

Exploring the Lived Experiences of Novice School Based Agricultural Education Teachers in California: A Phenomenological Study

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Abstract

The purpose of this qualitative study was to explore the lived experiences of novice, secondary school-based agricultural education (SBAE) teachers in the state of California. Social support theory guided this study. With 10 novice SBAE teachers serving as study participants, data collection included a questionnaire, individual interviews, and focus groups. Data were analyzed by a seven-step, modified Van Kamm data analysis procedure. Findings include four themes: (1) Teacher-teacher interactions and teacher-supporting staff interactions propel or hinder the novice SBAE teacher's career; (2) Agriculture-specific induction program is a consistent support system which provides valuable information, professional connections, and emotional support; (3) California Agricultural Teachers' Association offers dynamic professional development, yet some leaders and members lack professional communication and responsibility; and (4) Novice SBAE teachers actively seek to improve balance while finding success in their chosen profession. These lived experiences led to a set of implications and recommendations for agricultural education.

Introduction

With a rich history and strong foundation, school-based agricultural education (SBAE) in California has evolved from its first high school class offered in the 1905-1906 school year (Sutherland & Burlingham, 1982) to a dynamic educational system boasting over 330 programs and 95,000 students statewide (California Agricultural Education, 2020). As promising as the numbers sound, the capacity to satisfy secondary SBAE teaching positions mimics those at the national level, and jobs are left unfilled every year (Foster et al., 2022). In fact, Kantrovich (2010) claimed the existence of a national shortage of agricultural educators dating back to the 1970s, while Eck and Edwards (2019) expressed how school-based agricultural teachers have fallen short of meeting capacity since the Smith Hughes Act in 1917. Smith et al. (2019) conveyed the need for agricultural education instructors to satisfy the demand. This teacher shortage has implications far beyond the secondary classroom. "Solving the teacher shortage in agricultural education is imperative to meet the scientific and professional agricultural workforce demands of this century" (Ingram et al., 2018, p. 65).

The long-standing shortage of SBAE teachers (Eck & Edwards, 2019; Foster et al., 2020; Kantrovich, 2010; Smith et al., 2019) and teacher attrition (Lemons et al., 2015; Solomonson, 2018; Solomonson et al., 2019) provided the impetus of this study and necessitated the need to qualitatively

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unpack the types of social support in the context of SBAE. Social support may serve as a factor in novice teachers' decision to persist or depart the profession (Cobb, 1976). Although many agricultural instructors pride themselves in teaching rigorous curriculum in the classroom, supervising student-managed (SAE) projects, and overseeing leadership activities and competitions from the local to the national level of FFA, the profession faces an exodus of teachers leaving the profession (Solomonson et al., 2018). Teacher attrition, which occurs at the highest rate for novice teachers, with some studies indicating rates as high as 40-50% (Gourneau, 2014; Ingersoll, 2012), exacerbated the shortage. Even more detrimental, researchers suggested SBAE teachers likely depart the profession more often than teachers of other disciplines due to the multi-faceted demands of agricultural education (Lemons et al., 2015; Solomonson et al., 2018; Sorensen et al., 2016; Traini et al., 2019). This knowledge, coupled with current statistics from the California Agricultural Teachers' Association, is disconcerting. Of the 956 total secondary agricultural teachers in California, 454 have taught for five or fewer years (M. Patton, personal communication, 2020). With almost half of the pool of secondary agricultural teachers in California considered novices and more vulnerable to leaving the profession, researchers and educational leaders need to better understand this demographic with the goal of reversing the course.

Literature Review

The experiences of novice SBAE teachers are characterized by incongruous beginnings, the realization of unattainable goals, plummeting teacher self-efficacy, and a mixed review of received supports. The literature has suggested that novice SBAE teachers experience psychological and physiological challenges (Korte & Simonsen, 2018). Culture shock (Caspersen & Raaen, 2013; Langley et al., 2014) and symptoms related to the transition in novice teachers' lives manifest during the early career phase (Caspersen & Raaen, 2013) as they built a connection to their new community (Langley et al., 2014). Insufficient social connectedness impacted novice teachers (Caspersen & Raaen, 2013; Langley et al., 2014) as they struggled to communicate their individual needs to colleagues (Caspersen & Raaen, 2013).

In a study by Traini et al. (2019), it was found that early career teachers largely equated perceived success with swelling membership, banners and ribbons, grant dollars, and FFA members involved in the chapter. Likewise, they believed that they could demonstrate balance or success, but the combination of the two was unattainable (Traini et al., 2019). In their efforts to obtain work-life balance, teachers experienced guilt, judgment, fear, and pressure (Traini et al., 2019), and this conflict of balance is one of the factors which cause SBAE teachers to depart the profession (Solomonson et al., 2019). SBAE teachers' perspectives shift as they progress in their career. Experienced SBAE teachers perceived the ability to achieve balance (Blackburn, et al., 2017), reporting moderate levels of work-life balance (Sorensen and McKim, 2014). Novice SBAE teachers require support systems to build effective work-life balance if they are to be retained in the profession (Langley et al., 2014; Solomonson et al., 2019).

Support Systems

Cobb (1976) defined support as the belief that one is loved and cared for as part of a system with mutual goals. Regardless of the specific definition of support, Langley et al. (2014) and Solomonson et al. (2019) argued that support was essential for teacher retention. Solomonson et al. (2019) found that the perceived need for support was weaved throughout their findings but varied drastically. While some SBAE teachers conveyed support in terms of curriculum and resources, others communicated the need for support from other teachers or administrators (Solomonson et al., 2019). Warsame and Valles (2018) determined that study participants viewed collaboration with other teachers as the most useful source and type of support while, on the other end of the spectrum, participants rated staff development, which occurred prior to the school year, as the least effective. Conversely, and specific to novice SBAE teachers, Traini et al. (2019) posited that the SBAE profession provides illusionary support for early career SBAE teachers.

Participants in the Trani et al. (2019) study concurred that few support systems and resources for early career SBAE teachers existed to facilitate their obtainment of work-life balance.

Connectivity

The ability to develop friendships and collaborate with other SBAE teachers are important characteristics to their longevity in the SBAE profession (Clemons & Linder, 2019). Similarly, the variance in general self-efficacy is influenced by the connectedness to a community (Langley et al., 2014). Teachers' relationships with their colleagues can be viewed as a factor in school-wide performance and student achievement and is congruent with teacher development (Nais, 2005). Professional development activities and induction programs have been identified as effective avenues for building and strengthening professional networks for novice teachers (Dempsey et al., 2021).

Professional Development

The professional development needs of early-career SBAE teachers may vary based on their past experiences, specifically FFA membership (Ferand et al, 2020). Regardless, there has been overwhelming evidence that professional development can be useful for SBAE teachers (DiBenedetto et al., 2018; Easterly & Myers, 2019; Smalley et al., 2019; Yopp et al., 2020). As priority needs differ from pre-service to novice to veteran instructors, professional development should be designed and delivered based on the needs of the specific experience level of teachers (DiBenedetto et al., 2018; Smalley et al., 2019) and presenters should represent a range of career stages (Smalley et al., 2019). Validating the significance of professional development, Easterly and Myers (2019) indicated a statistically significant and moderately positive correlation between participation in professional development and career satisfaction.

