Examining How Principals Support School-Based Agricultural Education Programs

Abstract

Principals have traditionally served as the instructional leader in a school, significantly impacting school culture and effectiveness. Despite this importance, little work has been conducted to examine how administrators view and impact school-based agricultural education programs. The purpose of this qualitative study was to examine how the leadership practices of principals support the culture of exemplary school-based agricultural education programs in Florida. Semi-structured interviews were conducted with five principals who supported SBAE teachers in exemplary programs in Florida. Thematic analysis of the transcripts yielded several emergent themes. The principals relayed value in agricultural education and found that school-based agricultural education programs helped meet their school's overall goals. The principals saw their role as helping the teacher find ways to grow without micromanaging their work. The principals expressed interest in the prospect of professional development to help them support agriculture teachers in their programs. Based on these findings, the authors recommend state and national agricultural education leaders implement professional development opportunities for teachers and principals so they can work in concert to find areas where their goals intersect and focus on strengthening those areas. A model for examining principal support in SBAE is presented based on the findings.

Keywords: principal; professional development; teacher support; supervision

Introduction

Principals are the primary instructional leader in a school, who provide authority, autonomy, and leadership at the K-12 educational level and execute the policies established at the district level (National Association of Elementary School Principals, 2020; Phipps et al., 2008). Typically, the most important goal is the health and safety of the students in the school, once that goal has been met, the focus shifts to operating a positive and healthy learning environment for their students (Bredeson & Johansson, 2000; Phipps et al., 2008). To accomplish this, principals must coalesce the staff of the school towards that common goal. This can be a complex and challenging job to manage. Principals who do this effectively create a positive school culture and empower their teachers to be effective so can have a meaningful impact on students (DuFour & Berkey, 1995).

Creating this environment is a balancing act of structural, political, symbolic, and human elements (Bolman & Deal, 1997). Structurally, principals enforce rules and policies while moving the school towards specific goals. The political sphere requires principals to navigate power and conflict while also advocating for their staff and students (Bolman & Deal, 1997). The human resource frame of a principals' job requires attention to needs, feelings, and relationships, while the symbolic aspect is where principals can inspire and motive as school leaders. As faculty growth is connected to student development, principals can serve as change agents, knowledge brokers, and culture makers by encouraging their teachers to continually strive for improvement (Bredeson & Johansson, 2000; Tilford, 2007).

The principal and teacher relationship has been especially crucial in school-based agricultural education (SBAE) due to the dynamic structure of the total program. The demand of resources including specialized facilities such as greenhouses or barns, as well as specific professional development

opportunities to run and maintain such operations are a draw on the school budget. Additional demands are caused by teachers spending time away from the school with Supervised Agricultural Experience (SAE) visits or FFA Career Development Events (CDEs) (Phipps et al., 2008). SBAE teachers are encouraged to foster this relationship by involving the principal in aspects of the program and make sure their program fits into the goals of the school. However, the responsibility of this relationship does not solely rest with the SBAE teacher. While principal leadership practices have been a subject of consideration in the literature (e.g., Parker, 2015), the nuances of how principals support SBAE programs and foster this relationship effectively has not been explored in the literature. The purpose of this study is to examine how the leadership practices of principals support the culture of exemplary SBAE programs in Florida.

Literature Review

The body of literature related to administrators and school-based agricultural education has been sparse in recent years, with much of the research conducted in the 1980s to early 2000s (e. g. Foster et al., 1995; Foster & Riensenberg, 1985; Joerger, 2003; Kalme & Dyer, 2000; Kelsey, 2006; Martin et al., 1986; Martin & Howell, 1983; Thobega & Miller, 2003; Thompson, 2001). The earliest studies of the 1980s and 1990s almost entirely compared views of agriscience teachers and their principals on a variety of subjects such as elements of high-quality programs, the importance of instructional areas, communication, and support (Foster et al., 1995; Foster & Riensenberg, 1985; Martin et al., 1986). While these studies provided some initial insight, further research is needed to examine the relationship between agriculture teachers and the principals who supervise them.

