

Induction Programs for Beginning Agriculture Teachers: Research-Based Recommendations on Program Structure and Content

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Abstract

The shortage of teachers, specifically agriculture teachers, has been established and literature shows us why some teachers choose to leave. The question remains, how can we provide induction programs to agriculture teachers that support their unique needs and ultimately retain beginning agriculture teachers in the profession long term? This longitudinal qualitative case study began with eight traditionally certified beginning agriculture teachers and concluded with six completing the three-year study. The collective case study gathered data from site visits, monthly interviews, and annual focus groups. Recommendations were made for components that should exist in an induction program for beginning agriculture teachers. The content beginning teachers may need, how to structure a program, and items mentors and facilitators need to be aware of when providing a comprehensive program are provided. Recommended components include developing a supportive community among the teachers, providing “as needed” resources, multiple mentors, feedback on teaching, and structured reflection.

Keywords: beginning teachers; agriculture teachers; mentoring; induction programs

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Introduction

The greatest challenge facing education is the lack of qualified teachers. The United States attrition rate for teachers was approximately 8% from the mid-2000s to mid-2010s (Ingersoll, 2002; Sutchter et al., 2016) which was significantly higher than other high achieving countries which ranged from 3% - 4%. The teacher shortage is directly affecting agricultural education and the quality of agriculture programs nationwide. Policy allowing teachers who are not fully certified into the classroom helps with the immediate

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need for teachers but does not always yield a long-term solution (Sutcher et al., 2016). The need for agriculture teachers is well-documented (Camp et al. 2002; Foster et al., 2016; Kantrovich, 2010; Smith, et al., 2017, 2018, 2019). While teacher recruitment is key to a long-term solution to teacher shortage, the most immediate solution lies in teacher retention (Ingersoll, 2002). Sutcher et al. (2016) supported this notion by stating “reducing attrition by half could virtually eliminate shortages” (para. 7).

Challenges facing education policy, such as the nationwide teacher shortage, meets the definition of a wicked problem (Rittel & Webber, 1973) due to the complexity of the challenge and the many factors that contribute to the issue. One factor contributing to the teacher shortage is teachers leaving the profession, especially in the early years of their career. Beginning teachers have attrition rates even higher than the national average (Sutcher et al., 2016) and those who are not fully prepared to teach leave at the highest rates. Factors contributing to the teacher shortage include increased demands on teachers, more teachers being needed and a shortage in supply with fewer students entering undergraduate teaching programs (Sutcher et al., 2016). The cost associated with re-hiring and re-training a teacher is significant, ranging from nearly \$10,000 per teacher in suburban areas to up to \$26,502 in high-need urban areas (Watlington et al., 2010). Ronfeldt et al. (2013) also suggested high rates of teacher transition create financial impacts on school districts as well as strains on human resources working to mentor and train the new teachers.

According to the National Agricultural Education Supply and Demand Study (Smith et al., 2019) in 2018 there were at least 1,092 new agriculture teachers hired nationwide. Of these, 618 were traditionally certified through an undergraduate, graduate, or licensure program, leaving 363 alternatively licensed and 111 non-licensed. There is a significant need nationwide to serve all beginning professionals. To satisfy this need, challenges facing beginning teachers must be identified and addressed in an induction program. There needs to be a focus placed on induction support for early career teachers, those in their first years of teaching. Igo and Perry (2019) cited the top teacher training/professional development need of teachers who left the teaching profession was “inadequate training to support the position” (p. 117). The teachers in their study who left the profession averaged 3.25 years in the classroom, thus, an effective induction program needs to span beyond the first year of teaching.

Prior research addressed content-specific needs of beginning agriculture teachers identified by Myers et al. (2010) including classroom management, advising the FFA Chapter, curriculum development and lesson planning. These items were identified as “major problems faced by beginning agriculture teachers” (p. 50). Figland et al. (2019) found agriculture teachers with 1-5 years of experience wanted professional development related to teaching in a laboratory and managing instructional facilities.

Finally, teacher retention ultimately influences future teacher recruitment. Clemons and Lindner (2019) stated that former teachers have the greatest influence on a student’s decision to pursue agricultural education as a career. Investments in our beginning teachers will increase retention, improve quality of instruction, and have a positive impact on recruiting future generations of agriculture teachers.

Across the nation, the support for beginning teachers varies in expectations, requirements, and funding. Moore and Swan (2008) categorized induction teacher activities as high intensity and low intensity. High intensity activities included networking, on-site visits, mentoring, college credit and group sessions. The low intensity activities included orientation, collaboration, and less formal mentoring. For the agricultural education profession, it is essential for beginning agriculture teacher programs to be designed with the specific needs of agriculture teachers in mind. There exists a paucity of research to adequately support the ideal content and structure of such programs based on input from teachers in their induction years.

