

# Evaluating First Year Agriculture Teachers' Use of Reflection

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## Abstract

*Reflection is a useful tool which improves teaching approaches; however, many first-year teachers do not appear to reflect upon their instructional plans (McAlpine & Weston, 2000). Prior research has indicated preservice teachers are not utilizing the acquired reflective approaches learned throughout the teacher preparation program (Hatton & Smith, 1995; Kagan & Tippins, 1992; Reynolds, 1993). It is believed teachers fail to implement reflective practice in their professional practice because they have not acquired the pedagogical knowledge to effectively reflect (McAlpine & Weston, 2000). The primary purpose of this study was to determine if beginning agricultural education teachers employed a systematic approach of reflection, determine what components of the teacher preparation program aided in learning, how to reflect, and to examine first-year teachers' gratification with the reflective approaches learned from Iowa State University agricultural education teacher preparation program. The study drew on the theoretical framework of John Dewey and Donald Schon in support of reflection throughout an educator's professional teaching career. This qualitative study consisted of phone interviews with six first-year secondary teachers who graduated from the teacher preparation program. All first-year teachers employed a systematic reflection approach and preferred the following approaches to reflection: written reflection, verbal reflection, or through internal dialogue. First-year teachers indicated they learned how to reflect from student teaching, the tuning protocol process, and in core classes. However, they indicated preservice teachers need more exposure to reflection during their student teaching experience and throughout coursework.*

**Keywords:** preservice teachers; first-year teachers; reflection; instructional planning; lesson plan development

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## Introduction

Hatton and Smith (1995) acknowledged John Dewey as the primary theoretician to initiate the concept of reflection as a problem-solving process. John Dewey (1933) believed individuals do not learn from an experience but learn from reflecting upon the experience. Dewey (1933) distinctly defined reflection as "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends to constitute reflective thought" (p. 118). John Dewey (1933) terms reflection as a meaning-making process in which the learner transitions between old experiences to new experiences by making connections between the two experiences. The connection between these experiences engages

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learners with the instructor throughout the teaching-learning interaction. The relevance of reflection for teachers is associated with their understanding and practice within the classroom. Previous research suggests how closely connected reflection is with a practitioner's understanding and development of their professional practice (Schon, 1983).

One emphasis of a preservice teachers' professional practice is the development of the teacher into an instructional planner (Baylor & Kitsantas, 2005) because the common goal is to produce reflective practitioners within the field of education (Goldsby & Cozza, 1998; Barry & King, 1998). Novice teachers have a major concern with designing and developing lesson plans (Greiman & Bedtke, 2008; Veenman, 1984). Teacher preparation programs utilize reflective teaching to promote growth in developing and employing instructional plans through self-evaluation (Calderhead, 1987). Preservice teachers who learn how to reflect will be able to identify their strengths and weaknesses in instructional planning. Dewey (1933) indicated the practice of reflection allows the learner to come to the realization of what is lacking. Additionally, Epler, Drape, Broyles, and Rudd (2013) found that utilizing a reflective process within preservice teacher's practicum experience (i.e., student teaching), assisted student teachers to identify issues within their instructional plans and helped them reflect upon those problems to determine solutions and implement those changes. Using reflective practice maximizes the effectiveness of instructional plans within the teaching-learning interaction process.

Preservice teachers utilize various methods of reflection to build upon their experiences through self-reflection. Self-reflection is the process an individual goes through to deliberate one's behaviors and actions (Lew & Schmidt, 2011). Numerous authors of teacher preparation texts indicated several reflective strategies to assist preservice teachers in becoming better reflectors: journaling, reflective teaching, peer teaching, and case studies (Calderhead, 1987; Hatton & Smith, 1995; Yost, Sentner, Forlenza-Bailey, 2000). Greiman and Covington (2007) revealed agricultural education preservice teachers preferred to utilize verbal means as a source to reflect upon their experiences rather than written reflection. However, one reflective practice is journal writing within a teacher preparation program instead of oral reflection (Risko, Roskos, & Vukelich, 2002). Preservice teachers engage in initial field experiences and/or practicum, afterwards providing a reflective written report over their observations and learning they experienced (Greiman & Covington, 2007). Initial field experiences and/or practicum provide their university supervisor(s) with knowledge gained and skills learned throughout their experiences.