The relationship between administrator and teacher remains a vital aspect of the school and plays an essential role in any SBAE program's success (Phipps et al., 2008). Administrators have unique philosophies of what embodies effective practices in education (Phipps et al., 2008), regardless of the principals' or superintendents' familiarity with SBAE. Philosophies of effective teaching practices can also be reflected in administrators' supervision style. Supervision style is critical in influencing teacher behaviors and thus impacting student performance (Nolan, 1997). While there are several different styles, the collaborative supervision where "the supervisor and the teacher share decision making about future improvement" (Thobega & Miller, 2003, p. 57) has been noted as the most effective for administrators when working with teachers (Glickman, 1990).

Relationships with, and percieved support from, school administrators are instrumental in teachers' job satisfaction (Hasselquist et al., 2017). The style in which adminsitrators choose to interact with the their teacher provides an additional level of intricacy to this relationship. Thobega and Miller (2003) explored the extent to which supervision experiences were related to agriscience teachers' job satisfaction. Administrator observation and guidance were found to have had a low, positive correlation to teacher job satisfaction. Teachers who received collaborative supervision were found to have significantly higher job satisfaction despite teachers most frequently reported they received directive informational supervision (Thobega & Miller, 2003). Thobega and Miller recommended a collaborative supervisory approach for administrators who work with SBAE teachers, in line with Glickman (1990) who indicated that collaborative supervision is most effective with teachers.

Similarly, Paulsen and Martin (2013) examined agriscience teachers' perceptions of the importance of supervisory practices. Teachers reported that principals' availability for discussion and feedback, similar to Glickman's (1990) idea of collaborative supervision, was vital for them to feel validation. Coaching, professionalism, and a visible presence was also acknowledged as essential practices for principals. Additionally, most teachers indicated that supervisors should provide the

teacher with resources and time to improve educational practice and show interest in the teacher's professional growth (Paulsen & Martin, 2013).

Several studies have reviewed supervision and administrators' views through the lens of gender (Kelsey, 2007; Paulsen & Martin, 2013; Robinson & Baker, 2013). Paulsen and Martin observed differences in the perceptions towards supervision between male and female teachers. Female teachers perceived more importance for dialogue between the teacher and the administrator in terms of supervision. In contrast, male teachers displayed less desire for feedback, encouragement, and recognition (Paulsen & Martin, 2013). The experiences of female agriscience teachers concerning interactions with administrators have also been regarded as unique. Kelsey (2006) sought to examine female underrepresentation in SBAE as related to teacher attrition. Administrators were noted by the author as primary gatekeepers for agriculture educators, whether that be current teachers or those attempting to enter the field. During the hiring process, principals' gender-biases were barriers for agriscience teachers wishing to enter the field (Kelsey, 2006). In contrast, Robinson and Baker sought to determine which school principals most valued human capital factors related to their decision to interview candidates. It was found that the gender of potential agriscience teacher candidates had no bearing on the principals' decision to interview them. However, the candidates' academic rigor including GPA, coursework, and academic recognition was the most critical factor (Robinson & Baker, 2013).

Agriscience teachers' impressions of principals have been an additional line of inquiry (Joerger, 2003; Kelsey, 2006; Paulsen & Martin, 2013; Thobega & Miller, 2003). Joerger (2003) studied the nature and impact of selected teaching events experienced by beginning agricultural education teachers. Support from principals was one of the most impactful experiences a beginning agriscience teacher can have. Further, unclear expectations and being unsure of school policies were also noted as impactful to the experience of first year teachers (Joerger, 2003). Barriers, such as having adequate funds, were also an area of concern for the beginning teachers. Funding was noted as an area of need for teacher professional development as perceived by school administrators in Cannon et al. (2013).