Teacher induction programs must be structured to meet the unique needs of beginning teachers. Fessler and Christensen (1992) designed the *Teacher Career Cycle Model* that included eight stages teachers move through during their career: preservice, induction, competency building, enthusiastic and

growing, career frustration, career stability, career wind-down and career exit. Most pertinent to this study is the induction stage of the model that focused on the first few years of employment and discussed how teachers are socialized into the school environment (Fessler & Christensen, 1992). During this stage, teachers sought acceptance by everyone around them: administration, faculty, and students. Induction stage teachers were generally unsure of their own ability to effectively teach but were treated just like their veteran peers which caused them to enter survival mode when they focused on day-to-day decisions rather than long-term planning. This survival mode naturally caused the teachers to question their career and wonder if it gets better (Fessler & Christensen, 1992). Once the teachers broke through the survival mode, they thought more about teaching strategies and learner outcomes.

Moir (1990) elucidated the experiences specifically within the first year into phases including anticipation, survival, disillusionment, rejuvenation, reflection, and a return to anticipation. Becoming familiar with the phases beginning teachers may experience and specific points in the year when they may need additional support allows for development of a comprehensive teacher induction program to develop teacher's self-efficacy in managing all aspects of their position as well as their emotional response to their experiences.

To ensure professional development is effective, Desimone (2009) suggested five core features that should be present in all professional development: focus, active learning, coherence, duration, and collective participation. Desimone (2009) further outlined that professional development includes formal and structured activities as well as casual hallway conversation, and that all learning activities in which teachers engage in contribute to their growth.

Purpose and Objectives

This phenomenological collective case study sought to understand the experiences of beginning agriculture teachers during their first three years of teaching to determine what content should be provided in an induction program and how a program should be structured to meet their unique needs. The study was guided by the following research questions:

1. What content should be provided in an induction program to meet the needs of beginning agriculture teachers?
2. How should an induction program be structured to meet the needs of beginning teachers?

Conceptual Framework and Methodology

The findings presented in this article are the result of a larger investigation – an extensive three-year longitudinal qualitative study. The conceptual framework and methods sections which would normally appear here are excluded. These sections are identical to those presented in a companion article also under review that was drawn from the same study titled “Successes and Challenges Experienced by Beginning Agriculture Teachers in their First Three Years: A Collective Case Study” (Disberger et al., under review).

In summary, the conceptual framework draws from constructionism to understand the lived experiences of beginning teachers. Pragmatism allowed for multiple methods of data collection and to apply practical implications. Phenomenology was selected due to the complexity of the beginning teacher experience. The methodology of the study focused on eight participants were graduates in agricultural education in the mid 2010 decade who taught agriculture in Kansas, there were seven females and one male. Methods included a site visit, monthly semi-structured interviews, focus groups and reflection guides completed annually throughout the three-year study. Guided by grounded theory data analysis (Corbin & Strauss, 2015) the open, axial, and selective coding was conducted by the researcher. To ensure rigor and trustworthiness, participants were part of a bounded system (Tracy, 2010). Interviews and field notes taken during the interviews were analyzed solely by the researcher. Reflective journaling and an extensive audit trail were utilized throughout the analysis process (Creswell, 2018). Potential bias was addressed through

a subjectivity statement that identified the researcher's background with the participants and positioned them within the research (Jones, et al., 2006). Data were provided to a peer/colleague for review during each step of the coding and analysis process. Triangulation (Tracy, 2010) was established through multiple data sources including end-of-year focus groups. Through analysis, major themes emerged. The collective case study (Stake, 1995) approach was used to understand the unique experiences of this group.

Results

The research objectives were to determine the content and structure to best meet the needs of beginning agriculture teachers in an induction program. Following the flow of the school year, data were divided into four academic quarters per year yielding 12 independently analyzed quarters of data. Throughout the 12 quarters of data collection, themes were identified related to induction program needs. These themes included program management, personal, community, and school. Once the initial themes were categorized, the areas of support an induction program could impact emerged under content, structure, and awareness. Content included theme topic areas that could be provided through professional development, structure suggested how teachers wanted to be supported and awareness were items unrelated to content or structure, but topics that would inform individuals supporting induction teachers.

Key Findings

Content related needs in Year 1

The teachers were concerned about obtaining supplies and equipment they needed in the agriculture program. For some it was figuring out how to request supplies for labs and a timeframe that assured processing through the school to acquire them in time for instruction. Clare said,

I felt like anytime I had questions it was just a matter of asking who the right person is, I'm needing to put in a lot of requisitions to get my CASE [Curriculum for AgriScience Education] supplies...we've been having some issues with accounts and they are saying it is correct, but the system is saying it's not correct ... that's the biggest headache.

For others, significant time and effort were invested in seeking external funding for the agriculture program to obtain larger equipment such as welders and greenhouses. Sophia said "I just finished two grants this month. I sent one off today...I am doing everything I can to help our department grow and get a greenhouse." They viewed the lack of supplies and/or equipment as a hinderance to the quality of teaching they could provide. Clare said,

I'm waiting to hear about a [Company] grant and then I'm working on another grant application. I just want to make sure so I can start requisitioning equipment and that it gets processed on time, with our district office that has been a huge issue.