Induction Programs

Induction programs have been widely implemented to counter the many apprehensions and challenges beginning SBAE teachers endure (Moore & Swan, 2008; Tummons et al., 2016) and assimilate new teachers into the profession (Foor & Cano, 2012). Local district administration, professional associations, state departments of education, and teacher educators play key roles in providing an induction program (Moore & Swan, 2008). Broken into high and low-intensity activities, Moore and Swan (2008) suggested the local district should be primarily responsible for activities such as selecting and training mentors and on-site visitations, but all contributors need to be involved. Taking a different stance, Franklin and Molina (2012) found that 65% of SBAE programs aided beginning SBAE teachers through workshops, on-site visits, courses, collaboration with state staff, and service on related committees.

Mentoring is a vital aspect of induction programs (Renbarger & Davis, 2019), yet Foor and Cano (2012) uncovered a reluctance among some mentors to connect with mentees on an emotional level. Hasselquist et al. (2017) found that perceived support from school-related sources influenced the impacts of teacher self-efficacy and overall job satisfaction for first and second-year teachers. Tummons et al. (2016) found that perceived similarity and expectation congruency significantly forecasted the counseling, friendship, role model, and acceptance support functions, both statistically and practically. Additionally, relationships with students (Korte & Simonsen, 2018), their parents (Rayfield et al., 2014), and the community (Korte & Simonsen, 2018) should be included in mentoring programs. In the context of this study, a content-based mentoring system, called California Agricultural Teachers' Induction Program (CATIP), exists in California. Aligned with standards presented by the California Commission on Teacher Credentialing, the program aims to induct SBAE teachers into the SBAE profession.

Curricular Resources

Curricular resources represent yet another method to support teachers. Easterly and Simpson (2020) found teachers may use curriculum with slight or no modification (offload), augment the material with one's own ideas and design elements (adapt), or diverge from the curriculum or lesson plan (improvise). Resources which have been created by professionals and experts, such as CASE and AET, exhibited a positive correlation with teacher self-efficacy (Easterly & Simpson, 2020). Conversely, a peer-developed curriculum showed a negative relationship (Easterly & Simpson, 2020). Thorton et al. (2020) found that the use of certain resources did not impact self-efficacy and teachers with different ranges of self-efficacy do not appear to use resources differently.

Influence of Social Support on Teacher Self-Efficacy

The perceived support that an individual receives may impact their self-efficacy (Hasselquist et al., 2017; Korte & Simonsen, 2018). Perceived support from colleagues significantly influenced how first or second-year teachers perceive their impact on their pupils, while perceived support from all school-related sources influenced the job satisfaction of new teachers (Hasselquist et al., 2017). Novice SBAE teachers who felt supported in their work environment had higher self-efficacy (Korte & Simonsen, 2018). Korte and Simonsen (2018) grouped the types of support into three constructs: emotional/appraisal, informational, and instrumental. Participants indicated that they acquired the highest level of support in the emotional/appraisal construct (Korte & Simonsen, 2018). School related sources, specifically from students and the community, proved to be a significantly significant predictor of teacher self-efficacy (Korte & Simonsen, 2018). Considering the existing literature focused on quantitative methods, using a qualitative study which seeks a rich, nuanced understanding of the constructs of support was necessary.

Theoretical Framework

Social support theories are commonly studied in medicine, education, psychology, and more. The role of social support as a coping resource began to gain momentum in the 1970s (Zimmet et al., 1988). Although support theories generally encompass aspects of support systems, researchers have varied their definitions and approaches (Cohen & McKay, 1984; Cohen & Syme, 1985; Gore, 1981; House, 1981; Tardy, 1985; Zimmet et al., 1988). As with the definition of social support, the way it operates, and the nature of the support are also viewed from different perspectives. House (1981) conveyed four forms of social support: emotional, appraisal, instrumental, and informational. According to House (1981), emotional support, which includes trust, empathy, love, and caring, is the most important. This type of support may be accessible in its isolated form or through the other types of support (House, 1981). People often consider the type of support they receive from others as emotional and represents more specific acts of support than the other types (House, 1981). Instrumental support is demonstrated when a support person takes care of or does the work for somebody else (House, 1981). A purely instrumental act may have psychological consequences (House, 1981). House (1981) provided an example of providing money for an individual in need, which could cause a negative effect by conveying that a person needs financial support and is dependent on others. Appraisal and informational support are the most challenging types of support to define and describe (House, 1981). Information support represents the sharing of information that may help a person. Although this information is not helpful by itself, it provides others with an avenue to help themselves (House, 1981). An example of informational support is sharing a job opportunity; the sharing of this information does not secure the position for an individual but rather makes them aware of the opportunity (House, 1981). Lastly, appraisal is similar to information support in that it only involves the conveyance of information in contrast to the effect and aid involved in emotional support and instrumental support, respectively (House, 1981). Appraisal support represents sharing sources of information that people may use to assess their performance, attitude, behavior, etc. (House, 1981). These types of support were used in the formation of interview protocol and data analysis in this study.

Purpose of the Study

The purpose of this transcendental phenomenological study was to understand the lived experiences of novice SBAE teachers in California as they related to social support from school-related sources. A central research question guided the study: How do novice SBAE teachers in California describe their support from school-related sources?

Methodology

Transcendental Phenomenological Research Design

As a means of shedding light on the experiences of novice SBAE teachers, we employed a transcendental phenomenological research design. With its roots in philosophy, phenomenology attempts to capture the essence of an experience (Eddles-Hirsch, 2015) and to describe the lived experiences of a group of people who experienced a common phenomenon (Creswell & Poth, 2018). The core processes of transcendental phenomenology include epoché, transcendental phenomenological reduction, and imaginative variation (Moustakas, 1994). Employing epoché, the researcher enters the study free of prejudgments and preconceptions, allowing them to view the phenomenon freshly and naively from all angles and vantage points (Moustakas, 1994). The bracketing process and intentional naivety in the data collection and analysis allow the researcher to view the phenomenon with a clear mind and eyes and, ultimately, interpret it with an imaginative variation. During transcendental phenomenological reduction, which should ultimately lead to textural descriptions, each experience receives equal value and measures in its singularity (Moustakas, 1994). To grasp the structural essence of the experience, imaginative variation, which follows the reduction process, fulfills the desire to fully grasp the meaning of the phenomenon (Moustakas, 1994). As Moustakas (1994) proclaimed, researchers employing imaginative variation must navigate the phenomenon from diverse perspectives, roles, or functions.