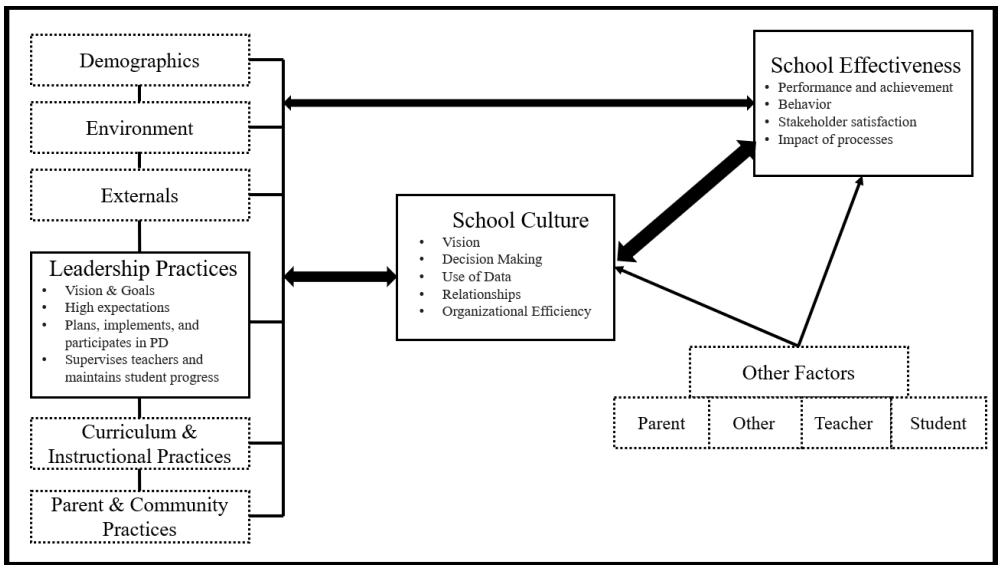
Theoretical Framework and Conceptual Model

This study was guided by the Parker theory of school effectiveness (2015). According to Parker (2015), a principal's leadership practices directly impact school culture, and thus impact the school's effectiveness. School effectiveness is defined as "meeting required state and federal accountability measures, student achievement in reading and math, and stakeholder perceptions" (Parker, 2015, p. 29). The theory of school effectiveness draws from relationships among several variables including demographics, environment, curriculum and instructional practices, and parent and community practices. Within the theory of school effectiveness, the principal's actions mold and influence all areas of the school in a multidimensional and interactive role. Several factors were identified by Parker related to leadership practices including establishing and maintaining a vision for the school, maintaining high expectations, guiding professional growth, monitoring the effectiveness of teachers and progress of students, being involved in community outreach, and providing resources so the school can operate. School culture is influenced by many factors such as administrative leadership, student and teacher characteristics, curriculum and instructional practices, and the community in which the school is situated (Parker, 2015). Administrative leadership on a campus will influence school culture, and thus teachers who will, in return, impact administrative leadership (Parker, 2015). "It is through the school culture that the principal does [their] work" (Parker, 2015, p. 29) with the principal's views and perceptions of the school, their teachers, and the overall school environment impacting the work of the teachers in the school.

In the model of school effectiveness (see Figure 1), school culture is placed in the center of the model to illustrate school culture as the "heart" of the school (Parker, 2015, p. 29). School culture has a reciprocal effect with leadership on overall school effectiveness (Parker, 2015). The principal's decisions, beliefs, and actions influence all the elements of a school. As a school's ultimate end-user is the student, a principal's actions and school culture thus impact student outcomes. Student outcomes, such as achievement, graduation, and post-secondary activities, then influence a principal's decisions and make an overall feedback loop (Parker, 2015).

Figure 1

Adapted Model of Parker's (2015) Theory of School Effectiveness



The views and perceptions of SBAE by administrators, and in particular, principals, have been the most common thread of literature focused on this topic (Cannon et al., 2013; Gentry, 2011; Kalme & Dyer, 2000; Rayfield & Wilson, 2010; Rayfield & Wilson, 2009; Smith & Myers, 2012; Thompson, 2001). Principals' perceived value of the SBAE program has been noted in several ways. Kalme and Dyer (2000) reported that principals see SBAE programs as positively impacting communities and student success, skill development, and academic achievement. Gentry (2011) and Kalme and Dyer (2000) noted administrators' perception that SBAE can positively impact all students across all achievement levels. Additionally, SBAE programs were viewed as an outlet for developing academic skills when integrated with agriculture (Gentry, 2011). Thompson (2001) offered principals perspectives on both careers and academic achievement. Principals believed that SBAE was a place for students to learn information valuable to careers, specifically those in the science fields (Thompson, 2001). Smith and Myers (2012) support this claim by recommending that agriscience teachers focus on their program areas, which enhance student achievement when communicating with principals.

Purpose and Objectives

The purpose of this study was to examine how the leadership practices of principals support the culture of exemplary school-based agricultural education programs in Florida. The study examined the American Association of Agricultural Education's (AAAE) Research Priority Area Five, *"Efficient and Effective Agricultural Education Program"* (Thoron et al., 2016). The following research questions guided the study:

- Do principals in Florida schools that have exemplary SBAE programs view them as beneficial for meeting the goals of their school?
- How do principals in schools with exemplary SBAE programs in Florida support their schools' agriculture teachers?