Similarly, Paige said "we have major ventilation problems in the welding shop." A lack of communication with the administration, perhaps caused by the teachers not asking, on how to obtain necessary or desired supplies was present.

Student management was a theme throughout the year, however, the focus of the challenge evolved. At the beginning of the year, the challenge was helping students adapt to having a new teacher, as Crystal emphasized,

A lot of the students didn't do much last year, there wasn't much planning, the students would see the teacher plan right as they came into class, they would do one thing and then they would do nothing the rest of the hour.

Once relationships were established, there was a challenge managing each student having their own technology, having the technology ready to use, and using it in a productive manner. This was further complicated by trying to manage the personal devices students brought into the classroom, Sophia said "a lot of kids are like 'oh I don't have mine charged' or 'I forgot it at home' ...today [Student] was using his phone to look it up because he said his iPad was at home charging." Later in the semester, the technology

challenges were nearly absent as teachers identified ways to manage and utilize the technology in the classroom. The theme transitioned to student motivation toward the end of the first semester. Hank said, “it seems like I am finding that I put more priority on teaching these kids how to behave than...the actual content.” Wendy talked about students not being motivated by grades, “they don’t care about grades...they don’t care about anything, so I think that’s my most difficult problem right now is students not caring.” The lack of motivation was evident again toward the end of the school year as Claudia said, “with the nicer weather they are just crazy and want to be outside...it is hard to stay motivated.” During the fourth quarter there was an increase in significant student behavior infractions such as using illegal substances and posting inappropriately to social media.

Teachers sought support related to the Supervised Agricultural Experience (SAE) and FFA responsibilities of their position. For those who attended National FFA Convention, there was a lot of planning and anticipation, Claudia said, “National convention is coming up so taking kids...to a conference I have only been to once before, I am a little nervous about.” Similarly, Wendy said “I definitely understand why we have extended contracts now...I don’t think anyone realizes except advisors how much time, effort you have to put in for everything to go right.” Due to lack of finances or support, not all attended National FFA Convention. Beginning teachers used Career Development Event (CDE)/ Leadership Development Event (LDE) success or lack of success as a measure of their personal, student, and program success because during the first few months of the school year, this may have been the only measure they had. Hank said,

Our greatest success was last week, we had our district CDE’s and...we were able to take home third as a team and had a top individual and the second individual in the top 10, so that was a good experience.

During the second academic quarter, the FFA fundraising activities were very demanding (fruit and meat sales, concession stands, etc.) on their time and the teachers sought support on how to manage them. Crystal said, “Today our fruit and meat truck actually arrived while I was trying to figure out what was the best way to be organized and trying to deal with the orders and I never really experienced that.” Another challenge was SAEs. Teachers all knew they should be exposing students to Supervised Agriculture Experience (SAE) Programs, but this tended to be the third circle of the Agricultural Education Model that simply fell off their already very full plates. Crystal did not realize she had overlooked SAEs until selection day, “I was at selection day, it just hit me, I didn’t do any proficiencies, any state degrees, I didn’t do any of that. So, I was just like, oh my God I feel like a terrible teacher.”

During the second quarter of the year, the teachers had become aware of the agriculture content and/or delivery they lacked and were working to grow in those areas, Hank said he was working to “fill the void of content that I’m not as familiar with by using outside resources or asking for help.” Others were experiencing more challenges related to how to deliver content. Sophia talked about how using a lot of PowerPoints was not working so she was looking for other ideas. She said, “when we just sit there and do notes, yeah, it is boring, but I try to explain to them that you got to get through it.”

The teachers were constantly seeking a better work/life balance and for this group of teachers, doing so was especially hard when they experienced a mid-semester morale slump in both the fall and spring semesters. By the end of the first quarter, they had identified it as a problem and were seeking solutions, Helen said.

I’m trying to balance home time and work time and it is challenging because I feel like I have a lot more planning to do than I would necessarily in the future. So being able to mark out my time that I have on the weekends is what I’ve been trying to do lately, but that’s challenging.

When they did take time for their friends and family, they felt guilty when they returned to school because they were not as prepared as they wanted to be. The breaks in the school year helped with this challenge, Claudia said “over the Christmas break is a lot of life and not much work so that helped with balance.” It is not just physically being at work, but also the toll it took on their thoughts, Crystal said “I laid awake last night thinking of all the things I have to do because my mind wouldn’t shut off.”

Program Structure needed in Year 1

The teachers were craving feedback, grasping for any measure of success they could find and the primary measure provided was CDEs for FFA success. Clare was complimented by a parent during fruit pick-up, a mother said, “it was the most organized fruit pick-up ever” and this compliment was very motivating. Finally, Hank, Wendy and Paige all talked about getting new students into the program and how they viewed that as positive feedback. These examples show they received so little feedback, they held on tightly to anything they could find. For many reasons, administrators were not providing the type of feedback teachers sought on classroom performance and there were no measures or accountability for SAEs.