On the contrary, Webb (1999) indicates written journals or self-reflection is ineffective without verbal reflection because preservice teachers are not motivated to challenge their own thinking. John Dewey (1910) argued reflection needs to happen within a community because expressing yourself to others will shed light on the strengths and weaknesses of one's ideas. Other researchers (Greiman & Covington, 2007; Hill, 2005; Parsons & Stephenson, 2005) indicated verbal reflection supported and enhanced deeper cognitive thinking of preservice teachers' practicum experience (i.e. student teaching). Ishler, Johnson, and Johnson (1998) indicated the amplified need to improve teaching aptitudes over reflection through additional professional development experiences within teacher preparation programs.

One way to instill reflective practice within students is by utilizing the tuning protocol process during a preservice teacher's practicum. Tuning protocol was developed by David Allen and Joseph McDonald as a form of collaborative reflection to redesign and evaluate teachers' assessments and instructional plans; which improves teaching competences (Easton, 1999). Easton (2009) defined the tuning protocol as a formalized process where teachers develop a lesson plan to be implemented within the classroom. During the tuning protocol process, teachers receive critical feedback from peers to fine-tune their lesson and become better instructional planners. Recently,

the modified tuning protocol process has been found to be effective with preservice teachers in agricultural education during their practicum experience (Down, Paulsen, & Clark, 2015; Paulsen, Clark, & Anderson, 2015). Regardless of what approach students utilize to reflect, the reflective process is helpful to assist students in recognizing ways to improve their teaching methods (Epler et al., 2013).

Education practitioners stated reflection is a useful tool for improving teaching methods, but it has been apparent that many novice teachers do not reflect upon their instructional plans (McAlphine & Weston, 2000). Research has correspondingly suggested preservice teachers do not typically utilize the acquired reflective practice techniques developed in teacher preparation programs and after student teaching (Hatton & Smith, 1995; Kagan & Tippins, 1992; Reynolds, 1993). McAlphine and Weston (2000) believed teachers fail to reflect upon their practice because they do not have the acquired knowledge base of the pedagogy to properly reflect. Rodgers (2002) pointed out many teacher preparation programs say they are teaching preservice teachers how to reflect, but this component tends to be missing when exploring those programs. Baylor and Kitsantas (2005) indicate instructional planning can be difficult for novice teachers because they are not provided with regular critical feedback from colleagues. Reflection can be enhanced when novice practitioners are able to utilize a community of peer collaborators (Lave & Wenger, 1991).

Reflecting upon a practitioner's practice enriches observational skills and self-esteem (Heinrich, 1992), improves cognitive thinking abilities (Greiman & Cogington, 2007; Hill, 2005; Parsons & Stephenson, 2005; Moon, 1999), diminishes practitioners stress levels (Hill, 2005), increase self-perception towards accomplishing tasks (Sobral, 2000), and improves the ability to transfer knowledge into different teaching methods along with deepening the understanding of subject matter (Shulman, 1986). Kullman (1998) believed: "reflection will lead to a greater awareness among student teachers of what constitutes appropriate pedagogic practice and will lay the foundations for development, a process which will be ongoing throughout their teaching careers" (p. 471).

Hatton and Smith (1995) identified numerous obstacles which obstruct preservice teachers from learning and retaining reflective approaches learned within a teacher preparation program. Some of these obstacles include preservice teachers' pre-notions conceptualization of teaching, inadequate amount of time to develop reflective practices, and preservice teachers undermined the reflection process because they do not know how peers will perceive their thoughts.

Hatton and Smith (1993) indicated the need for longitudinal research studies that follow preservice teachers into their first-year of teaching upon graduation. Hatton and Smith (1993) pointed out this would determine if first-year teachers are retaining reflective approaches learned within the teacher preparation program, continuing to develop those reflective practices, or lost the act of reflecting upon oneself. Within the field of agricultural education, limited research has been conducted in determining if preservice teachers utilize reflective approaches learned within an agricultural education teacher preparation program, throughout their beginning teaching careers (Hatton & Smith, 1993).

### **Theoretical Framework**

This study's theoretical framework is based off the work of Schon, *The Reflective Practitioner* (1983) and *Educating the Reflective Practitioner* (1987) and Dewey (1933) *How We Think* to support the examination of novice teacher's reflective methods during their first-year as a beginning teacher within the field of agricultural education. Schon (1983) argues that reflection is

an essential component of a teacher's professional practice. The development of teachers requires the ability to recognize problems and through the utilization of continuous reflection throughout one's practice (Schon, 1983, 1987). A practitioner's intelligence is the result of the magnitude of one's reflection (Dewey, 1933).

