Journal of Research in Technical Careers
December 2019, Vol. 3, No. 2.

An Analysis of Cooperating Teacher Feedback: A Qualitative Inquiry

Christopher J. Eck, Jon W. Ramsey
Oklahoma State University

Cooperating teachers are a key component to the success of student teaching internships, serving an integral part in "raising" a teacher. To effectively facilitate the student teaching internship, teacher preparation programs must identify cooperating teachers who align philosophically with the pedagogical training delivered by university programs (Korthagen & Kessels, 1999; Tom, 1997), specifically, cooperating teachers who can reinforce the theoretical framework underpinning the professional coursework pre-service teachers experience in university teacher preparation programs. This qualitative study sought to better understand the feedback provided to future school-based agricultural education (SBAE) teachers during their student teaching experience. Through initial and secondary coding, the research team identified themes among the feedback provided to student teachers by their cooperating teachers. The study revealed cooperating teacher feedback reflects the pedagogical training provided via the teacher preparation program, specifically, around effective teaching behaviors. Understanding the cooperating teacher feedback provides insight for teacher preparation programs.

Keywords: cooperating teacher, school-based agricultural education, student teaching, teacher preparation, effective teaching

Moore and Swan (2008) noted, "if it takes a village to raise a child, then perhaps it takes four contributor groups to 'raise' a teacher" (p. 68), including the teacher education programs, state departments of education, professional teacher associations and local school districts. The researchers believe the school-based agricultural education (SBAE) teacher preparation program at Oklahoma State University (OSU) is preparing students for the student teaching experience and beyond, but is the student teaching internship playing the integral role it should? Darling-Hammond (2000) identified teachers who took part in traditional teacher preparation programs along with early mentoring opportunities to have higher levels of student achievement. This raises the question of how first year teachers can be held to the same expectations as that of veteran teachers (Moore & Swan, 2008). What role does the structured communication and relationship development between a cooperating teacher and student teacher play in this concept of raising a teacher?

The relationship developed between student teachers and their cooperating teachers is a key component in the pre-service teacher preparation process (Fosnot, 1996). Although

many studies investigate characteristics and competencies of effective teachers (Harlin, Roberts, Dooley, & Murphery, 2007; Shippy, 1981; Young, 1990), few studies highlight how cooperating teachers' feedback is framed in the context of effective teaching. To effectively facilitate the student teaching internship, teacher preparation programs must identify cooperating teachers who align philosophically with the pedagogical training delivered by university programs (Korthagen & Kessels, 1999), particularly, cooperating teachers who can reinforce the theoretical framework underpinning the professional coursework pre-service teachers experience in university teacher preparation programs. Conner and Roberts (2013) concluded student teachers need 20 competencies, ranging from agricultural production and economics to cultural and political perspectives. Although effective characteristics are taught to students, it is unclear whether their cooperating teachers identify and "coach" the concepts through feedback; thus, the feedback forms used by cooperating teachers for evaluation of student teachers provides a look into the student teaching internship to monitor and evaluate the practices of student teachers. To align with certification mandates, the OSU teacher preparation program is currently evaluating the curriculum and learning objectives to better align with new teacher certification requirements i.e., the pedagogical certification examination (PPAT) to be implemented in 2020. Effective feedback that aligns with the learning objectives of pre-service coursework connects the concepts, values, and ideals from the pre-service coursework with real experiences found only in the classroom. The reinforcement of the knowledge, skills, and dispositions highlighted in the teacher preparation program via cooperating teacher feedback is an important message that needs to be nurtured and reinforced through cooperation and collaboration (Borko, Eisenhart, Brown, Underhill, Jones, & Agard, 1992).

Literature Review

School-based agricultural education (SBAE) is a multi-faceted discipline; one that requires those who work to enter the profession to possess a wide array of skills. These skills are fostered during the student teaching internship. Edgar, Roberts and Murphy (2009) stated, "structured communication between the cooperating teacher and student teacher is an important portion of the field experience" (p. 34). In this study, cooperating teacher feedback serves as the structured communication between the cooperator and the student teacher. The feedback highlights delivery of the comprehensive three-circle model of agricultural education (Figure 1). Purposely using contextualized teaching and learning in the classroom and laboratory, specifically youth leadership development (FFA) and work-based learning (SAE) (National FFA Organization, 2017; Talbert, Vaughn, & Croom, 2005), provides a structured and balanced learning environment. In addition to effective classroom teaching, student teachers are exposed to FFA and SAE opportunities during their student teaching internships. These experiences serve as contextualized learning opportunities that play an integral role in the development of future agricultural educators to efficiently deliver school-based agricultural education programs; teachers should exhibit the knowledge and skills to effectively deliver instruction in both formal and informal settings (Rayfield, Murphy, Briers, & Lewis, 2012). To allow cooperating