Methods

This study employed a qualitative exemplar case study design to examine how principals support agriculture teachers in Florida. According to Bronk (2012), an exemplar case study investigates highly developed programs that demonstrate the upper end of development in a particular phenomenon and showcase other programs' potential to follow. According to Ary et al. (2014), qualitative investigations allow for a rich description of a specific phenomenon. The phenomenon under investigation was how principals in Florida support agriculture teachers in their schools.

The population explored in this study were principals in Florida high schools with agricultural education programs. According to Bronk (2012), the first step in an exemplar study is to establish the nominating criteria for exemplar cases. Exemplar cases had the following characteristics: (a) evidence of participation in the components of the three-circle model of agricultural education, (b) sustained participation in professional development and leadership organizations, (c) a track record student success in multiple arenas, (d) well-equipped teaching facilities, and (e) receive excellent professional support from the school administration. These criteria represent the competencies and traits of successful agricultural science teachers identified by Roberts et al. (2007). The members of the research team have a knowledge of the programs in the state. The research team developed an initial list of exemplary programs. An effort was made to select programs from different areas in the state and varying school sizes. Eight programs were identified as potential participants in the study. The teachers in these programs were used to determine if their exemplar programs fit this study. A brief questionnaire was sent to the selected teachers to collect more information about the principal at their school. All eight teachers responded to the questionnaire. Questions included the principal's duration at the school and the level of support for the school's agricultural education program. Five principals were nominated as exemplars and were asked to participate. All the principals agreed to participate. An email invitation was sent to the principals selected to participate in the study.

One-on-one, semi-structured interviews were conducted using the Zoom video conferencing platform. The recommendations of Abrams et al. (2015) were followed for collecting data online. The interview guide consisted of three major components. The opening block of questions asked principals to identify the purpose of agricultural education and explain how the programs help meet their school's broader goals. The second block explored how principals supported the agriculture teachers in their school. The final question block examined how principals address their professional growth and if an opportunity to learn about supporting SBAE teachers would be useful. A pilot interview was conducted with a principal in a different state who met the study's criteria to improve the qualitative interview guide (Kim, 2010). The data from that interview was not included in the data analysis for this study. Minor changes in question format and order were made from the pilot interview.

Each interview was recorded and lasted approximately one hour. The audio files were transcribed using the transcription software embedded in Zoom and cleaned by the research team to ensure accuracy. The transcripts were coded in NVivo version 12 Plus using the four-step thematic analysis method described by Harding (2018) which includes identifying initial categories, coding the data, reviewing the codes and organizing them in initial and emergent categories, and looking for themes and findings in each category. Every research team member conducted coding related to at least

one of the three research questions using the entire interview transcript as a data source. The data were analyzed to examine three areas based on the research questions. The entire transcript was coded using descriptive coding and subcoding to create an analytical synthesis of consolidated meaning (Saldaña and Omasta, 2022). Audit trails were kept by each team member and were reviewed by the team continuously to ensure dependability (Lincoln & Guba, 1985). Each team member analyzed the data holistically to determine if any themes emerged outside of the three research questions used to frame the analysis. Member checking, peer debriefing, continuous observations, and triangulation were used to ensure credibility (Lincoln & Guba, 1985). The use of thick, rich descriptions of the context was provided to uphold transferability (Creswell, 2007). The researchers were a professor, an assistant professor, a Ph.D. candidate, and a research associate professor at the same institution. Individual subjectivity statements were identified by each member of the research team and documented any possible bias before the research was conducted and continuously through the process. The research team had varied working relationships with principals through their careers as teachers. However, the entire team believed that the administration's positive support could positively affect the agricultural education program.

Pseudonyms were assigned to the principals to ensure anonymity (Creswell, 2007). **Dr. Barnett** was the principal of a mid-sized school about 30 minutes from a larger population center. The school had 1,157 students enrolled and approximately 300 in the agricultural education program with two teachers. She had been the school principal for eight years and has worked in administration for 26 years. Before becoming a principal, she taught math and music for eight years. She grew up on a farm and that contributed to understanding the value of agricultural education.