The teachers relied on both informal and formal mentoring. Rather than a single designated mentor, they utilized multiple individuals to serve different roles. A mentor for agricultural education located within their FFA district made it easier to connect because they saw them regularly. Hank said, “he and I spoke at land judging, and we spent about 30 minutes talking on the subject of outside (shop) projects and he gave me some very truthful advice.” Early on, the beginning teachers reached out to their former cooperating teachers, but as the year progressed, they were more likely to reach out to an agriculture teacher in their district at an event. There was also a need for a mentor to help understand the processes and procedures of the school. This quote from Crystal also identifies why the mentors should be in a common FFA district, “Today we just had our district meeting and I guess you just – every time we meet up you get a lot of new ideas, so I guess I would say I’m not afraid to ask those questions.” Finally, they utilized peers to help with idea-generation and to measure their successes and challenges against those of someone with a similar background and experience. Within this group of teachers there existed self-created peer pairs of which both parties talked about reaching out to a specific peer for advice and support.

Beginning teachers thrived when surrounded by an agricultural education support system in addition to mentoring. This group of teachers engaged in statewide agricultural education professional development because they were seeking the connection with other current and beginning teachers who could relate to their unique experiences. The teachers were sponges for new information, they engaged with the professional development and provided multiple examples of how they applied it in their classrooms once they returned home. Beginning teachers need to be connected with their peers and exposed regularly to professional development. Claudia reflected on the Ag Ed Symposium, “I just see all my classmates again and then other teachers to get to know more resources that I can use in my classroom for the rest of the year.”

This group of teachers experienced multiple highs and lows throughout their first year. Although they each had a unique journey, collectively they started with very positive attitudes, describing the beginning of the year as “exciting.” However, after returning from the National FFA Convention, experiencing parent-teacher conferences, and engaging with fall fundraising events, they became “overwhelmed.” The fall and winter breaks provided time for more balance in their lives, and they began the second semester feeling “rejuvenated.” However, by the end of February they had FFA events, National FFA Week Celebrations, applications due, parent-teacher conferences demanding their time, and this quickly took its toll. Some teachers were not able to come out of the spring “slump” while others recovered to celebrate the end of the semester. Hank said, “We have students gone all of the time and we have accomplished a lot and looking at all the ideas that I have and would have like to have done, it just has to wait until next year.” At the end of the year, they were reflective, they knew the areas in which they wanted to grow and set clear goals for what they would accomplish over the summer.

Awareness related to Year 1

As young professionals, they were getting married, having children, relocating significant others and/or spouses, and they were still engaged with their family and perhaps farming operations, but rarely living in their home community. Rather, they were living in a community where they may only know individuals through the school. They were working to meet the professional development and licensure requirements of the state, and many were contemplating their next professional move, will they engage with graduate school or consider a different profession in the future? During her first semester of teaching, Wendy was already contemplating her master's degree options and planning ways to pay off college loans.

Content-related needs in Year 2

In year two, the teachers had a greater understanding of their FFA and classroom roles and were more willing to engage in growing the SAE circle. Claudia said "I need to start picking up on my SAE part. That was easily my weakest last year, but I realize that and this year I am going to do a lot more with it, like schedule some visits." The teachers who were trained in "SAE for All," talked about different tools and a new outlook on SAE when compared to their peers. They felt like SAE was more practical and possible to implement in their program.

The teachers in year two increased purposeful parent/community communication. The teachers more readily reached out to parents in both formal and casual ways about student performance. They were also more open to parent involvement in the program and invited them to events and/or created parent-specific communication about the program. When Helen moved into a new community, she hosted an event including parents because she knew this was an area she wanted to improve upon after her first-year teaching experience. Hank said, "this year I can be a little bit more honest about what I need from them [community]. Last year it was just a little bit overwhelming...but this year I think I know who I can be honest with." To increase her communication with the community, Crystal said "I have an FFA Facebook so I've been trying to really utilize that...so it's really helped."

There was an impact on beginning teachers who felt separated in some way. For example, not having lunch with other teachers, being split between high school and middle school responsibilities and faculty, or physical separation because of their facility locations. Hank described his separation, "the fact that I am 300 feet away from the closest classroom, and I am in a completely separate building, I find that I really unless I need something from the main building I am not up there."

Program Structure needed in Year 2

The teachers who moved schools between year one and two were not formally assigned a new mentor at their new school. Instead, these teachers tried to seek out their own mentors or even parents to provide support and answer questions. Those who remained in the same school did not necessarily have a mentor, Wendy said "my FCS teacher (mentor) retired, so I don't have her anymore. I don't blame her, but I don't know who I talk to." There was a need for a school-based mentor for teachers who transitioned schools, the support needed was largely related to school processes and culture. For the teachers who continued into their second year at the same school, they continued to use a school-based mentor, but it may not have been their official mentor due to connecting with another teacher better or their formal mentor leaving. The teachers still expressed a need for school-based mentoring, although they used it significantly less than in year one. The teachers readily discussed using their go-to, self-selected, mentor in agricultural education. They still utilized peer mentors as well. Hank described what he was looking for in a mentor during his second year,

It really didn't get in depth, and it really wasn't a lot of value in the mentoring process. So, I think that the – having someone on a more personal level within my school system that I would consider as a mentor was much more valuable to me. And we did not have set questions, or we didn't have

set schedules when we were going to meet, it was extremely informal. But I think that at the same time it was more valuable in the case that it was very down to earth and comfortable to do so, so that was my experience.