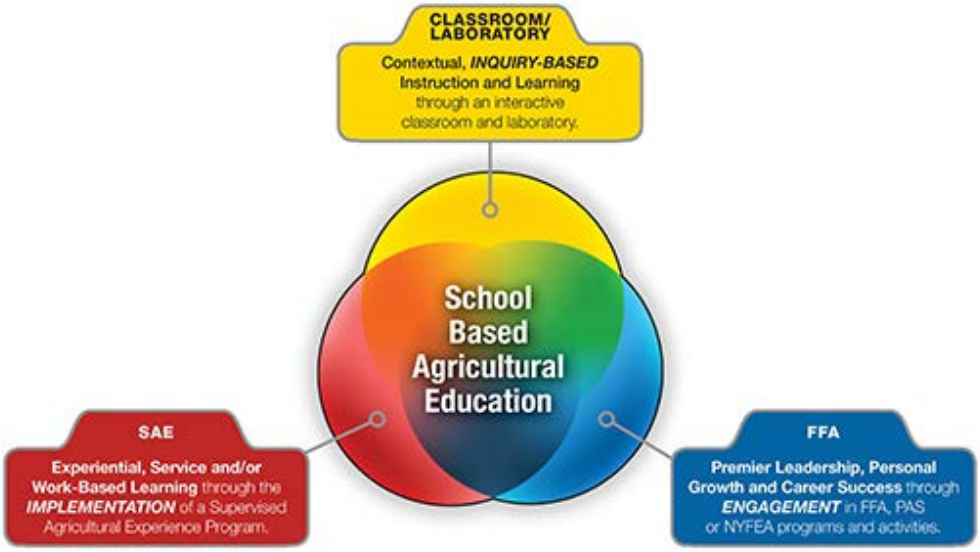


Figure 1. National FFA's (2015) Three-Component Model of Agricultural Education

teachers an opportunity to provide structured feedback on all components of the three-circle model (Figure 1), OSU allows up to five of the 20 feedback forms to be associated with the student teacher interaction during FFA and SAE activities. The acquisition, practice, and implementation of effective teaching skills in the context of a comprehensive agricultural education program is the desired outcome of the student teaching internship.

An integral part of the student-teacher relationship is the selection and pairing of the cooperating teacher and agricultural education student. Teachers demonstrating effective teaching characteristics, such as those identified by Roberts and Dyer (2004), i.e., instruction, FFA, SAE, community relations, marketing, professionalism, program planning, and personal qualities, are used as a starting point to identify possible cooperating teachers. Similarly, Eck, Robinson, Ramsey, and Cole (2019) identified eight categories essential to effective SBAE teaching on a nationwide scale, including instruction, FFA, SAE, program planning, balance, diversity and inclusion, professionalism, and personal dispositions. Additional criteria for selecting cooperating teachers include feedback from school administrators, state staff responsible for delivering agricultural education programs, teacher educators, and cooperating teachers themselves (OSU Agricultural Education Student Teaching Handbook, 2018). Due to the potential impact of the cooperating teacher, much time and effort goes into their identification and selection. Their role in the process of helping student teachers learn to teach cannot be diminished. Learning to teach is a complex process determined by the interaction of knowledge and skill and contextual factors such as expectations and feedback provided by the cooperating teacher (Borko et al., 1992). Despite the importance of student teaching in teacher preparation and the effort put forth to identify quality cooperating teachers, the internship experience has been criticized for being disconnected from the reality of what occurs in SBAE programs

(Guyton & Byrd, 2000; NCATE, 2001; Zeichner, 1990). In addition to existing literature, anecdotal evidence at OSU provides a further need to determine the nature and depth of structured feedback between cooperating teachers and their student teacher. This feedback can serve as a guide to SBAE teacher preparation programs, helping to better establish relevant curriculum for required university coursework, along with purposeful placement of student teachers.

Theoretical/Conceptual Framework

Knowledge is social in nature and is the result of social interaction rather than individual experience (Doolittle & Camp, 1999). Pre-service teachers are able to gain knowledge through the discourse of instructional feedback and social interactions that are based on experiences rooted in cultural, social, and language-based interactions (Fosnot, 1996). Social constructivism served as the theoretical framework for the study. Prior to the student teaching internship, a pre-service teacher's paradigm of teaching is challenged by teacher educators. Specifically, effective teaching behaviors are identified and practiced with the intent that these behaviors become an embedded component of their professional teaching DNA. Much as Fosnot and Perry (1996) explained: "reflective abstraction is the driving force of learning. As meaning makers, humans seek to organize and generalize across experiences in a representational form" (p. 34). They continue by connecting the discussion and facilitation of reflection to the development of reflective abstraction (Fosnot & Perry, 1996), ultimately leading to gained knowledge through discourse. This reflective abstraction and discourse is constantly happening during the student teaching internship, but does the gained knowledge of the student teacher align with that of the teacher preparation program? Implementing the reflective lens of Fosnot and Perry (1996), cooperating teacher feedback can be evaluated to determine the extent to which student teachers are experiencing growth (Fosnot, 1996).

To provide an integral lens associated with the agricultural education teacher preparation program at OSU, the five characteristics of effective teachers by Rosenshine and Furst (1971) were utilized: (a) clarity, (b) variability, (c) enthusiasm, (d) task-oriented and businesslike behaviors, and (e) student opportunity to learn material. Forty characteristics of effective agriculture teachers were also categorized by Roberts and Dyer (2004), into "instruction, FFA, SAE, building community partnerships, marketing, professional growth/professionalism, program planning, and personal qualities" (p. 93). These characteristics help to shape the pre-service teachers before entering student teaching. These pedagogical underpinnings (Rosenshine & Furst, 1971) can be used to evaluate the alignment of student teacher growth (Fosnot, 1996; Fosnot & Perry, 1996) through the feedback received from cooperating teachers against that of the teacher preparation program.