Procedures for Data Collection

Upon approval from the Institutional Review Board, non-proportional stratified random sampling, which justifies selecting participants regardless of their proportion to the population (Gall et al., 2007; Patton, 2015), was employed by selecting one to two novice SBAE teachers from each region of the state. We utilized a questionnaire to collect demographic and professional information about the participants. One-hour semi-structured interviews followed by two 45-minute focus groups were conducted via Zoom. Focus groups provided the opportunity to ask follow-up questions and determine and/or confirm trends while ensuring panelists were given equal opportunities to share their experiences (Breen, 2007). We exercised member checks for juxtaposition and to ensure the accuracy of transcripts (Moustakas, 1994). Following Moustakas' (1994) framework for a transcendental phenomenological study, data were analyzed as information was collected.

Participants

At the time of the study, the California SBAE system boasted 965 SBAE teachers; 454 met the criteria for novice instructors M. Patton, personal communication, 2020). With an accessible population of approximately 450 employed novice secondary SBAE teachers across California accessible through the California Agricultural Teachers' Association database, 10 served as study participants. See Table 1 for demographic data. While Creswell and Creswell (2018) recommended 3 to 10 participants in a phenomenological study, Polkinghorne (1989) indicated that 5 to 25 participants should achieve saturation. Participants were assigned pseudonyms for the purpose of this study.

Table 1*Participants' Characteristics and Teaching Experience*

Name	Age	Gender	Hispanic, Latino, or Spanish origin?	Ethnicity	Education Level	Years Taught	Number of School Sites	Number of Co-Teachers
Sally	23	F	N	White	Masters	1	1	5
Tom	31	M	N	White	Bachelors	5	1	3
Amelia	24	F	Y	White	Bachelors	1	1	2
Mike	47	M	N	White	Bachelors	2	1	4
Leah	28	F	N	White	Bachelors	2	2	2
Anna	24	F	N	White	Bachelors	1	1	6
Natalie	23	F	N	White	Bachelors	1	1	1
Rosa	36	F	Y	2 Races	Bachelors	2	2	2
Lucy	26	F	N	White	Masters	2	1	2
Shane	25	M	N	White	Bachelors	2	1	3

A description of each participant at the time of data collection follows:

Sally - The newest SBAE teacher in a large program, Sally taught agricultural science courses, oversaw the lamb projects, coached the horse judging team, and spearheaded the application process for FFA degrees and proficiencies.

Tom - As a past FFA member who was influenced to teach by family members in the profession, Tom instructed a wide range of agricultural science and leadership courses, varying by year.

Amelia - At the time of data collection, Amelia had recently resigned as an agricultural mechanics teacher and accepted another position teaching agricultural science.

Mike - After working in the agricultural industry for approximately 20 years, Mike capitalized on the opportunity to make a career change and teach students agricultural mechanics.

Leah - Following a short career in the agricultural industry, Leah raised cattle and was soon to be married. Leah also served as the lead FFA advisor, coached the Leadership Development Events, and managed the program's livestock Supervised Agricultural Experiences (SAEs). Leah taught agricultural exploration for middle school and agricultural mechanics for high school.

Anna - During student teaching, Anna questioned her career choice. A long-term substitute teaching job, sandwiched between student teaching and employment at her current site, catalyzed a paradigm shift. After completing her first year of teaching at her alma mater, Anna was excited to continue teaching agriscience.

Natalie - Transitioning from teaching multiple preps to a full-time agricultural mechanics instructor in the coming year as the program grows from one to two teachers, Natalie was encouraged after a challenging first year of adapting her instruction from online to hybrid and then face-to-face during her first-year teaching.

Rosa - After 15 years of foundering at many non-teaching jobs, Rosa changed course, earned her teaching credential, and accepted a position teaching SBAE. Rosa's first and second year of instruction occurred at different high schools as she received a non-reelect assignment at her first site. She was enrolled in a master's program in agricultural education.

Lucy - Married recently, Lucy was getting accustomed to her students calling her by her new last name. She entered the SBAE profession with State FFA Officer experience and surrounded by family members who teach in the profession. She taught agriscience and agribusiness courses.

Shane - Shane taught a gamut of courses, from agriscience to leadership. For the past two years, he served as the lead FFA advisor for his chapter officers as well as the sectional officers.

Data Analysis

We followed the modified van Kaam methodology (Moustakas, 1994) using NVivo software to organize and analyze data. The methodology followed the necessary steps for analyzing transcribed interviews and focus groups: (a) listing and preliminary grouping by logging expressions germane to the experience, (b) reduction and elimination by excluding non-sufficient, overlapping, or vague expressions, (c) clustering and thematizing the invariant constituents using phenomenological reflection and imaginative variation, (d) validation of complete data expressed, (e) individual textural descriptions from invariant horizons and themes to provide the “what” of the each participant’s perception of their experience, (f) individual structural descriptions to provide the “how” of their experience, and (g) textural-structural descriptions of the meaning and essence of the lived experience for each participant (Moustakas, 1994). To achieve these aims, horizontalization was used to catalog each germane significant statement through participants’ experiences. After abstracting and labeling the data, expressions were removed that did not fit the requirement of a unique and sufficient constituent. These 184 invariant constituents (codes) were then clustered into 4 horizons, or themes, and substantiated through comparison to transcripts where imaginative variation was used to purposefully bracket researchers’ personal experiences and viewpoints. Another analysis of transcripts was conducted to ensure the invariant constituents and their associated themes were both explicit and compatible. A thick and rich description of each participant was developed to provide textural and structural descriptions to represent the integration of each participant into each theme.

Trustworthiness

Guba (1981) proposed four criteria which respond to the positivist paradigm and confirm a trustworthy qualitative study. Trustworthiness encapsulates Guba’s constructs of credibility, transferability, dependability, and confirmability in a qualitative study (Shenton, 2004). Provisions in this study included familiarity with the culture of the participants’ organization, guidance from well-established research methods of seminal work, practice of reflective commentary, random sampling, triangulation of data, strategies to foster participant honesty such as sharing the purpose of the study and informing participants they could depart the study if needed, identification of discrepancies from data collection, member checks, input from external sources, and thick descriptions of participants’ lived experiences. As an ontological researchers and human instruments, we bracketed out the experiences and biases with the goal of encountering the phenomenon naively to seek original texture. We practiced reflective commentary by recording our early impressions and constructs and assessed our research throughout the entire process.

Findings

Theme 1: Teacher-teacher interactions and teacher-supporting staff interactions propel or hinder their career

Often referred to colloquially as a family, the SBAE teachers’ connections with each other extend far beyond the traditional professional development experiences and into informal interactions that build bonds unique in education. Participants strongly articulated the meaningful influence of the unstructured collegial experiences in SBAE. Regarding his high school SBAE teacher, Shane expressed that she was a “big mentor for me when I was in high school” as he “saw the work ethic and attitude that she had.” Anna stated her SBAE teacher was the “one that got the rock rolling.” The perspectives of participants also included a heightened focus on the continued support they received from their initial mentors. Lucy explained how her SBAE instructor, “makes sure that I am on that track” and Natalie stated, “I just trust her” and “I can bounce ideas off of her.” Rosa agreed, stating, “I can go to my SBAE teacher.” The

supportive influence of the prior SBAE teachers was consistent across participants and clearly described as being significant. Most participants in our study experienced positive interaction with their cooperating teacher during the practicum and acknowledged maintaining a relationship with their cooperating teacher as a novice SBAE teacher. They sought informational support and, although expressed only once, emotional support.