Awareness related to Year 2

Beginning teachers struggle with work/life balance and time management. However, due to their lack of personal demands (perhaps not being married or having children) they volunteered or are asked to do more in the school when compared to some veteran teachers. For this group of beginning teachers in year two, five of the seven took on significant additional responsibilities in addition to agricultural education/FFA in their schools. These decisions were motivated by a notion it could help them get to know more students and get them out of their classrooms. However, they readily talked about how it also took away from their time to be the teacher and FFA advisor they would like to be. Claudia said, “now that volleyball is over, I find a lot more time to make really fun lessons.” These beginning teachers were not yet comfortable saying “no” and recognized they often took on more than they should.

Content-related needs in Year 3

In the third year, student management was rarely an issue, Wendy said, “I definitely noticed that I have more confidence in myself... you don’t give them any chance to do anything [related to student management].” However, teachers could identify student motivation issues and they were challenged to determine how to develop the “desire to learn.” Student motivation was a major challenge in all areas of their jobs as teachers, and they sought strategies to motivate students in the classroom, to be engaged with FFA events at a higher level and to establish SAE programs. Claudia said, “I had some students that they are really lazy and they just like, I’ll give them directions, or I’ll tell them something and not even five seconds later they ask me a question about what I just said.” The teachers felt like they know how to help and prepare students, but students were not motivated to engage. Clare described this lack of motivation in the classroom as “disheartening when they are like ‘why are we learning this?’ Or ‘why are we doing this’ or ‘why aren’t we down at the shop today?’” Paige noticed less participation in FFA events and Helen said, “I’ve had some challenges in my shop classes with student participation.”

The teachers were clearly more experienced in creating or finding curriculum, tweaking it and then adding to it because they knew of tools to make it more student centered and engaging. They were moving through the content at a faster pace in year three, Claudia said “I was like way ahead of schedule compared to last year.” Clare’s focus was on “one class that I’m definitely revamping is welding one and two next year.” The teachers were able to identify the types of curriculum they needed. Some needed content to which they could add their personal touch, while others needed creative ideas to enhance the content knowledge they possessed.

The teachers made a concerted effort to increase communication with the community. Methods used included newspaper articles, newsletters, or social media. This effort was immediately rewarded by supportive comments, community volunteers, and increased engagement with community activities. Claudia said, “we’ve been putting more stuff in the newspaper...so more community members are seeing our success there and everyone is always so positive.” However, there is also a drawback to the increased attention, Helen said,

They were like, ‘can you do this for us,’ or ‘could you do that for us?’ Then the springtime is just as busy as usual so kind of makes it difficult to cram more stuff into what we already have planned.

It was more difficult for teachers in multi-teacher programs to get connected with the community as community members contact the teacher, they know best; this was especially hard for teachers who did not reside in the community. Paige said, “I don’t live in the community. It’s really hard...I think that’s probably always going to be the challenge until we live closer.”

As personal life events changed for this group of teachers (engagements, marriages, and children), work/life integration also evolved. Early in the year there was a lot more work than life, however, data were not collected over the summer and there could have been more "life" in the summer than there is in the school year. Later in the year, there were examples of working through work/life balance challenges through some integration, for example, inviting the family along during greenhouse sales. During the month of April several examples arose of spouses stepping up and helping with the jobs normally done by the teacher, knowing it would balance back out in the summer months. Helen said, "It's just, I don't know like early mornings, I'm seeing that a lot, my husband should feel neglected, but I plan to just make up for that in the summer months." Some teachers were more comfortable with work/life balance via compartmentalization while others were more satisfied with a work/life integration plan.

Professional development was readily sought out by this group of teachers, but it appeared to come at a cost. Many were highly engaged with professional development over the summer but did not ensure there was an adequate break. Clare said, "I was only in town for 17 days" after balancing both professional and personal travel over the summer so much that she started the school year "burnt out from the summer."

Program Structure needed in Year 3

The teachers could readily identify what they did not know related to content and/or program management. While they did not feel the need for a traditional mentor, they needed "go-to" people for the specific questions they had. The teachers wanted to work with beginning and experienced teachers to exchange ideas on specific areas of growth they had identified to benefit them as a teacher and their program. They were making decisions based on their work/life balance to give up some additional responsibilities and make room for family. Crystal said, "on the dance team side, I have to think about what I want to do on that, if I am going to do it (next year)." They shared less need for formal and frequent events and activities but a desire for deeper discussion on specific topics. For example, Paige was seeking mentors to specifically help with "middle school and interactive notebooks" while Clare left state FFA convention with goals to get students on stage and said, "you know we are going to reach out to [ag teacher] and hopefully he can help us get through the whole process."