Purpose/Objectives

The purpose of this study was to explore the nature of feedback provided by cooperating teachers during the 15-week student teaching internship to determine the

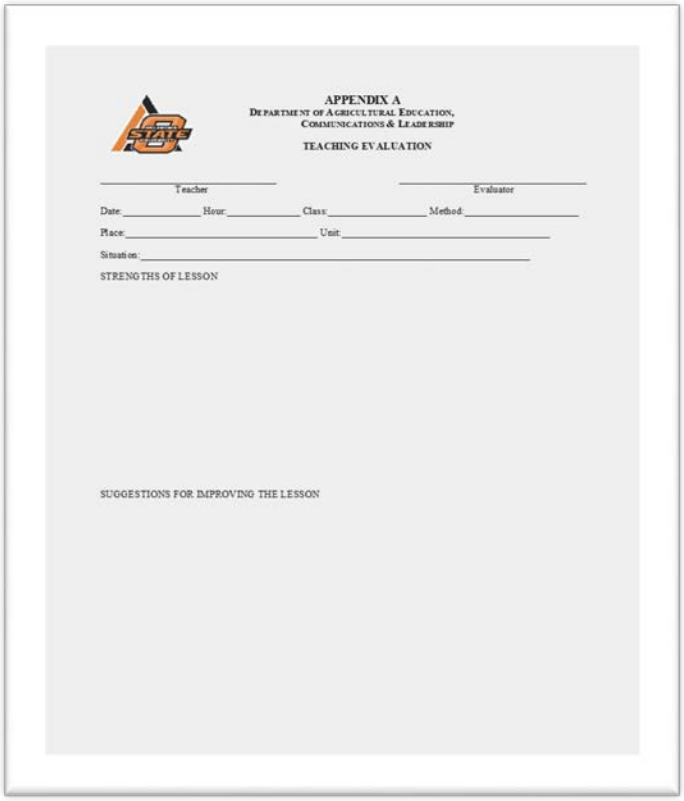
impact of the mentoring relationship. Researchers sought to gain a deeper understanding of future SBAE teachers' identified teaching behaviors, including strengths and areas needing improvement as determined by their cooperating teacher through structured feedback. Three questions guided this study:

1. What is the nature of cooperating teacher feedback to preservice teachers during the 15-week student teaching experience?
2. To what extent does cooperating teacher feedback reflect effective classroom teaching?
3. To what extent does cooperating teacher feedback reflect FFA advising and SAE opportunities?

Methods/Procedures

For this exploratory study, the researchers utilized existing data of cooperating teacher feedback for 10 fall 2016 agricultural education student teachers in the OSU SBAE teacher preparation program. The exploratory nature of this study allowed the researchers to focus on a smaller sample size to help further develop research potential along this line of inquiry, identifying potential limitations and changes to address before a larger scale study is conducted (Privitera, 2017). The fall student teaching cohort is historically smaller than spring cohorts at this institution. The smaller size allowed researchers to adopt a qualitative approach to determine the potential for future investigations with a larger sample of student teachers. Student teacher evaluation forms were collected during the student teaching seminar at the end of the semester, as part of the professional education certification process, allowing access to the documents for coding. The student teaching internship serves as the capstone experience for teacher preparation programs (Borne & Moss, 1990; Deeds, Flowers, & Arrington, 1991; Edwards & Briers, 2001). The feedback provided through the OSU feedback form used by cooperating teachers for evaluation of student teachers provides a look into the student teaching internship to monitor and evaluate the practices of student teachers.

With existing data design, "the collection, review, and analysis of any type of existing documents" (Privitera, 2017, p. 224), content analysis was employed to identify patterns in the data (Saldaña, 2016). Privitera (2017) acknowledged four criteria of trustworthiness, which were implemented to provide credibility, transferability, dependability, and confirmability to the analysis. The research team consisted of three researchers, who together analyzed the data to offer interrater reliability within the study, helping to improve the overall trustworthiness. The researchers consisted of two graduate students and a faculty member in Agricultural Education at OSU. The data from this exploratory study is intended to inform practice of the SBAE teacher preparation program at OSU and is only intended to be transferable to peer institutions with similar characteristics. The data analyzed in this study came from traditionally certified agricultural education teachers in Oklahoma serving as cooperating teachers, providing dependable data for analysis. Each of the 10 student teachers received 20 feedback evaluations from their cooperating teacher throughout the semester. These evaluations were submitted in support of the student teachers' final requirement for teacher certification and graduation. In total, 200 feedback



APPENDIX A
DEPARTMENT OF AGRICULTURAL EDUCATION, COMMUNICATIONS & LEADERSHIP
TEACHING EVALUATION

_____ Teacher _____ Evaluator

Date:_____ Hour:_____ Class:_____ Method:_____

Place:_____ Unit:_____

Situation:_____

STRENGTHS OF LESSON

SUGGESTIONS FOR IMPROVING THE LESSON

Figure 2. Teaching Evaluation Form

forms were qualitatively analyzed by the research team. The requirement for cooperating teachers is to complete a minimum of 20 observation forms during the 15-week student teaching internship, with four of those observations being outside of the traditional classroom setting. Completed observation forms are placed in the respective student teacher's teaching experience notebook. The notebook is a semester-long activity in which student teachers' complete assignments required for certification, write lesson plans for classes taught, complete a student teaching experience checklist, and compile feedback and observation forms. At the end of the semester, student teachers submit their notebooks to their university supervisors. Figure 2 identifies the feedback form that was provided to cooperating teachers, which was recommended for use but not required. The 10 cooperating teachers were carefully paired with student teachers from OSU for their capstone student teaching experiences. Although only seven of the cooperators utilized the provided form, the other three still provided valuable information through the form of comments relevant to strengths and weaknesses noted during the observation of the student teacher, allowing the feedback to be compiled with the completed forms.