Contrary to the findings described above is the mixed influence and support provided by fellow SBAE teachers within the participants' departments. Some noted their department's dynamics were helpful and positive while others stated they felt their dynamics were a drain on their overall growth and personal experience in the profession. Sally stated, "Department members are equally supportive and amazing" and Anna explained, "If anything ever happened, they would be there for me." However, Shane shared, "...teachers maybe aren't as supportive within their departments." Lucy described her relationship with her teaching partner as "the hardest part of my job." Referring to her teaching partner's programmatic approach, Leah stated, "She's very much stay in your lane...I'm going to stay in my lane and I'm going to do a really good job and I'm not going to help you." Amelia's comments echoed the sentiment, explaining she, "feels isolated from and intentionally left out of FFA activities at times." External relationships outside the walls of their schools appeared to yield similar patterns of both positive and negative interactions. Of particular positive influence was the interactions and relationships formed with members of their respective cohorts. Shane described it as follows, "They're definitely my biggest support," and Rosa said members of their cohort "talk pretty much every darn day."

Beyond the induction cohort and departmental colleagues, relationships live a much broader field of informal interactions within the profession, including teachers of various ages and years of experience. The varying nature of the people involved in the organization leads to a natural variation in the tone and content of the interactions, based on the findings from participants. Participants expressed significant concerns about the lack of consistency and positivity in those interactions. Both Natalie and Tom explicitly mentioned, "It's not always that family that we claim to be." Lucy described the issue as a result of, "a lot of toxic energy that exists right now" and stated, "Teachers come together and just love to talk about each other." Further study participants confirmed these findings, with expressions such as, "mean girls group" from Tom and "cliques and top dogs" from Natalie. Anna nodded, sharing that while listening to the examples and comments, she had a mental, "flipbook of things that I could just relate to." With a "family" that is a "conditional kind of thing," as described by Rosa, it is clear from the findings the broader relationships found within the SBAE teaching profession are not a clear source of support for beginning SBAE instructors.

There were also positive mentions of the larger SBAE relationships as well, although not mentioned with as much specificity as the concerns. Mike commented, "we talk to each other" and Lucy mentioned, "my wedding was like half ag teachers." Natalie stated she valued the opportunity to, "talk to ag teachers who have been in the game for a long time" and Shane mentioned he receives, "emotional support from my other ag teacher friends." Leah shared, "I have my group of people that I always ask questions" while Rosa lovingly referred to her "community of ag teachers."

Additional support mechanisms woven throughout the SBAE network included normalized resource sharing practices. An informal, cultural practice widely encouraged throughout SBAE is the sharing of resources often between teachers who otherwise may not interact. These resources can take the shape of curriculum, pedagogical exercises, project supervision manuals, or coaching regimens and guides. Regardless of the exact nature of the resource, participants uniformly noted how helpful that practice is in supporting their growth and achievement. Shane stated they, "talk about issues and ways to come up with solutions for them" with his peers and Tom described how a colleague in the profession, "gave me all of her biology curricula." The appreciation for this aspect of the SBAE family was clear among participants.

A key role in SBAE is that of state staff. State staff employed by the California Department of Education toil in SBAE and administer programming and fiscal grant delivery throughout the state. Though they exist in a formal capacity, their influence extends beyond their prescribed duties and can also become an informal source of support for beginning SBAE teachers. Most findings in this category receive support from state staff and were both positive and negative. Tom described how state staff, “give you thousands of bits and pieces of information that are actionable tomorrow in thirty minutes.” Lucy said, “State staff has empowered me.” However, findings also indicated the encouragement of damaging behaviors, both individually and culturally. A perception exists of state staff encouraging members of the profession to overwork by rewarding those who do so. Rosa encapsulated her thoughts in a comment made to teachers by a member of state staff who suggested, “You’re ag teachers and this is what you signed up for.” Interactions with members of state staff can be beneficial to novice teachers but can be harmful to their perceptions of their value and ability to succeed.

Theme 2: SBAE-specific induction program is a consistent support system which provides valuable information, professional connections, and emotional support

New teachers in California, regardless of the subject area, obtain their professional credentials through a locally- and state-approved induction program. Research participants expressed overwhelmingly positive thoughts regarding the mentorship connections made throughout CATIP work. In addition to building a network deemed valuable by multiple respondents, the programmatic elements of CATIP participation allowed for the development of professional skills. Sally described her relationship with their CATIP mentor as “helpful as could be.” Additionally, Amelia said, “observations by CATIP mentor is helpful.” Leah said her CATIP mentor was, “extremely supportive of me and other people.” Further responses articulated the significant value provided by CATIP mentors in coaching participants following the delivery of lessons as well as in navigating department dynamics and other challenging situations faced by novice SBAE instructors. Amelia mentioned, “my CATIP mentor fought for me” and Leah shared she, “brought in her CATIP mentor.” Natalie summed up her perceptions of the support from CATIP mentors, stating “we’re not doing this alone.”

Emotional support, not a typical function of an induction mentor, but a support construct in which participants placed value, was a noted theme expressed by respondents. Amelia described how in her experience her mentor was “there for comments that you need to make just to get it off your chest.” Shane stated that his mentor was consistently, “guiding those conversations that you need to have with your future partners or even with yourself.” Though not a formal role of the CATIP mentor, responses made it clear that several participants appreciated the deviation from typical processes, which allowed them to offer additional support. Overall, the interpersonal elements of CATIP provided a clear benefit to the development of the participants in this study.

Further positive comments focused on the useful application of those mentorship interactions. Natalie explained how her CATIP mentor, “showed me the website and the curriculum resources,” while Sally said her mentor, “offered tips for State Degrees.” Amelia shared her CATIP mentor’s school transitioned to hybrid learning before she received permission to do so and he “shared his experience” with her. Mike, who received special permission to use an SBAE teacher from his department as his CATIP mentor, shared, “I talk to Jim mostly, here.” Only one participant, Anna, described a lack of mentorship from her CATIP mentor but took full responsibility for not more thoroughly vetting her proposed mentor. As such, we recommend novice SBAE teachers receive protocols to vet potential CATIP mentors. Respondents mentioned concern about the workload of CATIP, with Shane explaining how CATIP was, “sometimes a little much for a novice teacher” and Sally describing the program’s activities by saying, “sometimes you feel like you’re jumping through hoops.” However, the number of expressions critical of the program were minimal and the vast majority of statements articulated a clear appreciation for the offerings of CATIP.