Schon's (1983) previous research on reflection suggests two primary types of reflection as depicted in figure 1: reflection-in-action and reflection-on-action. Reflection-in-action (contemporaneous reflection) suggests practitioners think about the reason why they perform their actions during the exact moment these actions are carried out (Schon, 1983). Schon (1983) alludes as the unexpected experience happens, reflection instantaneously occurs, and the practitioner reflects what the potential outcome of the action will be and the action itself. Similarly, Thompson and Pascal (2012) indicated reflection-in-action is the manner which a practitioner brings forth their foundational knowledge during the given experience. In contrast, Schon (1983) further specifies reflection-on-action (retrospective reflection) occurs after the experience. Upon completion of the experience, the practitioner reflects later.

John Dewey (1910) argues reflection should happen within a community because collaboration actively confirms meaning and encourages deeper thinking. Martin and Double (1998) believe collaborative reflection allows pre-service teachers to improve their teaching skills and approaches while helping pre-service teachers discover the ineffective instructional plans. Nicholson and Bond (2003) point out reflecting in a community allows teachers to deepen their knowledge base and understanding to the next level through analysis, application, and evaluation.

Reflection-in-action, reflection-on-action, and collaborative reflection are all reflective approaches taught in the agricultural education teacher preparation program. Valli (1997) campaigned for teacher program programs to develop and implement reflective methods within the program to extend preservice teacher's reflective capacity. This fact-finding study was necessary to better understand if the agricultural education teacher certified graduates are applying reflection approaches within their practice and which methods of reflection they are using.

### **Purpose and Objectives**

The primary purpose of this case study was to determine if these preservice teachers utilize reflection approaches learned during their first-year as a beginning teacher and what reflective approaches learned from Iowa State University teacher preparation program are being used in their first-year as a teacher.

The following research objectives guided the study:

1. Determine if beginning agriculture teachers employed an approach of reflection as it relates to their instructional plans.
2. Determine what components of the teacher preparation program aided in learning how to reflect upon their professional practice.
3. Examine first-year teachers' gratification with the reflective approaches learned from the universities agricultural education teacher preparation program.

The American Association for Agricultural Education (AAAE) National Research Agenda Priority Area 4: Meaningful Engaged Learning in All Environments indicated the need for agricultural education teachers to "determine the best way to teach and distribute agricultural information to students for optimal long-term retention" (Edgar, Retallick & Jones, 2016, p. 39). This priority aligns with The Interstate Teacher Assessment and Support Consortium (InTASC)

core teaching standards. Standard 9: Professional Learning and Ethical Practice states “the teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner” (Council of Chief State School Officers, 2013, p. 41).

### **Methodology**

To address the above research objectives, we selected a qualitative observational case study research method. A case study is defined as an in-depth holistic description and analysis of a bounded system (Merriam, 2009). Merriam (2009) further specifies the characteristics of a case study which is symbolized as a circle: “the heart is the focus of the study, while the circle defines the edge of the case: what will not be studied” (p. 27). Merriam means the focus of the research is bounded with limits. Within this observational case study, we selected first-year agricultural education teachers who graduated from the Department of Agricultural Education and Studies teacher preparation program at Iowa State University as the boundary of the case.

### **Sample**

Per Merriam (2009), this case study used a purposive sampling because this sampling technique allowed the researchers to assemble teachers based on specific characteristics. Purposive sampling produces informants whom conform to a set of criteria needed to conduct the study (Copper & Schindler, 2003). The criteria for selecting participants in this research study are the following:

1. Individuals who are first-year agricultural education teachers at a secondary school.
2. Individuals whom graduated from Iowa State University.
3. Individuals whom graduated from the Agricultural Education and Studies department teacher preparation program.

The target population for this case study was all first-year agriculture teachers who were teaching in a secondary agricultural education program and had participated in the tuning protocol during student teaching. Creswell (2007) states results cannot be generalized because the entire population is not represented, however valuable information can still be derived from the study. The researchers created pseudonyms for each teacher to aid in protecting their anonymity.