Awareness related to Year 3

The teachers in their third year no longer felt like novice teachers, but they were not sure they were ready to serve as formal mentors yet. They shared a desire to "give back" to the profession but were unsure as to how they could do so. They felt they could relate well with beginning teachers, having recently experienced their first year, and have some experiences they would like to share. However, they readily realized they still have a lot to learn as well.

Overarching structural considerations

There were components from the research methods implemented in this study that the teachers felt had a direct impact on their professional development, specifically the monthly interviews and the annual focus groups. When reflecting on the monthly phone calls, the teachers found them to be very valuable, especially because they were predictable, the teachers found comfort in knowing what would be asked and appreciated the forced reflection they knew they needed but would not have otherwise done on their own. In year one, Claudia said,

I think it was really good in helping me reflect on what I was doing. I'd look at my planner and see 'Oh crap! I have a call meeting today at 1 o'clock' and then I'd start thinking about the questions that I knew you were going to ask and started thinking about what I've done for the past month, and it got me, you know, realizing 'Oh yeah, I did this. I still need to work on this' and you guys pushed us to reflect, you will think about what we were doing and so us doing this has helped me.

The appreciation of the monthly conversations continued through year two, again referencing the consistency in the questions was valuable. Helen said, “having you call once a month at the end of the day and like ask me the same questions...it was kind of nice to have just a debrief.” She valued the phone calls because the researcher understood agricultural education.

In year three, Crystal said she valued the outsider perspective and the long-term support. I don’t think I would have gotten through my first two years of teaching with all the challenges. So, I’m actually really bummed that this is over, but I definitely think you having an outsider perspective helped me get through my first two years especially not having an FFA background. I knew I always could look forward to those phone calls and get the information I needed or tools and so I was really glad I stuck with this and stuck to teaching for the three years I have been a part with you because I think you know definitely, I was running for the hills this time last year to get out, just because I had such a terrible experience.”

There were mixed feelings on whether it was important for a site visit to be a part the experience. Clare said, "I don't really think the [site visit] really impacted any of my responses," however, she went on to say there was value in the informal meeting with the administrator. “It made me feel good when I walked up with you to my administrator and he was like ‘Oh are you sending student teachers to us already’...so it just felt nice, like he was totally on board.” In contrast, Hank articulated the value of the visit when he said, "I think for me having two different buildings that I physically instruct in, it was kind of nice, it enabled me to be a little more honest (during monthly interviews) about some of the challenges that I have been facing."

The focus group allowed the teachers to reflect as a group, exchange ideas, and share challenges and solutions. Clare said, "I really like this conference call because we don’t see each other all the time like we did when we were in Block [classes]. It's something to hear everyone's experiences and how different they were, and it has been actually kind of really cool. So, I don't know, getting together more often would be really nice."

Conclusions and Implications for Practice

There is a need for comprehensive beginning teacher programs that span the first three years and is unique in content and structure in each of the three years to best meet the needs of beginning teachers. Induction facilitators should consider including the topics outlined in Table 1, but it is important to note this is not an all-inclusive list. Rather, these themes emerged based on uniform feedback from the study participants. Individual teachers in this group identified other areas of content they needed and sought support from their mentors. Induction programs should incorporate a mechanism that allows input from individual induction teachers to identify the specific areas of support they needed.

Table 1

Suggested Content to be Delivered by Year

Year 1	Year 2	Year 3
Obtaining supplies and equipment	SAE	Student motivation
Student management	Parent communication	New ideas
Balancing and prioritizing FFA, SAE and classroom	Isolation	Communicating with the broader community
Agriculture content and/or delivery resources	Evaluating responsibilities	Work/life balance - life transitions
Work/life balance – new lifestyle and community		

Induction programs should focus on a comprehensive professional development program, rather than a series of events that would appear to be unrelated “snapshot” activities. Mentoring should be a component of the program but mentoring itself does not meet the needs of the beginning agriculture teacher. The program should be more formal and structured in year one and become less structured and more “self-guided” in years two and three.

Induction Program Needs in Year 1 – Content

Teachers needed coaching to identify supply and facility needs, prioritize them, and have a conversation with their administration on a short and long-term plan for how they will work together, over time, to improve the facilities and obtain the needed supplies, equipment, and professional development training. Student management resources need to be available on an “as needed” basis because the type and nature of student management challenges shifted throughout the year. Teachers should be provided support on setting expectations for one-to-one technology at the beginning of their first year, setting clear expectations, and provided opportunities to practice holding students accountable for those expectations.

Induction programs must support the development of the entire professional and provide measures of success and growth opportunities in all areas of their job responsibilities. Beginning teachers need support on managing major events and activities such as National FFA Convention and FFA fundraising best practices. Manageable strategies for making realistic progress with SAE in year one should be considered. The teachers could readily identify the content or delivery areas where they want to grow. However, they needed help identifying resources to help fill the voids they identified and provided time to ensure it happens.