Theme 3: California Agricultural Teachers' Association offers dynamic professional development, yet some leaders and members lack professional communication and responsibility

Each participant described their experiences with the formal and informal support mechanisms offered through participation in the California Agricultural Teachers Association (CATA). These included specific events as well as interfacing with the structural components of and resources available through the professional organization. As a statewide entity in which expects all SBAE teaches to participate, the influence of CATA permeates many elements of their life. Participants reported a variety of experiences with the organization, ranging from confusing to helpful and positive to negative.

Upon initial interface with the organization, participants recognized the unique value of CATA. Rosa explained, “our own CATA and our group of ag teachers is the only thing that I hear that's consistent across the board.” Participants also described difficulty understanding the myriad structural components of the organization. Sally described the pressure and excitement of being possibly involved in the organization coupled with the challenge of understanding how to do so, saying, “...and even if you want to try to branch out and get involved at those higher levels, you don't really know ...what you would be doing or how to do it.” Similarly, Leah mentioned, “everything at the state level kind of scares me.” Notably, participants described an overwhelming mixture of emotions when describing their initial experiences with the organization.

Immediately upon joining in the organization's events, participants described finding discernable value in the professional development offerings. After participating in the New Professionals Institute for teachers in their first through third years of teaching, Shane said: “...I think it really is a very strong support in terms of helping novice teachers become a little bit more confident, a little bit more passionate even, and... get those connections so that we stay in the profession.” Additionally, Tom mentioned, “...it was a breath of fresh air,” referring to the opportunity to attend a professional development conference with other new teachers a few months after the beginning of the school year.

The organization's professional development opportunities extended to Mentoring Mini-Sessions this year, which participants also described as being tightly focused and topically useful. Anna offered, “They're short and sweet, but what is in there is so informational.” Even with her resistance to Zoom meetings, Natalie said “...get the important information and take the notes on it.” Tom appreciates the virtual setting, stating “Yes, they were online, but I thought that the virtual ability gave me access to teachers all around the world.” Regardless of the mode of delivery, participants valued the informational support, aligning with their responses on the questionnaire.

The annual CATA Summer Conference, attended by over 800 SBAE instructors, proved to be a challenging mixture of experiences for study participants. While it was mentioned by Tom that, “...they get to make mistakes in a safe environment where their administrator doesn't have to be there” and Shane said, “I think that the overall purpose is definitely positive”, there were also several other responses who described the conference in an unfavorable light. Amelia explained, “there was a big disconnect for me to learn new things as a new teacher” and Lucy simply stated, “I don't know what a division meeting is...I have no clue” regarding how well they were able to navigate the offerings of the large conference.

Lucy and Leah noted the tenor of normalized communication at CATA events left them concerned about the professionalism of the organization. Lucy explained, “It's surprising how people talk to each other in these meetings. I think new teachers are shocked and taken aback that that's how our profession interacts with each other.” Leah agreed, stating that it can be a “toxic organization.” Lucy continued, “I've never walked away from a CATA meeting thinking, oh, I love all those people or, oh, I had so much fun.” It is important to note that Lucy and Leah are from the same region.

Strong connections resulted from the communication norms to the way CATA events statewide conducts business. With a diffused structure designed to empower teachers locally to lead within their counties or geographical sections, there is an associated need to identify leaders to hold offices and positions of authority to help guide the organization. Some participants spoke positively about leaders in their respective areas. Amelia stated, “the regional president...she always sends updates, keeping us informed whether we’re new or veteran teachers” and Lucy described the influence of an effective area leader by saying they were effective at, “showing me the ropes, how things work, especially in our section CATA.” Other observations were less enthusiastic in their endorsement, with several observations focusing on the degree of organizational responsibility seemingly foisted upon new teachers. Leah stated, “In my section, I’m the adviser because nobody else would do it.” Shane explained he was told, “I did that when I was a young teacher and I’m done with that” as well as “You’re the youngest teacher... you’re taking it” concerning a number of additional organizational leadership responsibilities. Tom added the situation, “makes me kind of sad about CATA when I see it. We’re a professional organization, we should have each other’s back and instead, it’s us versus them situation.”

Theme 4: Novice SBAE teachers actively seek to improve balance while finding success in a profession they love

The theme of work-life balance continued to emerge when examining the compiled findings. Though many findings in this area overlap with different themes, the strength of the expressions necessitated the distinction of this area as an independent theme. Due to the SBAE three-circle model, an SBAE teacher typically has responsibilities and duties far beyond those of a traditional classroom instructor. Thus, time management and balance can become priorities for young teachers who seek longevity in this profession.

Burnout and the work-life balance quandary emerged as challenges occupying the thoughts of research participants, particularly regarding what they view as cultural messaging within the profession. Rosa described this message further, sharing the mentality, “...that’s the profession, sometimes it sucks...pull up your bootstraps and let’s go... otherwise, you’re not made for it.” but “I don’t plan on leaving this because I love this.” Reinforcing these direct statements, broader cultural messages reflected a perception of success being achievable only by teetering on the edge of burnout. Rosa stated leaders in the profession, “are encouraging burnout” and only offer “gratitude for killing yourself.” Thanks to a “fear of letting people down,” Lucy strove to achieve but already experienced burnout. SBAE teachers who mentor Lucy related concerns that she is “burned out” because she is, “trying to keep up with my teaching partner’s agenda.” Candidly, Lucy shared one of her mentors, “doesn’t want me to overcommit right now and set myself up for three-five years when I have a family... to be stuck in that situation.” Natalie’s simple statement of, “it’s been a lot” coupled with her sigh of resignation was worth a thousand words. Shane and Leah used the adjective “chaotic” to describe their overall teaching experience. Shane also referred to his experience as a “rollercoaster ride” while Mike humbly stated, “There’s definitely days that are harder than others.”

These patterns were at odds with the desire for balance expressed by research participants. Rosa said optimistically, “My generation is pulling more towards a little more balance.” Lucy described a desire to not, “feel guilty about not having the state champion team, even though I do practice with my kids all the time” and not, “feel guilty for missing a field day.” They saw a generation of more seasoned professionals and Rosa asked, “Where is my personal life going to fit?” Lucy inquired as to, “how people who have families and kids do this.” Anticipating her teaching partner getting married and starting a family in the next few years, Rosa stated, “more of the work falls on me,” indicating a desire for equity in distributing responsibilities so all members of a department can experience work-life balance. Lucy

recognized how longevity in this profession requires a balance, stating, “I am for kids, and I need to figure out how to set boundaries that won't make me want to quit my job.”

There was broad concern about unreasonable expectations placed on novice teachers both within departments and in the larger profession. In multi-person departments, the capacity to share tasks and differentiate responsibilities based on capacity and expertise exists but not put into practice. Shane stated that even though they are young compared to their colleagues, “I feel like I'm running our program” and explained, “everything gets put on the younger teacher.” They told Shane, “You're the youngest teacher... you're taking it” even though there are more critical needs for the use of his time.