Mr. Simon was a principal at a small high school, which serves 610 students in grades 6-12 in a rural community. There were 159 students in agriculture courses in grades 6-12. He has been the principal for 14 years and has spent 16 years in administration. Before becoming the principal, Mr. Simon was a science and health education teacher for three years at the school he currently serves. While he did not have a direct tie to agriculture, his children were active in the agricultural education program at the school.

Mr. Hawkins was a principal at a larger high school that employs four agriculture teachers and has approximately 550 students enrolled in agricultural education. The school serves 2300 students. While Mr. Hawkins has only been the principal for three years, he has been involved in educational administration for 20 years. Before becoming the principal, Mr. Hawkins taught English and TV production.

Ms. Matthews was the principal at a larger school that was built in the last ten years. The school has 2,350 students, 350 of whom are enrolled in agricultural education and taught by four agriculture teachers. The area the school serves has deep agricultural roots that are ". . .a huge part of the community." As a result, the school serves a more diverse population with various amounts of agricultural experience. Formerly a health teacher for four years, Ms. Matthews has worked in administration for 16 years and has been the principal at her current school for one year.

Ms. Wagner is the principal at a larger school that serves a suburban population. The school has 1,850 students and approximately 500 students in the agricultural education program with four agriculture teachers. She has been the principal for four years and has been in administration for 17 years. Ms. Wagner had a limited agricultural background but saw value in the experiences her students are receiving. Before becoming a principal, she was a social studies teacher and worked as a teacher for eight years.

Results

Various relevant themes were identified through the analytical process; these themes are presented and arranged below in the form of three organizing themes consisting of multiple basic themes (Attride-Stirling, 2001). The three organizing themes are: (a) Purpose and Value of Agricultural Education Programs, (b) How Agricultural Education Contributes to the Goals of the School, and (c) How Principals Support Agricultural Education Programs.

Purpose and Value of Agricultural Education Programs

Principals in this study appreciated the value of agricultural education. The basic themes that emerged about the value and purpose of agricultural education in the schools were not uniform. Broadly, the principals expressed these programs were essential because they provided something the students were interested in and created a place for them to belong in the school. According to Mr. Hawkins, "Everything we do here with our scheduling, and the course is driven by what the kids are interested in." Finding student interest was not limited to career and technical education courses. Most principals wanted to provide broad programmatic offering so all students could find where they belonged. Dr. Barnett noted a goal she had as an administrator is, ". . . really trying to meet the needs of every single child, and what I have found with the ag. program is you have kids who maybe don't fit other places, or just haven't found their kind of niche."

For some, the agriculture teacher was similar in function to athletic coaches. Mr. Hawkins noted that agriculture teachers encourage students to complete their work in other courses so they can participate at events above the chapter level. According to Mr. Hawkins, "I think if you develop an atmosphere on your campus, that everyone is supporting one another, you know, makes life a whole lot easier." For some administrators, the goals of the program were related to preparing students for agricultural careers. Another basic theme that emerged indicated that principals saw the agriculture program in their schools leading to a broad range of agriculture careers. Ms. Matthews noted, "the career opportunities through the program are vast". Ms. Wagner also noted, "It gets them almost on the job training, and for those who aren't sure what they want to do, it exposes them to what they could be involved in agricultural science." Others saw the value of the programs as increasing agricultural literacy. Dr. Barnett noted that some students "think that steaks come from [the grocery store]." This lack of agricultural literacy created a need for instruction beyond career preparation. Mr. Simon noted, "I think even if you don't end up having a career in an agricultural field, you become empathetic to understanding how agriculture works in our state and in our nation."

The principals in the study all noted the broad scope of agriculture seeing more value that traditional images related to production. Mr. Hawkins noted, "There's a lot of things that I think principals don't understand [about agriculture] . . . it's pretty high-functioning stuff." Mr. Simon stated, "Agriculture helps to create an awareness of our environment." Ms. Wagner stated, "It's not just raising a cow or going out and planting crops, or so many other parts that agriculture . . . it's a very broad field." Because of the broad scope, the principals noted it was part of their job to make sure the teachers have a wide lens related to the areas of agriculture the programs expose students to. Mr. Hawkins explained that part of his job was to make sure the teachers do not get "tunnel vision" with one specific programmatic aspect. He explained,

> We don't want to be the school that is just known for doing a great job at the youth fair . . . with hog sales. Like that's not what we want our ag. program to be known for. Is it a piece? Sure. We want to be successful in everything we do. There's so [many] more opportunities

> within the agricultural field than just raising hogs, for example, or more steers. I mean, there's just so many different variables and opportunities for kids, and we want them to have that degree of experience with them and exposure to it.