The participants, although blinded for data analysis, had to meet certain criteria. Some basic descriptors of the group are: (a) all cooperating teachers have been teaching in their current position in Oklahoma for more than five years, (b) selected cooperating teachers were composed of seven male and three female SBAE teachers, (c) the 10 programs were high schools in Oklahoma offering agricultural education courses to students in grades eight though 12, and (d) the student teachers were evenly split with five males and five females. The evaluation forms were blinded by removing both the student teacher and cooperating teacher names to prevent any bias that may be present from the researchers, who also serve as university supervisors for student teaching.

A variety of cooperating teacher to student teacher pairings were observed during the fall 2016 semester, including male cooperating teachers with both male and female student teachers, along with female cooperating teachers hosting both male and female student teachers. Along with diversity amongst the pairings, student teachers were also placed in both rural and suburban high schools during the fall 2016 semester.

Data analysis was guided by *The Coding Manual for Qualitative Researchers* (Saldaña, 2016). The researchers independently coded the data, using first and second cycle coding methods (Saldaña, 2016). Before coding began, the research team met to discuss the coding process and determine the appropriate procedures to follow moving through the individual coding stages, improving coding reliability. Round one coding provided researchers with the overall nature of the cooperating teacher feedback, answering the initial research question. The researchers then employed descriptive coding for the first cycle, summarizing cooperating teacher remarks "in a word or short phrase" (Saldaña, 2016, p. 102), followed by second cycle coding to "develop a sense of categorical, thematic, conceptual, and/or theoretical organization" (Saldaña, 2016, p. 234) among initial codes. The codes developed during two coding cycles allowed researchers to determine the extent to which the cooperating teacher feedback reflected effective classroom teaching (Eck et al., 2019; Roberts & Dyer, 2004; Rosenshine & Furst, 1971) and the opportunities presented through FFA and SAE.

Once the individual coding process was complete, the researchers collaborated to ensure "individual coding efforts harmonize" (Saldaña, 2016, p. 36), turning the codes into categories and eventually overarching themes. As a result, evaluation of 10 student teachers yielded 214 codes, resulting in 28 harmonized categories among two identified themes. Themes were then used to develop contextual descriptions, relating the data to effective teaching behaviors as described by Rosenshine and Furst (1971) and other concepts identified in SBAE (Harlin et al., 2007; Shippy, 1981; Young, 1990).

The student teacher feedback forms are limited to the 10 cooperating agricultural education teachers for the fall 2016 student teaching cohort. This sample is a limitation to the study as is not generalizable on a state or national level, but rather a study used to inform the OSU SBAE teacher preparation program, guide future research, and potentially provide program implications to similar programs as transferable knowledge.

Results/Findings

Research Question #1: What is the nature of cooperating teacher feedback to preservice teachers during the 15-week student teaching experience? The cooperating teacher feedback was structured using the template provided to identify two key components of the student teachers' experience: (a) instructional strengths of student teachers in SBAE, and (b) areas for improvement of student teachers in SBAE. Although the two overarching categories align with the recommended feedback template given to the cooperating teachers, the qualitative analysis process resulted in individual codes, categories, and themes of which best fit the two categories present in the template. Even when cooperating teachers did not use the template (n = 2) the codes resulted in themes related to the overarching categories of instructional strengths and areas of improvement. Therefore, the researchers chose to utilize those two overarching categories to group the codes.

Instructional strengths of student teachers in SBAE. Cooperating teachers reported 17 key strengths that were identified as categories. Individual codes were analyzed by the researcher and grouped to establish each strength category (Table 1). Feedback statements varied in depth and value for the students, but the researchers were able to reduce individual statements to grouped codes and eventually categories. Some of the individual reports of strengths included the following statements: "focused on individual student learning," built rapport by asking previous shop experiences," "stressed the importance of safety," "great pre-test," lots of good information," "good introduction," "kept student enthusiasm high," "very deep lesson allowing students to incorporate multiple skills," "great summary," "good job using real life examples," "awesome idea," "game really helped their understanding," "good review and interest approach," "good movement around the room," "very enthusiastic," "good use of personal experience," "kids are active and engaged," "good questions," "PowerPoint and handouts," "expectations," "great game plan," "on time," "worked on disruptive students," "positive reinforcement," "good intro to lesson," "made sure all students understand," and "related to future career options." Although some codes are brief, they highlight how the cooperating teachers are identifying positive aspects of the student teachers lesson development and presentation of material, resulting in growth of the student teacher throughout the 15-week experience.

