication of tools available, and updated resources targeted specifically to the participants' needs.

Additionally, professional development opportunities should focus on furthering the human capital of the complete person for SBAE teachers in Oklahoma. *Respect* and *work-life balance* represent basic human needs found at the subsistence, security, and belonging level within *the conceptual model of support for SBAE* (Marsh et al., 2023). Efforts should be made to build relationships, as the sharing of resources and fostering of mentorship between the career phases could help to bridge the identified need gap and increase security in the profession since one-size fits all is not effective for creating the human capital growth needed to overcome the current identified needs (Marsh et al., 2023; Doss et al., 2022; Klassen & Chiu, 2010; Shoulders et al., 2021). Additionally, providing SBAE teachers with the necessary resources to advocate and defend the value of their programs when communicating with parents, administration, and the surrounding community helps to increase a sense of respect and appreciation.

Future research should further investigate the impact of such professional development, including alternatives to one-time professional development workshops. 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. Validation of the conceptual model of support for SBAE should be evaluated as a tool for identifying SBAE teachers' unique needs and connecting them with actionable resources.

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