While the basic themes related to the purpose and value of agricultural education programs varied, the principals were unanimous in their view that the agricultural education program in their school provide value to the students.

How Agricultural Education Contributes to the Goals of School

The principals had agreement about the overall goal of their school, which was to prepare students to be a functioning member of society after they graduate. According to Ms. Matthews, "Our biggest thing is to prepare our students to do something outside of the school walls." Similarly, another basic theme was that the principals agreed agricultural education programs played a part in meeting the overall school goals. Principals saw this function of agricultural education as a clear intersection between the goals of the school and the agricultural education programs. Two additional basic themes emerged related to agricultural education preparing students for careers and giving them relevant skills needed in the workplace. According to Ms. Matthews, "I think it's it all goes back to their careers. Being able to show them what careers are available." The principals specifically pointed to exposure careers, providing hands on training, and giving students authentic experiences as specific examples of how agricultural education programs prepare students for careers.

There were divergent views about the industry certifications in agricultural education programs. Mr. Simon was a proponent of the exams, boasting that his teachers "probably get over 100 industry certification each year in their program." According to Mr. Simon, "The industry certification has really put a light on career and technical programs where they become more core programs not electives." He further added that this increased emphasis is because of the "money from the certifications are going back to the program," as well as the increase in "teacher accountability" since "at least a third of their evaluation has to be based on student data." Dr. Barnett had a different view of industry certifications, stating that, "Ag. is bigger than the county getting $500 and the teacher getting $50." She also noted, "the only thing that I worry about is what's going on in the classroom, the certification is just gravy." She went on to say, "I don't want to see these kids on a computer all the time. It's not about that. It's about bringing veterinarians in, and it's about practicing." The rest of the principals seem to fall somewhere in the middle related to industry certifications' importance. Mr. Hawkins noted the "$90,000 was a decent amount" to bring into the programs because of industry certifications. This influx "has given us a chance to grow." He went on to note his teachers did not need support in that area because, "our people rock it, they do very well . . . they know the system and they do well with that." Ms. Matthews added, "they do a phenomenal job. They really have the motivation to get our students' industry certification testing done." While the viewpoints about the value of certifications were divergent, little was mentioned about the utility of the certifications beyond the benefit to the school grade and the financial benefit.

Another basic theme that emerged related to the benefit of agriculture course being a place where students can see practical applications of content from other courses. Ms. Wagner stated,

> I think for us, the value of agricultural education is to see how it correlates with so many other subject areas . . . It crosses over into science and life cycle and all the different ways that our teachers are interspersed with our faculty and what they do. So that's where it brings that whole child part in that we need to have a prepare our students for being citizens. That's our job at the end of the day.

Beyond science integration, the principals also noted the benefits of hands-on learning and higher-order thinking skills. Mr. Hawkins noted, "there's a lot of higher-order thinking going on." Ms. Matthews

noted, "innovation seems to be something that's really on the forefront when it comes to agriculture." There were specific instances of integration the principals referred to. Mr. Simon mentioned a time when the economics teacher visited the agriculture teacher classroom and learned about an agricultural example he could use in his class. He praised this type of "cross-curricular activity" that comes out through teacher collaboration.

How Principals Support Agricultural Education Programs

The interviews included questions about how these principals in exemplar programs supported agricultural education programs, and this became also one of the organizing themes. Broadly, basic themes emerged related to general approaches of leadership and management leaning towards autonomy in teacher decision making and providing resources to teachers when possible. According to Mr. Hawkins, ". . . it's just the mantra of our school, we're not a big micromanaging type place" and ". . . you got to trust them." Ms. Matthews stated,

> I think teachers find out pretty quickly in my approach, it's never a micromanage approach. I don't do that. They know that. I'll tell them, you know flat out you're the professional. I expect you to be professional, and I'm going to treat you that way. I'm clearly here to support you and guide if I feel that you need extra support.

Ms. Wagner added, "My job is to help them do their jobs and take things that I can."