The following procedures were established in selecting participants that best fit the criteria listed above. The researchers identified first-year agriculture teachers whom graduated from Iowa State University within the Iowa Ag Teachers Directory. The Directory provides each agricultural education teacher’s phone number and email. Every first-year teacher was emailed a flyer indicating our need for participants fitting the criteria. All respondents were used as our informants unless they did not match our criteria.

### **Data Collection**

The participants were comprised of four females and two males who were first-year agriculture teachers and ranged in ages from 22-25 years old. All participants were traditional students. However, one student transferred into the teacher preparation program from a community college. All participants indicated this was their first full-time job acquired upon graduating with their agricultural teaching license. Moreover, a pair of teachers graduated with their master’s degree from Iowa State University immediately following their bachelor’s degree. One teacher attained

his/her teaching license during undergraduate program and the other teacher achieved his/her teaching license throughout their master's degree. Five of the participants teach agriculture in Iowa and one participant teaches secondary agriculture courses in Illinois. All participants indicated they work for a secondary school in a rural community. Though, two teachers indicated they worked for a school district which combines two towns to make up a single program.

Rigorous qualitative methods were used based on the recommendations of Creswell (2007) and Lincoln and Guba (1985). Data collection was approved by Institutional Review Board. The instrument developed for this case study was a phone interview protocol asking each participant 11 open-ended questions focused on reflective practices used in their current teaching career, if it was learned from the teacher preparation program, and if they were gratified with the reflection approaches learned from the teacher preparation program. The developments of the questions asked throughout the interview were developed for the intended population of the study. Phone interview appointments were set up to establish a date and time to collect the desired data. Phone interviews were conducted at the convenience of the participant lasted approximately 30-40 minutes and were recorded with a basic audio-recording device.

Rigor was ensured through the triangulation of the data at multiple data sources. The triangulated data pieces included data collection and researcher notes. Trustworthiness measures included confirmability, dependability, transferability, and credibility. Confirmability was sought through audit trail of raw data, data reduction and data analysis products. Dependability of the data was sought through independent researcher coding, coding checks between researchers after initial coding and at each level of abstraction. Transferability was enabled through the use of rich, thick descriptions of the participants and peer debriefing. Credibility was established through engagement and debriefing.

Upon completion of the phone interviews, the researchers manually transcribed each audio recording. Transcripts were sent to each participant to validate the transcript in order to create validity and trustworthiness within the transcripts. This created validity by member check, as a form of triangulation (Creswell, 2007). Feedback provided by the participants improved the reliability of the findings in the case study. After the case study was completed, all audio recordings were destroyed to protect identity of the participants.

### **Data Analysis**

To accomplish the objectives of the study; the researchers used Braun and Clark (2006) thematic analysis as a method to identify, analyze, and report themes within the transcripts. Data analysis involves reducing the data down to a manageable size in order to develop patterns or themes (Copper & Schindler, 2003). To identify recurring themes amongst the transcripts the data were analyzed in a six-phase process for each objective (Braun & Clark, 2006). The six-phase process includes: becoming familiar with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing the report.

### **Positionality**

The principal investigator was responsible for conducting interviews, transcribing data, coding, and academic writing of the case study. She is an American female without a teaching license, whom was the coordinator for the tuning protocol process. To limit any bias, the researcher asked each participant to expand upon their responses towards all questions related to learned reflective practices. This approach aided in eliminating any bias towards emphasizing the tuning protocol process by asking participants to share experiences; which ensured the researcher did not

jump to a conclusion. The principal investigator has a constructivist perspective as her epistemological lens. According to this paradigm, researchers believe the nature of inquiry is interpretive and its sole purpose is to understand a phenomenon (Farzanfar, 2005). Farzabfar (2005) indicates constructivists are naturalistic individuals whom tend to be non-manipulative or controlling.

### Findings

Objective one sought to determine if agricultural education beginning teachers employed an approach of reflection as it relates to their instructional plans. Upon analyzing the transcripts and coding the data, the researchers found all first-year teachers whom participated in the study adapted a systematic approach of reflection over their instructional plans. Amongst the transcripts, three common themes were found: written reflection, verbal reflection, and internal dialogue reflection. However, most of the participants employed more than one way to reflect upon their lesson plans.

#### Written Reflection

Written reflection was the most common theme which emerged from the first-year agriculture teachers when reflecting upon their instructional plans. The primary reason why written reflection was being used by participants was to make notes on portions of their lessons. Specifically, notes were made by participants of areas that went well and areas which should be changed for the future. Mary indicated:

I constantly reflect on my teaching, every day and after every lesson. I would not say it is a very formal reflection. I primarily think through the lesson and identify things that went well and things that did not go so well. Then I make note of items for improvement in my lesson planner or directly on an activity sheet.