Areas for improvement of student teachers in SBAE. Consensus among the researchers led to 10 major categories of improvement (Table 2). Similar to strength statements, the areas for improvement varied in depth and value for the students, some of the statements included: "keep people off their phones," "was very nervous," "why all the yelling," "review the lessons importance," "break down definitions," "work on being more strict," "make sure all are paying attention," "give instructions before distributing materials," "establish the importance of the lesson," "why aren't students taking notes," "don't be afraid to tell kids no," "closure is extremely important," "I would like to see more structure," "need to find a way to check for understanding," "give examples," "turn back lights off," "stick to the plan, it will work," "try to keep them focused," "use the smartboard," "what was the interest approach," "slow down," "ask why," "move the problem kids," "plan," "maybe practice this before class," "technology did not work,"

Table 1. Instructional Strengths of Student Teachers in SBAE

Strength Category	Grouped Codes
Classroom management	Proximity
	Lesson pacing
	Student management
Technology usage	Teacher technology usage
	Student technology usage
Student feedback	Providing feedback to students
	Coaching
Student engagement	Student engagement
Variability	Individualized instruction
	Chunking
	Teaching methods
	Instructional games
	Field trips
	Guided notes
	Handouts
	Transitions
Content application	Cross curriculum
	STEM
	Career exploration
Enthusiasm	Moving around
	Interaction
Classroom routines	Routines
Real-world connections	Real-world application
	Realia
Questioning strategies	Questioning
Content knowledge	Scaffolding
	Knowledgeable
Assessment	Assessing student learning
	Evaluation
	Test
	Pretest
	Review
Clarity	Good instructions
	Explanations
	Clarity
Usage of interest approaches	Interest approach
Professional disposition	Good communicator
	Student rapport
	Professionalism
	Businesslike behavior
	Task oriented
	Initiative
FFA advising	AET
	Fundraisers
SAE management	SAE management

Note. Table 1 highlights the individual second-round grouped codes, which resulted from individual first-round codes, leading to harmonized strength categories.

Table 2. Areas of Improvement for Student Teachers in SBAE

Strength Category	Grouped Codes
Planning	Gather supplies
	Organizing instruction
	Writing objectives
	Preparing applications
	Pacing
	Time management
Student evaluation	Review
	Assessment
Classroom management	Proximity
	Routines
Student engagement	Student engagement
Three-circle model balance	Classroom instruction
	FFA advising
	SAE management
Providing closure	Lesson closure
Enthusiasm	Moving around
	Interaction
Variability	Teaching methods
Appropriate content	Real-world application
	Grad-level content
	Academic language
Cooperating teacher wisdom	Teaching tips
	Teaching advice
	Feedback

Note. Table 2 identifies the individual second-round codes resulting in harmonized categories for areas of improvement.

"make sure everything is prepared before class," and "end the lesson with a preview of tomorrow".

Although many of these coded phrases are short, the feedback from the student teachers demonstrated growth over the 15-week internship. Early in the 15-week student teaching experience, classroom management was identified as an area for improvement, although later in the experience, establishing classroom routines and proximity within the classroom became evident as a strength. A finding of interest, that likely reflected the efforts of

cooperating teachers sharing their wisdom/experience regarding teaching. Feedback offered by cooperating teachers included teaching tips, teaching advice, and general feedback that could not be found in a textbook and came from time in the profession, i.e., handling troubled students, resolving parent complaints, classroom management suggestions, purchasing livestock, and fundraising tips and tricks.

Many categories, including classroom management, student engagement, variability, and enthusiasm appeared as both strengths and opportunities for improvement; however, a trend reflecting growth during the 15-week student teaching experience was evident. The main teaching evaluations reflected more strengths than weaknesses toward the end of the experience, revealing an increase in student teacher's knowledge and skills.

Research Question #2: To what extent does cooperating teacher feedback reflect effective classroom teaching? The 15-week student teaching internship aims to help student teachers grow through discourse, interactions, and experiences (Fosnot, 1996), of which the cooperating teacher feedback serves as a reflective opportunity for the student teacher (Fosnot & Perry, 1996). The major emphasis of cooperating teacher evaluations across the 10 student teachers was on the aspect of classroom instruction. One hundred ninety seven of the 200 feedback forms coded for the 10 student teachers discussed classroom instruction, all of which highlighted both strengths of the lesson and areas of improvement as prompted by the suggested feedback forms. The feedback supported effective characteristics taught to the student teachers during their SBAE teacher preparation coursework, e.g., "focused on student learning," "gave students a great pre-test," "good introduction," "slow down and provide clarity," and "enthusiastic." Rosenshine and Furst (1971) is used as lens to help students prepare to be effective SBAE teachers through the teacher preparation program at OSU. Some of the feedback reflecting effective teaching included classroom management, student engagement and feedback, variability, enthusiasm, routines, clarity, and professional disposition, aligning with Rosenshine and Furst's (1971) five characteristics of effective teachers: (a) clarity, (b) variability, (c) enthusiasm, (d) task-oriented and businesslike behaviors, and (e) student opportunity to learn material (Table 3).