Beginning agriculture teachers need to be coached on setting reasonable expectations for work/life balance and ways to maximize their time to provide more balance to prevent burn-out (Moir, 1999; Sorensen and McKim, 2014). This group of teachers employed a variety of methods to establish work/life balance from work/life integration to compartmentalization. Teachers need resources on methods to establish work/life balance and time to try them and reflect on what methods offer the best fit for them (Lambert et al, 2011). This is especially important to address before they experience the “mid semester slump.” It is recommended those working with beginning teachers provide resources related to establishing and communicating boundaries. Finally, education leaders should exercise caution when asking more of beginning teachers, such as sponsoring and coaching student activities, they need time to get established as a professional before adding more to their plates.

Structure Needs in Year 1

The beginning teachers should be brought together to create a community (virtually or physically) at least once per semester (no more than once per quarter). This helps confirm they are not the only one struggling with challenges and most of all to focus on helping them return to the classroom with solutions to specific challenges they are facing.

Professional development should be provided strategically before beginning teachers may experience the “mid semester slumps” of November and March. The teachers could be coached to think through the activities coming up and have a plan for how they will manage them to reduce surprises and set a goal for work/life balance. While we cannot prevent teachers from feeling overwhelmed, we can help them strategize to make the experience less stressful. Furthermore, induction programs that incentivize attendance at or are provided in tandem with state-wide or area agricultural education professional development should be fostered because no matter the motivation for attending these events they make a positive impact on their classrooms.

First-year teachers should be guided in identifying three mentors. One should be an agriculture teacher within the same FFA district for ease of meeting and the ability to answer district level questions and provide casual interaction at events. Another should be a teacher within their school to help them learn school culture, policies, and procedures. The teacher's school mentor should have a natural time to meet in the day such as a common planning period or lunch (Tait, 2008). Finally, a peer mentor with whom they can exchange resources and recognize they are not alone, and their experiences are not unique to them. The frequency of meetings may be higher at the beginning of the year. The highest quality mentoring relationships are based on similarities between the individuals and this should be considered when making each of the mentoring matches (Greiman, 2002).

At least one of the mentors should be trained to conduct regularly scheduled communication using a semi-structured format through guided reflection. For example, mentors could call the teacher once a month and ask the following questions:

- How are you?
- What went well this month?
- What were you challenged by this month?
- What are you looking forward to in the month to come?
- What are you concerned about in the month to come?
- If specific areas were not discussed (FFA, SAE, Classroom, School/Community, etc.) directed follow up questions should be asked.
- The final question should be, let's talk again in a month, what day/times works best for a call? Mentors should send a reminder via text or e-mail 1-2 days ahead of the call as a reminder.

The teachers in this study appreciated the predictability and frequency of the monthly communication. The act of seeing the call on their calendar prompted reflection on the questions they knew would be asked and forced reflection on accomplishments and challenges of the last month and the month to come. Unlike a "cold call" there was time for the beginning teachers to prepare for the discussion because they knew what would be asked. This activity forced them to focus on both the accomplishments and challenges of the last month, and to think ahead about the month to come. Ending the phone call with scheduling the next conversation ensured the predictability and stability they appreciated throughout the year.

Teachers need resources during times they cannot simply "call for help." Therefore, "in the moment resources" should be available at a common location where beginning teachers can obtain information on topics when they need them. This could include State and National FFA processes such as how to complete the FFA roster, and Career Clusters Pathway Applications. Student management, student motivation, and best teaching practices could also be included. These topics should be covered in professional development, but teachers receive so much information at once they need a resource to go to for "in the moment" needs.

Feedback on teaching should be provided to the beginning teacher between the 4th and 8th week of teaching. This timeline allows them to get comfortable, but also become aware of their challenges and where they want to improve. The feedback could be in person by having a trusted professional (preferably one with whom they have relationship or at least prior contact with) visit the beginning teacher's school. The visit could also include a tour of the agricultural education facilities, a meeting with the teacher and an administrator of their choice and an observation of at least one class. The feedback should focus on all aspects of their position. An alternative to this suggestion could be the use of video technology, the teacher could record and comment on a lesson and then provide it to a mentor for feedback. Regardless of the method, the focus of the observation is on growing the young professional, not evaluation or assessment. Although when the beginning teachers were asked "how impactful was the site visit?" their responses were mixed, some expressed it was very helpful and others said it did not impact the monthly conversations. The teachers were very consistent in their thirst for feedback and identified the only measure they had as FFA competition results, therefore a lack of feedback on classroom and SAE components of their program was

identified. The on-site visits should focus on all aspects of the agriculture teachers' roles and duties and provide feedback in the SAE and classroom areas on which they don't normally receive feedback.

Program Content in Year 2

Research shows teachers are least efficacious in the role of leading SAE programs and spend the least amount of their time fostering SAEs (Torres, et al., 2008; Wolf, 2011). To encourage the teachers to increase the focus on SAE, SAE for All training should be provided to all beginning teachers. Consider delivering the training in the summer between year one and two, after they have taught for a year and are feeling more comfortable with the classroom and FFA roles. To aid with SAEs and support the total agricultural education program, consider encouraging a method for parent and community communication earlier. For teachers in year two, they should be guided on different ways they can increase parent and community communication to better utilize volunteers in the agriculture program.