To echo Mary's statement, David indicated, "*Most of my reflection comes from modifying my materials after I see how they could have been used better.*" Thus, these statements would suggest first-year teachers are taking notes and modifying their instructional plans based on their observations over the experiences they had after teaching lessons. In further acknowledging this statement by David, James mentioned he employs a systematic reflection approach by taking notes over his instructional plans to create a more effective lesson plan:

I keep a daily outline of my lesson plans, and an organized documents folder of every piece of material I have used in class. When I have time, which is not overly frequent, I make little notes on good and bad lessons. The second thing I do is not be afraid to make mistakes and admit them when appropriate. If I am not effective, and it is obvious that the kids are not being reached (blank stares, poor performance on small assessments, etc.), then I just say hey, this is not working, let's try something new. Then I spend that night analyzing new ways to implement the material.

#### Verbal Reflection

The second emerging theme related to the instructional plans that beginning agriculture teachers employed was verbal reflection. First-year teachers indicated they utilize verbal reflection with an experienced educator such as a principal, teacher, or mentor to reflect upon their

instructional plans. This verbal reflection allows the teachers to enhance their classroom teaching by incorporating suggestions and recommendations. Sophia said:

Most of my reflection is done with my mentor through the Grant Wood Area Education Agency (AEA). Since I do not often have time to journal we reflect verbally, and she provides notes covering what we reflect. She also is available to observe me teaching and take notes about specific observation.

Sophia reflects upon her instructional plans by receiving critical feedback and observations from a mentor. This person can provide Sophia with beneficial criticism because most teachers do not want to challenge their own thinking. Mary also indicated, *"In the past, I have reflected with my Principal as well as other teachers I have team taught with. Even then, these reflections were more verbal than written."* Reflecting with another individual seems to be the second most popular way to employ a systematic reflective approach during their first-year as an agriculture teacher.

### **Internal Dialogue Reflection**

The final common theme amongst first-year agriculture teachers is internal dialogue. These teachers did not reflect by collaborating with experienced educators or by reflecting by taking notes over their instructional plans. After teaching their lesson plans, these educators used their internal dialogue as a tool for making sense and discovering what went well in their lesson plans and what needed improvement before teaching it again. Olivia stated, *"I always cognitively break my lessons into three categories – what went well, did not, and what needs improvements. It helps me plan ahead for the next time - even if it is a whole semester or year away."* Emily adds, *"I make goals and reflect after each month. The more specific the goal the more it actually gets accomplished."* These teachers are becoming internally aware and are reflecting on their lessons by mentally processing information and improving their lessons by generating self-feedback and/or creating future goals.

Objective two sought to determine what components of the teacher preparation program aided in learning how to reflect upon their professional practice. While analyzing the open-ended questions, the researchers found two common themes which aided former student teachers, now first-year educators, in becoming better reflective practitioners: a) student teaching experience, and a sub-theme within the student teaching experience tuning protocol professional development event, and b) core courses. The researchers made the tuning protocol professional development event a sub-theme for the student teaching experience because this event happens during a preservice teacher's practicum.

### **Student Teaching**

Student teaching experience is the capstone course within the agriculture teacher preparation program. All students are required to student teach before attaining a teaching license. During their student teaching experience, preservice teachers are required to reflect on their experiences by journaling; along with gaining critical feedback over their instructional plans from their cooperating teacher and major professor(s) at Iowa State University. While student teaching Mary indicated:

I believe being able to meet with my student teaching supervisor after a lesson (whether it was face to face or electronic) was the most beneficial as I received immediate feedback. As an agriculture teacher, themselves, the professor was able to give me ideas and critiques that were beneficial to me and my teaching. On the



other hand, I did not benefit as much from the one-sided reflections I wrote after presentations for other classes. This is because those reflections did not allow me to gather outside feedback which I believe to be more beneficial.