Research Question #3: To what extent does cooperating teacher feedback reflect FFA advising and SAE opportunities? Although some of the evaluations included FFA and SAE activities and events, many of them did not include any aspect other than classroom instruction. Of the 10 cooperating teachers, only one provided feedback for the student teacher during FFA activities and SAE visits. The feedback provided was relevant to an after-school FFA fundraising event the student teacher organized and facilitated, in which the cooperating teacher acknowledged the student teacher's adaptability in handling the event and that they did a great job, only to suggest the student teacher be more assertive at times. The remaining nine cooperating teachers focused all student feedback evaluations on classroom instruction. Although cooperating teachers are required to provide 20 feedback forms, it is only a suggestion in the student/cooperating teacher handbook for teachers to provide feedback for four FFA and/or SAE activities. The qualitative analysis identified four codes related to FFA advising and SAE opportunities, including FFA

Table 3. Strengths and Areas of Improvement Reflecting Rosenshine and Furst's (1971) Five Characteristics of Effective Teachers

Effective Teaching Characteristic	Strengths	Areas of Improvement
Clarity	Clarity	Three Circle Model
	Good instructions	
	Explanations	
	Preparing the Learner	
Variability	Student Engagement	Variability
	Variability	Teaching Methods
	Instruction	Closure
	Chunking	Student Engagement
	Methods	
	Simulations	
	Demonstration	
	Field trips	
	Notes	
	Handouts	
	Transitions	
	Real World Applications	
	Realia	
	Technology	
Enthusiasm	Professional Dispositions	Enthusiasm
	Good communicator	
	Student rapport	
	Professionalism	
	Working with the community	
	Initiative	
	Task oriented	
	Businesslike	
	Enthusiasm	
Task-Oriented and Businesslike Behaviors	Classroom Management	Classroom Management
	Proximity	Proximity
	Pacing	Routines
	Student management	Planning
	Routines	Supplies
	FFA Advising	Organization
	SAE Management	Objectives
	AET	Pacing
	Fundraisers	Time management
Student Opportunity to Learn	Content Knowledge	Appropriate Content
	Scaffolding	Real World
	Application of Content	Grade Level
	Cross curriculum	Academic Language
	STEM	Evaluation
	Career Exploration	Review
	Questioning	
	Providing feedback to students	
	Coaching	
	Assessing Student Learning	
	Evaluation	
	Test	
	Pretests	
	Review	

Note. Table 3 identifies second-round codes provided by the cooperators, comparing them to the characteristics of Rosenshine and Furst (1971).

advising, AET, fundraising, and SAE management. Both FFA advising and SAE management were identified as strengths and areas for improvement, whereas AET and fundraising feedback were considered strengths. Even though there was minimal feedback provided to student teachers in this area, it is still a valuable finding, as it provides the teacher preparation program at OSU an opportunity for growth and improvement for future student teaching internships.

Conclusions/Recommendations/Implications

The purpose of this study was to investigate the nature of cooperating teacher feedback during a 15-week student teaching internship in order to provide a snapshot of the strengths and weaknesses of future agricultural education teachers as identified by cooperating teachers. This snapshot allows the SBAE teacher preparation program at OSU to assess the impact of methods, pedagogies, procedures, and dispositions taught during the student's time in a formal agricultural teacher preparation program. In addition, the findings of the study informed the alignment of new certification mandates with the curriculum.

Content analysis of the data revealed cooperating teachers provide valuable feedback in the form of strengths shown in and out of the classroom along with areas of improvement for student teachers. This feedback is congruent with the findings of Shoulders, Edgar, and Bolton (2016) who reported site supervisor feedback as an influential portion of the student teaching experience and valued by student teachers. Student teacher efficacy was not a concern of this study; however, cooperating teacher feedback did focus on more strengths than areas of improvement during the 15-week internship which may have been a result of feedback fatigue or a genuine assessment of student teacher growth as a result of structured feedback (Edgar et al., 2009). The social nature of the student teacher/cooperating teacher relationship could also account for the feedback trend exhibited by cooperating teachers. The nature of the feedback provided by cooperating teachers amplified the pedagogical training student teachers received in the OSU teacher preparation program, particularly when referencing effective teaching behaviors (Fosnot, 1996). Cooperating teachers are important stakeholders who are valued as seasoned teachers, possessing tacit knowledge in contextualized teaching and learning who serve as a bridge between theory and practice. Teacher preparation programs rely on cooperating teachers to provide student teachers feedback through a variety of contextual lens (Jones, Kelsey, & Brown, 2014), allowing the agricultural education teacher preparation program at OSU to identify trends that may reflect congruence (or not) between teacher preparation training programs and the field. A variety of feedback was offered to student teachers; some of the feedback was very general in nature with little depth of meaning, e.g., "good job," "I liked it," or "needs improvement". However, the utilization of an open-ended feedback evaluation provides an opportunity to identify and practice strengths and mitigate for weaknesses. Written feedback is an asset to student teachers and can provide evidence of strengths and shed light on areas where improvement is needed, all while establishing documentation for teacher certification and building "a successful mentoring relationship" (Jones et al., 2014).