While the principals promoted autonomy in their management process, they were active in provided resources and support for teachers. Another basic theme relates to how principals support teachers to find professional development opportunities. Mr. Hawkins expressed this by stating, "we're not a stale place. We're always trying to do the next thing." The principals valued teachers who were self-motivated. According to Dr. Barnett, "I really try to find people who have that self-initiative that want to do stuff." Ms. Matthews was the only principal to expressly mention using data to help guide professional development. According to Ms. Matthews, "We use all of our formal and informal data to look at trends and patterns when it comes to what areas that teachers need support and growth in." The principals had a difficult time thinking of specific support their teachers needed because the teachers in their schools were well established and had the support they needed. Two principals did note seeing professional development needs to support beginning agriculture teachers as they enter the profession.

Conclusions and Discussion

This study's findings support Phipps et al.'s (2008) statement around the importance of the principal and agriculture teacher relationship. In this study, principals unanimously reported that they saw the value that school-based agricultural education provided to the agriculture and natural resources industry, the school, and the individual students. The principals relied on the agricultural education teacher to help the principal meet the school goals and the overall requirements of schooling (Bredeson & Johansson, 2000). This value to the school came in many different forms. The SBAE program taught students the importance of the agriculture and natural resources industry as both consumers and individuals engaged in the industry. Context was provided to enhance learning and application for other subject matter taught throughout the school and engage students at the application and synthesis levels. Students were taught leadership skills that they applied in the school setting and beyond. The intentional connection made between school and career for students was a key area principals noted how SBAE goals helped the principal meet the goals of the school. One aspect that did differ among the principals was the utility of industry certifications. None were opposed to the industry certifications, but the utility these certifications provided to the school, the SBAE program, and the individual students were mixed. According to Phipps et al. (2008), it is common for principals to have varying ideas of the best education

practices for their school. For principals in this study, the views of the exam focused on the positive financial incentive that was balanced with a concern about a shift in instruction and program focus.

Previous research has highlighted the need for educators and educational leaders to strive for improvement continually (Bradeson & Johansson, 2020; Paulson and Martin, 2013; Tilford, 2007), and the participants of this study concur. All principals expected the SBAE teachers to guide and direct their professional development in the subject matter of agriculture and natural resources. The principals wanted to be informed and have a strong relationship with the agriculture teachers but provided teachers with the freedom to design and guide the SBAE program. The principals sought to provide clear expectations to the teachers and help them find resources when needed. However, the ultimate responsibility for staying current on the subject was left to the teachers. The actions described were similar to the collaborative supervision style that Thobega and Miller (2003) indicated as the most effective and the recommended style for administrators (Glickman, 2000). We recommend professional development opportunities be developed that use collaborative supervision. Additionally, resources should be created for principals to help support agricultural education program. This could include just-in-time professional development and examples of ways support agricultural education programs if they are unfamiliar with that context.

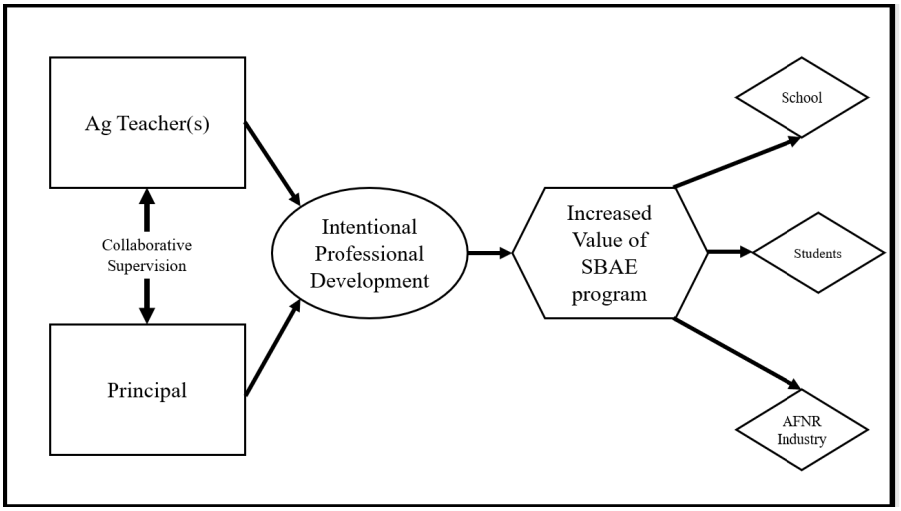
However, principals sought to be more involved in professional development related to the value and impact of the SBAE program. Several of the principals in this study noted their knowledge of SBAE programs helped them build a strong trust-focused relationship with the agriculture teachers. They saw it as a challenge for new principals that do not have this knowledge. The principals suggested that professional development opportunities be made available to allow principals to learn more about the value of school-based agricultural education and how to evaluate and support programs. These professional development experiences were recommended to help new principals learn about the useful features of SBAE and how to utilize these benefits in meeting the principals' goals. According to Glickman (1990), collective supervision styles should be used when developing professional learning opportunities for administrators. We found evidence to support providing opportunities to allow principals and SBAE teachers to work collaboratively in educating each other on the goals and critical aspects of how SBAE can contribute to the school community's overall goals. Efforts should be levied to create this type of professional development in a collaborative style.