To support Mary's response, Sophia stated, *"I think the most learning about lesson plan reflection happened during student teaching because I was able to see student's reactions and assess their knowledge. More specifically my student teaching placement in New Zealand where I taught science allowed me to really reflect on lesson planning and get critical feedback from my coordinating teacher."* Again, David supports his fellow peers by asserting, *"Student teaching was the most beneficial component to learn about reflective practice."*

### **Tuning Protocol**

The sub-theme for student teaching identified the tuning protocol professional development event. The tuning protocol is a tool of collaborative reflection utilized during the student teaching experience. Preservice teachers come together face-to-face or the facilitator hosts a virtual meeting where student teachers utilize a systematic process to reflect upon their own instructional plans and provide critical feedback to peers about their lessons. Mary indicated, *"Tuning protocol was something I completed during student teaching. I feel as though this had the most significant impact on my student teaching. I think this is because it is very structured reflection system and I really enjoyed getting new ideas from my peers/fellow student teachers."* In agreement, Sophia illuminates a statement about the tuning protocol process:

It was great for feedback and considering lesson during student teaching. I have simply not taken the time to do it now as a teacher. I think this would be a much more useful tool if it is used for more than just during student teaching because I can hardly remember the process as we only did it at our student teaching meetings and I was in New Zealand for part of those events.

James also thought:

Tuning protocol was way more beneficial than I originally thought it would be. I dreaded having to take the extra time for these reflective sessions at first. However, after getting a chance to hear of successes and failures from other new teachers, I could reflect and adjust my lessons to be more effective. All student teachers should have to undergo tuning protocol, and they should always be able to select the student teachers that we want to reflect with to provide the most valuable experience.

While most first-year teachers found the tuning protocol beneficial, some indicated the tuning protocol process has challenges with the timing and being realistic. Olivia said, *"There was no immediate feedback which I did not like. By the time, you got the feedback, you were five lessons down the road from it. I think it is good practice, but it needs to be more immediate for it to be effective."*

Mary also alludes:

I have found tuning protocol to be beneficial because it has allowed me to think more critically about my teaching and lesson plan development. However, I do not believe tuning protocol is entirely realistic for teachers because we often do not have the time tuning protocol requires to reflect on our teaching. My reflections

typically last no more than a few minutes because that is usually all I have time for.

### Core Courses

The final emerging theme for what has aided first-year teachers in learning reflective practices within the teacher preparation program were core courses. The university and the board of education examiners require specific courses to be passed to meet the requirements of obtaining a teaching license. Sophia indicated, "*Within a university setting most of our reflection practice came from course work.*" To align with Sophia's thoughts, James specified, "*Any course that allowed me to present a lesson, receive feedback, and then reflect, was beneficial to developing my reflective skills.*" However, James believed:

My best opportunities for reflection were after teaching a lesson. Many reflections in my curriculum and instruction (CI) course I thought were kind of pointless, because we were being forced to reflect on practices that did not fully pertain to the agriculture classroom or the tools/ strategies we planned on using. I did not, and still do not, see the value in reflecting on technology tools that I did not have enough time to fully experience because of time limitations, or on assessing student needs based off data pulled from a website without ever meeting the students. A reflection is only as valuable as the amount of information it is based on, and rarely did I feel that CI courses provided a good look at all aspects of the story, so to speak.

Objective three sought to examine first-year teachers' gratification with the reflective approaches learned from the agricultural education teacher preparation program. Upon analyzing the data, two common themes emerged: the need for exposure to reflective practices during the teacher preparation program and being content with reflective approaches learned.

### Need More Exposure

More than half of the first-year teachers indicated they need more exposure relating to reflection. Olivia says, "More exposure. I do not know if that means writing more lesson plans based on the materials we learned in our elective classes so that they were more refined later or what. I just felt like I could write a great lesson and reflect on it - but it was never a series of lessons taught and we always focused on one at a time." Additionally, David made apparent, "I wish there was more of a focus on making long term lesson plans and reflecting on what needs to be done to accomplish a long-term learning objective and less focus on making perfect one day lesson plans."

Thus, first-year teachers indicated they did learn reflective practices, but believe they need more exposure to fully encompass how to reflect long-term instead of on singular lessons. To support her peers, Sophia elucidates:

I think it would have been more useful to gain more lesson plans (full units) in general so that when I started teaching I could have focused more on reflecting and improving myself instead of how I was going to teach. It is impossible to formally reflect when you must formulate what you will be teaching the next day/ week.