Rosenshine and Furst's (1971) five effective teaching characteristics were identified within the cooperating teacher feedback. Effective teaching characteristics were identified

in both of the major themes identified via content analysis. Strengthening the conclusion, student teachers possess knowledge and skills as it relates to effective teaching. The identification of these effective characteristics with the cooperating teacher feedback serves to inform the OSU SBAE teacher preparation program that cooperating teachers are reinforcing the pedagogical training student teachers are receiving, including those characteristics of effective teaching which are taught throughout the program. Many of the characteristics identified through this study can be used to inform decisions outside of Oklahoma as they are supported by the findings of Roberts and Dyer's (2004) study of 40 effective characteristics of agriculture teachers in Florida, along with the findings of the replicated study of Eck et al. (2019). The development of effective teaching characteristics serve as an important element in the social environment that includes the university, cooperating teacher, and student teacher (Fosnot, 1996). The reinforcement of the knowledge, skills, and dispositions highlighted in the teacher preparation program via cooperating teacher feedback is an important message that needs to be nurtured and reinforced through cooperation and collaboration (Borko et al., 1992). The need for purposeful feedback reinforces the importance of cooperating teacher selection when placing student teachers to foster pertinent skills (Borko et al., 1992; Edgar et al., 2009).

Few cooperating teachers took the time to evaluate student teachers on any aspect other than classroom instruction, even though they were prompted to conduct four of their 20 observations outside of the formal classroom setting. The teacher who did provide feedback relevant to FFA and SAE provided evaluations during fundraising efforts, field-trips, and National FFA convention. The focus on instructional feedback aligns with Smalley, Retallick, and Paulsen (2015), specifically, feedback featuring the classroom and laboratory held the greatest importance to student teachers. Although it is important to consider the three-circle model (Figure 1) as an integral part of a comprehensive agricultural education program, this study relied on evaluations that were primarily focused on the classroom and laboratory, thus future evaluations should be more reflective of the complete duties the position requires. To help foster this, greater emphasis should be placed on the need for informal teaching evaluations in programs such as FFA and SAE by cooperating teachers. It is recommended that future studies highlight the informal teaching and learning that occurs outside the classroom through FFA and SAE (Talbert et al., 2005). The researchers were unable to determine if this feedback was provided informally through the mentoring process, since it was not offered through formal, structured feedback.

Researchers sought to gain a deeper understanding of future SBAE teachers' teaching behaviors, including strengths and areas needing improvement as determined by their cooperating teacher. The overarching experience and social interaction found within the feedback cycle provided both confirmation of understanding and newfound knowledge for the student teachers aligning with Doolittle and Camp (1999) through social constructivism. Although beneficial to the agricultural education department at OSU, transferability may guide future research at similar institutions, as the qualitative research design is not intended to generalize outside the current study.

The results of this exploratory study are encouraging and the research team recommends future research be conducted on a larger scale, i.e., multiple student teaching cohorts should be analyzed or taken as individual cases to determine if similar feedback is

offered (Privitera, 2017). Additional recommendations for research include the investigation of the quality and quantity of feedback through different stages of the student teaching internship e.g., when is the feedback provided? What is the quality of the feedback? Does the feedback show growth throughout the experience? Is the feedback consistent? A study of this nature would inform the professional development training of cooperating teachers. This could also help to connect earlier career success with the appropriate mentorship through the student teacher/cooperating teacher relationship. Another study could also look to determine the impact of poor feedback and communication between the mentor and mentee and how that impacts future perceptions of mentors and guidance. Outside of structured feedback, research is needed to examine informal feedback that is provided to the student teachers from the cooperators. Student teachers anecdotally seem to value cooperating teacher feedback, but research evaluating the benefit and helpfulness of the feedback from the student teachers' perspective provides a new outlook on the value of feedback in a student teaching experience. The analysis of feedback helps confirm the importance of the pairing of the cooperating teacher and student teacher (Fosnot, 1996; Korthagen & Kessels, 1999), providing additional evidence for the teacher preparation program at OSU that the purposeful placement of student teachers is effective.

In terms of a recommendation for practice, SBAE teacher preparation programs should provide yearly professional development training of cooperating teachers, with a specific focus on the pedagogy of teaching and learning and effective communication strategies to use with student teachers. Some SBAE teacher preparation programs already provide such training, but providing professional development training consistently, with research supporting the topics, would provide a more meaningful experience for all involved. Many institutions use similar models to evaluate student teachers through cooperating teacher feedback. This study identified the nature of feedback, highlighting the need for comprehensive feedback forms providing robust feedback to student teachers and university supervisors. The majority of feedback identified strengths within the classroom, however, the evaluation of FFA and SAE experiences should be integrated in the comprehensive feedback provided to the student teacher. Leading to the additional emphasis which should be placed on the FFA and SAE component of a complete SBAE program (National FFA, 2017), allowing student teachers to receive valuable feedback related to those components.

References

Borne, C., & Moss, J. W. (1990). Satisfaction with agricultural education student teaching. *Journal of Agricultural Education, 31*(2), 29-34. https://doi.org/10.5032/jae.1990.02029

Borko, H., Eisenhart, M., Brown, C. A., Underhill, R. G., Jones, D., & Agard, P. C. (1992). Learning to teach hard mathematics: Do novice teachers and their instructors give up too easily? *Journal for Research in Mathematics Education, 23*, 194-222. https://doi.org/10.2307/749118

Conner, N., & Roberts, T. G. (2013). Competencies and experiences needed by pre-service agricultural educators to teach globalized curricula: A modified Delphi study. *Journal of Agricultural Education, 54*(1), 8-17. https://doi.org/10.5032/jae.2013.01008

Darling-Hammond, L. (2000). *Solving the dilemmas of teacher supply, demand, and standards: How we can ensure a competent, caring, and qualified teacher for every child.* New York, NY: National Commission on Teaching and America's Future.