Reflecting on participants' comments in a focus group, Leah discussed the need to encourage work-life balance by celebrating interests and accomplishments outside of SBAE. Leah utilized social media to proudly share she, “PR'd my work out by forty-five pounds” and then received encouragement and from her colleagues. Sally proposed an idea to create a “social media group for our teachers that want to talk about stuff not related to work...make connections...celebrate each other out of school.” Anna agree with, “I don't want to talk about something that I do every single day because, with teaching, you really can't get away from a lot of things.”

Conclusions, Implications, and Recommendations

Participants credited their SBAE teacher as an influence on their choice of a career in SBAE and identified their continuing support in their early careers. Corroborating findings from prior studies (Clemons & Linder, 2019; Ingram et al., 2018; Solomonson et al., 2019) is the influence and effect of the participant's SBAE teacher in guiding them toward this career area, as well as supporting them during their time in the profession. Frost and Rayfield (2020) determined that although the relationship and support received from cooperating teachers affected the practicum, it did not influence the student teacher's decision to enter the profession. Participants describe a variety of support from other fellow SBAE teachers. However, these relationships were multi-faceted with some negative interactions described between colleagues. The connectivity between SBAE teachers catalyzed as well as manifested in social support constructs, endorsing Clemons and Linder's (2019) emphasis on friendship and collaboration. Connectivity appeared to go hand-in-hand with emotional and informational support as the nature of expressions indicated specific benefits the larger SBAE family can, in fact, provide to younger teachers, though there was a consistent desire to see changes in the broader organization's norms as well.

Expressions encapsulated beneficial and efficacious as well as cynical and uncooperative interactions with other SBAE teachers and leaders. Recognizing friendships and collaboration influence longevity in the profession (Clemons & Linder, 2019) and connectedness associated with self-efficacy (Langley et al., 2014), SBAE teachers should assess the culture of the group and determine practices that foster social support, collaboration, and healthy relationships. Participants recognized the plethora of informational support. Based on an individual's background, years of experience, or connections, participants experienced emotional support, which House (1981) suggested was the most important type of support, from some while enduring opposite treatment from others. Consequently, SBAE teachers need to consider the conditions in which they provide emotional support to colleagues and determine how to implement profound changes to normalize emotional support in the profession. Teacher educators were essentially not sought out, nor did they provide social support once participants entered the profession. As such, teacher educators should consider how to bolster the undergraduate experience, augment the transition to the profession, and open channels for continued communication succeeding graduation from the teaching credential program.

The SBAE model endorses competition with activities such as Career Development Events and Leadership Development Events as well as award application processes. This competitive aspect of the three-element SBAE model can be a double-edged sword, promoting a prolific work ethic, advanced

learning, team comradery, and healthy competitions for students or reveal a murkier experience where mindsets and behaviors from teachers and students, alike, become unhealthy, unfriendly, and undesirable. It can also negatively affect social support amongst SBAE teachers. Recognizing that friendships and collaboration impact longevity in the profession (Clemons & Linder, 2019) and connectedness is associated with self-efficacy (Langley et al., 2014), agricultural teachers who comprise the often-called, but arguably sometimes illusionary agricultural education *family* must assess the culture of the group and determine practices that foster social support, collaboration, and healthy relationships. Therefore, it becomes crucial for members of the SBAE *family* to find common ground by revisiting the primary reason they choose the profession, the students.

Overall, participants expressed useful and productive participation in the CATIP program and strong rapport with the mentors. Expressions from the majority of participants indicated they received informational support from their CATIP mentors. Of significance, several participants also perceived experiences of instrumental, emotional, and appraisal support. Foor and Cano (2012) reported mentor teachers were sometimes hesitant to form emotional bonds with novice teachers. Considering House (1981) postulated how emotional support was the most important of the social support constructs, fortunately, the findings from our study indicated emotional support was, in fact, provided by at least some CATIP mentors. As CATIP was overwhelmingly the primary source of appraisal support, not all participants perceived receiving this type of support from the program or their mentor. CATIP directors should examine the inconsistencies and work towards a more uniform appraisal support delivery system. Expectation congruency led to productive relationships between participants and CATIP mentors (Tummons et al., 2016). Expectedly, poor communication and ill expectation congruency led to negative feelings and a lack of perceived support from the CATIP mentor. As CATIP was overwhelmingly the primary source of appraisal support yet not all participants perceived receiving this type of support from the program or their mentor, CATIP directors should examine the inconsistencies and work towards a more uniform appraisal support delivery system. Additionally, based on a participant's negative experience with her mentor, it is recommended that novice agricultural teachers are provided protocol to vet potential mentors.

The overall impression of CATA was a mixed bag of experiences. Concerns expressed by study participants about the organizational business processes of CATA in addition to a lack of professional communication and responsibility of some CATA leaders and members countered the otherwise strong association.

Concurring with empirical literature (Easterly & Myers, 2019; DiBenedetto et al., 2018; Smalley et al., 2019; Yopp et al., 2020), our participants found professional development offerings to be useful. Smalley et al. (2019) acknowledged how professional development should be "correct for the audience" (p. 93). The findings from this theme indicate that professional development topics were germane to the profession, providing informational and even emotional support to participants, but support Rayfield et al.'s (2014) recommendation to also provide training and resources centered around developing and facilitating relationships with the administration as well as parents. Most importantly, CATA should consider shifting the messaging from leaders in the SBAE field. Members at the sectional level of CATA should consider the consequences of offloading leadership roles to novice SBAE teachers, disengaging instructors from curricular and pedagogical development. As the younger generation of SBAE teachers strive to provide effective instruction in the classroom, they seek more work-life balance in the three-ring SBAE model. This creates an imperative for redefining success and reprioritizing elements of a quality educational experience. As novice SBAE teachers value support, CATA should consider facilitating a workshop for veteran teachers on how to provide social support to new members in the profession.

At the core of the desire for balance is a clear need to have longevity in the profession. Participants unequivocally expressed love and passion for the work and a desire to stay in SBAE for the long run. Corroborating Solomonson et al.'s (2019) findings that altruism plays a role in an individual's decision to

teach SBAE, Rosa described her jobs as, participants described the profession as personally rewarding. However, the conflict of balancing work responsibilities and other elements of one's life is a concern clearly expressed by the young professionals who participated in this study. Traini et al. (2019) conveyed how novice SBAE teachers believed they could demonstrate balance or success, but the combination of the two they viewed as unattainable. Striving to obtain a work-life balance, teachers experienced guilt, judgment, fear, and pressure. Comparably, Solomonson et al. (2019) identified the issue of balance as one of the factors causing SBAE teachers to depart the profession. The findings from this study contradict Blackburn et al.'s (2017) and Sorensen and McKim's (2014) findings as participants actively sought balance but expressed concerns about burning out. Additional research should be conducted in the relationship between state staff expectations and perceived expectations on novice SBAE teachers' work-life balance and self-efficacy.

As the next generation of SBAE teachers strive to provide excellent instruction and assessments in the classroom yet seek more work-life balance in the three-circle agricultural education model, it is imperative that we redefine success and reprioritize elements of a quality educational experience. As novice SBAE teachers value support, CATA should consider facilitating a workshop for veteran teachers on how to provide social support to new members in the profession.