Mentors should talk with beginning teachers to see if a feeling of isolation exists (Flinders, 1988; Gordon, 1991; Mundt 1991; Talbert, 1994). This feeling may be overcome with purposeful meetings or by making goals to go into the main school building during their planning period. It is important for beginning agriculture teachers to purposefully engage in the main building if they are separated, this will foster relationships with other faculty and staff members and have a positive impact on the agriculture program as well. Teachers should also plan purposeful engagement at community events and activities.

Mentor teachers need to be prepared to help evaluate additional responsibilities presented to beginning teachers (Smalley & Rank, 2019). Mentors should coach beginning teachers through determining when to say "yes" or "no." Beginning teachers need to also be advised on how to provide a professional "no" response that reflects their thought process.

Structure in Year 2

Second year teachers need a mentor within their school, if there was a "formal" mentor in year one and they had a positive experience and are still at the school, they should be encouraged to continue the relationship. All beginning teachers need a school-based mentor in year two, especially if they transition between schools. The teachers need a mentor in the agricultural education arena, but their needs from the mentor are less formal and the individual could be self-selected. Continued communication with a peer mentor is valuable to their professional development. One of the mentors should continue monthly guided reflection with them, but other mentor activities can be on an as needed basis.

There needs to be a community of early career agricultural education professionals gathering (physical or virtual), but this could include both second- and third-year teachers as their needs are similar. Consider meeting twice a year. Strategically plan the meetings to avoid the busiest times of year so they have time to think, reflect, and apply new ideas. They need regular reminders they are not the "only one" who may be feeling overwhelmed, to be able to compare successes and challenges, and collaboratively brainstorm solutions.

Content in Year 3

Beginning teachers, especially in year three, are seeking new ways to motivate and engage students and need professional development and strategies to utilize at the beginning of the year. They are also ready to try new things. The teachers have a solid understanding of their skills and student interests and are seeking quality professional development to add new experiences to the program and curriculum.

Beginning teachers need a strategy to communicate with the broader community. They should carefully consider requests from the community and be strategic about opportunities with which they do

and do not engage. Teachers who are in multi-teacher programs need to be supported to be more strategic about getting involved with the community since it may not happen as organically in these situations.

Beginning teachers benefit from being exposed to multiple models of work/life balance (Lambert, 2011). There was not a “right way,” it was finding the best method for them. Related to this, they should be advised to engage with specific and purposeful summer professional development but be aware to not overdo it, which could contribute to “burn out.”

Program Structure in Year 3

A community of young agricultural education professionals should continue through the third year and can be alongside the second-year teachers. Third year teachers needed mentoring in a different form - not necessarily an individual mentor but rather a variety of contacts who could focus on topics where they need support. Teachers in their third year were ready to give back to the profession in informal ways. They had recent experiences which allowed them to relate to first year teachers and utilized them as mentors in small ways which may help them become future mentors. They could be utilized in the first-year teacher program in small, specific, and purposeful ways. One formal mentor should continue monthly guided reflection exercises with the third-year teachers, while other mentoring may be very specific to a topic or skill, and they need help finding content-specific mentors. Peer mentoring should be encouraged.

Recommendations for Future Research

Research should be gathered on current and future induction programs and beginning teacher needs. Fessler and Christensen (1992) and Moir (1990) showed how teachers move through phases throughout their career, but do those phases withstand the test of time? Facilitators of novice teacher programs need to obtain feedback on content and structure needs as the demographics of beginning teachers change. This research should be conducted using both qualitative and quantitative methods to explore the question “how do beginning teachers want to be supported in their first three years?” to learn about the best delivery methods of content as this too will likely change and evolve as new technology options become available.

Sutcher et al.’s (2016) finding that states those teachers who are not fully prepared to teach, leave at the highest rate. Similar research needs to be done to determine the unique needs of non-traditionally certified teachers since this project was limited to traditionally certified teachers. For example, supporters of beginning teachers need to know the content and structure desired by teachers who have added an agriculture endorsement to an existing teaching certificate. Related, facilitators need to understand the support requested by agriculture industry experienced individuals who are completing a teaching endorsement in agriculture.

There is much yet to be learned about accomplishments and challenges related to specific topics such as SAE integration, technology utilization and curriculum resources used. Qualitative studies, over time, that more closely examine specific topics are needed. Prior research (Figland, 2019; Myers et al., 2010) supported the findings of this study, but as teachers change, so may their needs therefore this topic needs to remain current in our profession.

Bigger questions exist on the impact of teacher morale. As Ingersoll (2002) reminds us, retaining teachers also has a financial benefit to districts as training new employees is expensive. He suggested that we focus on improving schools through increased salaries, student management, and faculty leadership. There is evidence in this study that staff, administration, and community support affect teacher morale. The extent of the impact and how staff, administration and community members can make a positive impact on agriculture teacher morale needs to be answered.

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