Deeds, J. P., Flowers, J., & Arrington, L. R. (1991). Cooperating teacher attitudes and opinions regarding agricultural education student teaching expectations and policies. *Journal of Agricultural Education, 32*(2), 2-9. https://doi.org/10.5032/jae.1991.02002

Doolittle, P. M., & Camp, W. G. (1999). Constructivism: The career and technical education perspective. *Journal of Vocational and Technical Education, 16*(1).

Eck, C. J., Robinson, J. S., Ramsey, J. W., & Cole. K. L. (2019, February). Identifying the characteristics necessary for becoming an effective agricultural education teacher: A nationwide study. Paper presented at 2019 American Association for Agricultural Education Southern Region Conference, Birmingham, AL. Retrieved from http://aaaeonline.org/resources/Documents/Southern%20Region/2019SouthernConference/PaperProceedingsAAAESouthernRegion2019.pdf

Edgar, D. W., Roberts, G. T., & Murphy, T. H. (2009). Structured communication: Effects on teaching efficacy of student teachers. *Journal of Agricultural Education, 50*(1), 33-44. https://doi.org/10.5032/jae.2009.01033

Edwards, M. C., & Briers, G. E. (2001). Cooperating teachers' perceptions of important elements of the student teaching experience: A focus group approach with quantitative follow-up. *Journal of Agricultural Education, 42*(3), 30-41. https://doi.org/10.5032/ jae.2001.03030

Fosnot, C. T. (1996). *Constructivism: Theory, perspective, and practice.* New York, NY: Teachers College Press.

Fosnot, C. T., & Perry, R. S. (1996). Constructivism: A psychological theory of learning. In Fosnot, C. T. (Ed.). *Constructivism: Theory, perspective, and practice* (pp. 8-38). New York, NY: Teachers College Press.

Guyton, E., & Byrd, D. (2000). *Standards for field experiences: Task force on field experiences standards.* Association of Teacher Educators. Retrieved from http://www.ate1.org/pubs/upload/fieldexpstndards.pdf.

Harlin, J. F., Roberts, T. G., Dooley, K. E., & Murphrey, T. P. (2007). Knowledge, skills, and abilities for agricultural science teachers: A focus group approach. *Journal of Agricultural Education, 48*(1), 86-96. https://doi.org/10.5032/jae.2007.01086

Jones, C. K., Kelsey, K. D., & Brown, N. R. (2014). Climbing the steps toward a successful cooperating teacher/student mentoring relationship. *Journal of Agricultural Education, 55*(2), 33-47. https://doi.org/10.5032/jae.2014.02033

Korthagen, F., & Kessels, J. (1999). Linking theory and practice: changing pedagogy of teacher education. *Educational Researcher, 28*(3), 4-17. https://doi.org/10.3102/0013189X028004004

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

National FFA Organization. (2017). *Official FFA manual.* Indianapolis, IN: Author.

National Council for the Accreditation of Teacher Education (NCATE) (2001). *Standards for professional development schools.* Retrieved from http://www.ncate.org

Oklahoma State University Agricultural Education Student Teaching Handbook. (2018). *Handbook for student teaching internship.* Retrieved from http://aged.okstate.edu/student-teacher

Privitera, G. J. (2017). *Research methods for the behavioral sciences* (2nd ed.). Thousand Oaks, CA: SAGE

Rayfield, J., Murphy, T., Briers, G., & Lewis, L. (2012). Identifying innovative agricultural education programs. *Journal of Career and Technical Education, 27*(2).

Roberts, T. G., & Dyer, J. E. (2004). Characteristics of effective agriculture teachers. *Journal of Agricultural Education, 45*(4), 82-95. https://doi.org/10.5032/jae.2004.04082

Rosenshine, B., & Furst, N. (1971). Research on teacher performance criteria. In B. O. Smith (Ed.), *Research in teacher education* (pp. 37-72). Englewood Cliffs, NJ: Prentice Hall.

Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). Thousand Oaks, CA: SAGE.

Shippy, R. D. (1981). Professional competencies needed by beginning teachers of agriculture/agribusiness. *Journal of the American Association of Teacher Educators in Agriculture*, *22*(1), 29-34. https://doi.org/10.5032/jaatea.1981.01029

Shoulders, C. W., Edgar, D., & Bolton, A. (2016). Variability versus continuity: Student teachers' perceptions of two university supervision formats. *Journal of Agricultural Education, 57*(2), 161-171. https://doi.org/10.5032/jae.2016.02161

Smalley, S. W., Retallick, M. S., & Paulsen, T. H. (2015). Relevance of student teaching skills and activities from the perspective of the student teacher. *Journal of Agricultural Education, 56*(1), 33-47. https://doi.org/10.5032/jae.2015.07073

Talbert, B. A., Vaughn, R., & Croom, D. B. (2005). *Foundations of agricultural education.* Caitlin, IL: Professional Educators Publications.

Tom, A. (1997). *Redesigning teacher education.* Albany, NY: SUNY Press.

Young, M. (1990). Characteristics of high potential and at-risk teachers. *Action in Teacher Education, 11*(4), 35-39. https://doi.org/10.1080/01626620.1990.10463099

Zeichner, K. (1990). Changing directions in the practicum: Looking ahead to the 1990s. *Journal of Education for Teaching 16*(2), 105-132. https://doi.org/10.1080/0260747900160201