Future research should include novice SBAE teachers beyond California. A quantitative or mixed-method study is a potential vehicle to survey social support questions to an accessible audience of SBAE teachers. The causes of attrition for California SBAE teachers, novice or otherwise, should be qualitatively explored. Additionally, considering participants our study viewed the SBAE family with mixed experiences and reactions to constructs of social support, researchers and SBAE leaders would gain a stronger grasp of the culture and norms of California's SBAE system if researchers quantitatively examined or qualitatively explored the experiences and/or perceptions of SBAE teachers in California, regardless of years of experience.

References

- Blackburn, J. J., Bunch, J. C., & Haynes, J. C. (2017). Assessing the relationship of teacher self-efficacy, job satisfaction, and perception of work-life balance of Louisiana agriculture teachers. *Journal of Agricultural Education*, 58(1), 14-35. <https://files.eric.ed.gov/fulltext/EJ1138978.pdf>
- Breen, R. L. (2006). A Practical guide to focus-group research. *Journal of Geography in Higher Education*, 30(3), 463-475. <https://doi.org/10.1080/03098260600927575>
- California Agricultural Education. (2020, September 5). https://myemail.constantcontact.com/Golden-Slate-Newsletter---September-2020.html?soid=1124095538556&aid=p_RSbrhnhTo
- California Agricultural Education. (2021, February 15). <https://myemail.constantcontact.com/Golden-Slate-Newsletter--Sacramento-Scene---CDE-Updates---Keeping-Faith---MJC-Legacy---Reopening-Campuses---5k-for-FFA.html?soid=1124095538556&aid=b34yXyEdRbU>
- Caspersen, J., & Raaen, F. D. (2013). Novice teachers and how they cope. *Teachers and Teaching: Theory and Practice*, 1-23. <https://doi.org/10.1080/13540602.2013.848570>
- Clemons, C.A., & Lindner, J. R. (2019). Teacher longevity and career satisfaction in the secondary agricultural education classroom. *Journal of Agricultural Education*, 60(1), 186-201. <https://doi.org/10.5032/jae.2019.01186>

- Cobb, S. (1976). Social support as a moderator of life stress. *Psychometric Medicine*, 38(5), 300-314. <https://doi.org/10.1097/00006842-197609000-00003>
- Cohen, S., & McKay, G. (1984). Social support, stress, and the buffering hypothesis. A theoretical analysis. In A. Baum, J. E. Singer, & S.E. Taylor (Eds), *Handbook of psychology and health*, 4, p. 253-267. Lawrence Erlbaum Associates, Inc.
- Cohen, S., & Syme, S. L. (1985). Issues in the study and application of social support. In S. Cohen & S. L. Syme (Eds.), *Social support, and health* (pp. 3-22). Academic.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications, Inc.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry& research design: Choosing among five approaches* (4th edition). Sage Publications, Inc.
- Dempsey, H., MacCallum, J., & Mansfield, C. F. (2021). Early career casual teachers: The role of relationships with colleagues in negotiating a teacher identity and developing resilience. In C. F. Mansfield (Ed.), *Cultivating Teacher Resilience*. Springer. https://doi.org/10.1007/978-981-15-5963-1_13
- DiBenedetto, C. A., Willis, V. C., & Barrick, R. K. (2018). Needs assessment for school-based agricultural education teachers: A review of the literature. *Journal of Agricultural Education*, 59(4), 52-71. <https://doi.org/10.5032/jae.2018.04052>
- Easterly, R. G. T., & Myers, B. E. (2019). Professional development engagement and career satisfaction of agriscience teachers. *Journal of Agricultural Education*, 60(2), 69-84. <https://doi.org/10.5032/jae.2019.02069>
- Easterly, R. G., & Simpson, K. (2020). An examination of the curricular resource use and self-efficacy of Utah-based agricultural education teachers: An exploratory study. *Journal of Agricultural Education*, 61(4), 30-45. <https://doi.org/10.5032/jae.2020.04035>
- Eck, C., & Edwards, C. (2019). Teacher shortage in school-based agricultural education (SBAE): A historical review. *Journal of Agricultural Education*, 60(4), 223-239. <https://doi.org/10.5032/jae.2019.04223>
- Eddles-Hirsch, K. (2015). Phenomenology and educational research. *International Journal of Advanced Research*, 3(8), 251-260. <https://doi.org/10.1093/obo/9780199756810-0042>
- Ferand, N. K., Thoron, A. C., & Myers, B. (2020). The relationship to prior FFA membership on perceived ability to manage an FFA chapter. *Journal of Agricultural Education*, 61(2), 162-172. <https://doi.org/10.5032/jae.2020.02162>
- Foor, R. M., & Cano, J. (2012). Mentoring abilities and beliefs of Ohio secondary agricultural education mentor teachers. *Journal of Agricultural Education*, 53(1), 162-175. <https://doi.org/10.5032/jae.2012.01162>
- Foster, D. D., Lawver, R. G., & Smith, A. R. (2020). *National agricultural education supply and demand study, 2019 executive summary*. <http://aaaeonline.org/Resources/Documents/NSD2019Summary.pdf>

- Foster, D. D., Lawver, R. G., & Smith, A. R. (2022). *California agriculture teacher supply and demand profile*. https://nsd.aaaeonline.org/State_at_a_Glance_select.aspx
- Franklin, E. A., & Molina, Q. F. (2012). Teacher induction programs in agricultural education: Description of the role of AAAE higher education teacher preparation programs. *Journal of Agricultural Education*, 53(1), 123-135. <https://doi.org/10.5032/jae.2012.01123>
- Frost, K. J., & Rayfield, J. (2020). Decision to enter the classroom as an agriculture teacher: An exploratory qualitative investigation. *Journal of Agricultural Education*, 61(1), 247-261. <https://doi.org/10.5032/jae.2020.01247>
- Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research* (8th edition). Allyn and Bacon.
- Gore, S. (1981). Stress-buffering functions of social supporters: An appraisal and clarification of research methods. In B. S. Dohrenwend & B.P. Dohrenwend (Eds), *Stressful life events and their contexts* (p. 202-222). Prodist.
- Gourneau, B. (2014). Challenges in the first year of teaching: Lessons learned in an elementary education resident teacher program. *Contemporary Issues in Education Research*, 7(4), 299-318. <https://doi.org/10.19030/cier.v7i4.8844>
- Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal*, 29, 75-91. <https://doi.org/10.1007/bf02766777>
- Hasselquist, L., Herndon, K., & Kitchel, T. (2017). School culture's influence on beginning agriculture teachers' job satisfaction and teacher self-efficacy. *Journal of Agricultural Education*, 58(1), 267-279. <https://doi.org/10.5032/jae.2017.01267>
- House, J. S. (1981). *Work stress and social support*. Addison-Wesley Publishing Company, Inc.
- Ingersoll, R. (2012, May). Beginning teacher induction: What the data tell us. *Phi Delta Kappa International*, 93(8), 47-51. https://repository.upenn.edu/gse_pubs/234/
- Ingram, M., Sorenson, T., Warnick, B. K., & Lawver, R. G. (2018). The influence of school-based agricultural education on preservice agricultural teachers' choice to teach. *Journal of Agricultural Education*, 59(2), 64-78. <https://doi.org/10.5032/jae.2018.02064>
- Kantrovich, A. J. (2010). A national study of the supply and demand for teachers of agricultural education from 2007-2009. *American Association for Agricultural Education*. <https://www.naae.org/teachag/2010%20AAAE%20Supply%20Demand%20Study.pdf>
- Korte, D. S., & Simonsen, J. C. (2018). Influence of social support on teacher self-efficacy in novice agricultural education teachers. *Journal of Agricultural Education*, 59(3), 100-123. <https://doi.org/10.32469/10355/61946>
- Langley, G. C., Martin, M., & Kitchel, T. (2014). Novice agriculture teachers' general self-efficacy and sense of community connectedness. *Journal of Agricultural Education*, 55(4), 1-11. <https://doi.org/10.5032/jae.2014.04001>