Based on these conclusions, the following model is suggested (Figure 2). Collaboration between teachers and principals is necessary for a prosperous learning environment for students (Bredeson & Johansson, 2000). Principals and agriscience teachers should work together through support and collaborative supervision. Because of the unique nature of SBAE, principals should be well informed about the total program delivery structure and the opportunities possible in SBAE programs. Our findings indicated that it is not critical for a principal to be versed in the nuanced content knowledge related to SBAE program delivery. However, it is beneficial for them to be aware of the opportunities available through the delivery of the total-program model and the potential that holds for students. The principals in this study agreed that a well-delivered SBAE program can contribute to the success of a school. As knowledge brokers, principals must be thoroughly knowledgeable to understand, appreciate, and support a successful SBAE program (Tilford, 2007). A prosperous SBAE program that is valued will be better able to impact the students, school, and overall AFNR industry by producing the next generation of informed citizens and individuals prepared to enter careers. The focus of this study was exemplar programs and used non-representative sampling which was a limitation of the study. Interpretations beyond the focus of exemplary programs are limited because of the methodology of this study. The principals who were interviewed for this study had a positive view of the agricultural programs in their school. Because of limitation of the methods, causal relationships about principal

support cannot be inferred but should be the focus for future studies. Sampling of broader principal groups and correlational studies should be conducted to determine the relationship between principal support and agricultural education outcomes.

Figure 2

Proposed Model for Examining Principal Support in SBAE



Recommendations

Based on these findings and conclusions, we suggest exploring the implementation of professional development opportunities for SBAE teachers and principals focused on building understanding and improving relationships. This could be conducted by school-based agricultural education state and national leaders in conjunction with school administrators. These professional development experiences could include explicit means for teachers and principals to illuminate key ways SBAE could help meet the overall school community's goals. Due to the fact the overall goal of SBAE program can oscillate between career preparation and agricultural awareness, professional development should explore the balance of these goals. Industry certifications emerged were discussed by the participants in this study. Further investigation is needed to explore how these types of initiatives impact how SBAE meets the goal of the school from the perspective of the principal. It is likely that other nuanced factors exist in other areas. These factors should be openly discussed between the agriculture teacher and principal and can be a topic for professional development. Professional development efforts should focus on areas in which SBAE contributes to the entire school's success, students in the SBAE program, and the principal's goals. Principals have a broad scope of responsibility. This may limit their time to commit to ongoing professional development focused on one programmatic area of the school. To account for the draw on a principals' time, professional development related to Career and Technical Education relationships, online offerings, or free-choice professional development could be explored.

It was noted the principals are willing to support SBAE teachers but often did not know how to provide that support. Higher education leadership programs should include coursework that focuses on providing strategies to support SBAE teachers. After principals have entered their role professional development should be available to help them provide support to these programs. Professional development should include specific examples of professional development types available to SBAE

teachers and other means of support available from state and national organizations. The principals can then use these specific examples in developing a more robust and effective teacher support plan. To assist principals in providing the most effective support and guidance to SBAE teachers' development, principals should also be provided professional development on the critical aspects of effective SBAE programs. State and national leaders should work with principals to help approved teacher evaluation procedures be translated and effectively used in the SBAE setting.

Further research in this area is also needed. To help prepare future principals and future SBAE teachers, the factors that lead to strong principal – SBAE teacher relationships need to be identified. Once identified, these factors should develop professional development for current teachers and principals and be integrated into teacher and administered development and certification programs.

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