- Lemons, L.L, Brashears, T. M., Burris, S., Meyers, C. & Price, M. A. (2015). Factors contributing to attrition as reported by leavers of secondary agriculture programs. *Journal of Agricultural Education*, 56(4), 17-30. <https://doi.org/10.5032/jae.2015.04017>
- Moore, L. L., & Swan, B. G. (2008). Developing best practices of teacher induction. *Journal of Agricultural Education*, 49(4), 60-71. <https://doi.org/10.5032/jae.2008.04060>
- Moustakas, C. (1994). *Phenomenological research methods*. SAGE Publications, Inc.
- Nias, J. (2005). Why teachers need their colleagues: A developmental perspective. In D. Hopkins (Ed.), *The practice and theory of school improvement*. Springer. https://doi.org/10.1007/1-4020-4452-6_12
- Patton, M. (2015). *Qualitative research & evaluation methods* (4th ed.). SAGE Publications, Inc.
- Polkinghorne, D. E. (1989). In R. S. Valle & S. Halling (Eds.), *Existential-phenomenological perspectives in psychology* (pp. 41-60). Plenum Press.
- Rayfield, J., McKim, B., Smith, K., Lawrence, S., & Stair, K. (2014). Developing attitudinal metrics for induction-year agricultural education teachers. *Journal of Agricultural Education*, 55(1), 38-50. <https://doi.org/10.5032/jae.2014.01038>
- Renbarger, R., & Davis, B. K. (2019). Mentors, self-efficacy, or professional development: Which mediate job satisfaction for new teachers? A regression examination. *Journal of Teacher Education and Educators*, 8(1), 21-34. <https://eric.ed.gov/?id=EJ1214939>
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22(2), 63-75. <https://doi.org/10.3233/efi-2004-22201>
- Smalley, S., Hainline, M.S., & Sands, K. (2019). School-based agricultural education teachers' perceived professional development needs associated with teaching, classroom management, and technical agriculture. *Journal of Agricultural Education*, 60(2), 85-98. <https://doi.org/10.5032/jae.2019.02085>
- Smith, A. R., Lawver, R. G., & Foster, D. D. (2019). *National Agricultural Education Supply and Demand Study, 2018 executive summary*. <http://aaaeonline.org/Teacher-Supply-and-Demand>
- Solomonson, J. K., & Retallick, M. S. (2018). Over the edge: Factors nudging mid-career, school-based agriculture teachers out of the profession. *Journal of Agricultural Education*, 59(4), 1-19. <https://doi.org/10.5032/jae.2018.04001>
- Solomonson, J. K., Thieman, E. B., Korte, D. S., & Retallick, M.S. (2019). Why do they leave and where do they go? A qualitative study of Illinois school-based agriculture teachers who left the profession. *Journal of Agricultural Education*, 60(4), 115-131. <https://doi.org/10.5032/jae.2019.04115>
- Sorensen, T. J., McKim, A. J., & Valez, J. J. (2016). Why agriculture teachers leave: A national examination of turnover intentions and work-family conflict. *Journal of Agricultural Education*, 57(4), 186 – 201. <https://doi.org/10.5032/jae.2016.04186>

- Sorensen, T. J., McKim, A. J. (2014). Perceived work-life balance ability, job satisfaction, and professional commitment among agriculture teachers. *Journal of Agricultural Education*, 55(4), 116-132. <https://doi.org/10.5032/jae/2014.04116>
- Stripling, C. T., & Ricketts, J. C. (2016). Research priority 3: Sufficient scientific and professional workforce that addresses the challenges of the 21st century. In T.G. Roberts, A. Harder, & M. T. Brashears (Eds.), *American Association for Agricultural Education National Research Agenda: 2016-2020* (pp. 29-35) Gainesville, FL: Department of Agricultural Education and Communication. <http://www.aaaeonline.org/resources/Documents/AAAE%20National%20Research%20Agenda.pdf>
- Sutherland, S. S., & Burlingham, H. H. (1982). A history of agricultural education in California secondary schools. https://www.calaged.org/sites/default/files/apb/special-list/A%20History%20of%20Ag%20Education%20in%20Secondary%20Schools_21691.pdf
- Tardy, C. H. (1985). Social support measurement. *American Journal of Community Psychology*, 13, 187-202. <https://onlinelibrary.wiley.com/journal/15732770>
- Thorton, K., Easterly, R. G., & Simpson, K. (2020). Curricular resource use and the relationship with teacher self-efficacy among New Mexico school-based agricultural education teachers. *Journal of Agricultural Education*, 61(4), 343-357. <https://doi.org/10.5032/jae.2020.04343>
- Traini, H. W., Clafin, K., Stewart, J. & Velez, J.J. (2019). Success, balance, but never both: Exploring reified forms of success in school-based agricultural education. *Journal of Agricultural Education*, 60(4), 240-254. <https://doi.org/10.5032/jae.2019.04240>
- Tummons, J., Kitchel, T., & Garton, B. (2016). Expectation congruency and psychosocial support in formal agriculture teacher mentoring relationships. *Journal of Agricultural Education*, 57(4), 68-85. <https://doi.org/10.5032/jae.2008.04060>
- Warsame, K. & Valles, J. (2018). An analysis of effective support structures for novice teachers. *Journal of Teacher Education and Educators*, 7(1), 17-42. <http://jtee.org/>
- Yopp, A. Edgar, D., & Croom, D. (2020). Technical in-service needs of agriculture teachers in Georgia by career pathway. *Journal of Agricultural Education*, 61(2), 109. <https://doi.org/10.5032/jae.2020.02001>
- Zimet, G. D., Dahlem, N. W., Zimet, S. G. & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52(1), 30-41. https://doi.org/10.1207/s15327752jpa5201_2