### Effective Preparation

The final emerging common theme indicated first-year teachers' gratification with the reflective approaches learned from the agricultural education teacher preparation program, is that they are content with reflective approaches learned. James concludes:

I gained a perspective of looking at the material through the eyes of the student. This was done a lot through getting feedback from professionals on my lessons. As a young teacher, you do not always know what to look for in a lesson, or how to improve it. Listening to professors and cooperating teachers is valuable to proper self-reflection.

In support, Mary indicated:

I learned how to reflect in an effective manner and generate ideas for future improvement. I also learned what an effective lesson must include and how to differentiate a lesson based on the types of students within the classroom. I really do believe the agriculture preparation program did well in helping me to reflect upon my lesson plans. The most valuable part was the fact that we received ideas from more than just one other person, but at least two other people via tuning protocol. The only critique I have is most teachers do not have a lot of time in their day to spend 15-30 minutes reflecting on one lesson.

However, Mary proceeds to say, "*What I would have liked is to practice more quick/short reflections, as this is more of the reality for busy teachers.*"

### Conclusion, Recommendation, & Implications

The premise of this study was to provide context associated with the reflective approaches used by first-year agriculture teachers, determine what components of the teacher preparation program aided in learning how to reflect upon their professional practice, and examine first-year teachers' gratification with reflective approaches learned throughout the teacher preparation program. All participants provided a somewhat different perspective and/or experience as to how they currently apply reflective approaches, where they learned how to reflect, and if they were gratified with the reflective approaches learned throughout the teacher preparation program. The findings cannot be generalized beyond the participants because not all first-year agriculture teachers were represented, however valuable information can still be derived from the study (Creswell, 2007).

The first issue examined in this study was whether first-year teachers employed an approach of reflection as it relates to their instructional plans during their beginning teaching career. All participants employed a systematic process to reflect upon their instructional plans. Three common themes were found: written reflection, verbal reflection, and internal dialogue reflection. Upon analyzing the findings, the researchers determined first-year teachers preferred to utilize written reflection rather than verbal reflection. This finding contradicts a prior research study conducted by Greiman and Covington (2007), which determined verbal reflection, was the utmost popular way for preservice teachers to reflect upon their practice. Granted more than half of the participants indicated they employed more than one approach to reflect upon their instructional plans. In connection with the conceptual framework, most participants reflected after the instructional plan was taught. This suggests a reflection-on-action thought process where teachers reflect after the experience to improve their practices in the future (Schon, 1983).

The second issue investigated was determining what components of the teacher preparation program aided in learning how to reflect upon their professional practice. Valli (1997) advocated for teacher preparation programs to develop strategies to support preservice teachers' capacity to reflect upon their instructional plans. The researchers found two common themes and one subtheme amongst analyzing the interviews of all participants: student teaching, the tuning protocol process (sub-theme), and core classes are components of the teacher preparation program which aided participants on how to reflect upon their professional practice.

Preservice teachers indicated their student teaching experience (practicum) as the most imperative factor when learning how to reflect upon their lesson plans. Participants specified gaining critical feedback from cooperating teachers and support from university professors aided them in learning how to reflect. This aligns with John Dewey's (1910) argument that reflection should happen within a community. Collaboration confirms meaning and encourages individuals to think deeper. Additionally, tuning protocol allows for collaboration. A couple participants indicated the tuning protocol was helpful during the student teaching experience, but it lacks realistic expectations after graduation as professionals, they do not have the time to go through the entire tuning process after every lesson. Issit (2000) concludes practitioners lack the time to reflect and many educators' hectic workplaces lack the application of reflective practices (Thompson & Pascal, 2012).

The researchers discovered first-year teachers gained reflective skills and knowledge throughout the student teaching experience, within tuning protocol, and through core courses. The final issue examined first-year teachers' gratification with the reflective approaches learned from the agricultural education teacher preparation program. Most participants indicated they needed more exposure to reflection. First-year teachers feel inadequate in learning how to reflect long-term; more than reflecting on a singular lesson plan. Two participants detailed getting critical feedback from experienced educators is valuable when reflecting upon instructional plans throughout the duration of a teacher preparation program.

Jay and Johnson (2002) believed teacher educators should implement different reflection activities during the practicum experience to assist preservice teachers in improving their reflective capabilities. This study should be shared with teacher preparation faculty to intentionally enhance reflection in their teacher preparation programs. We recommend teacher preparation programs implement more reflective activities before and during the student teaching experience. A modified tuning protocol should be introduced and implemented throughout a preservice teacher's coursework prior to student teaching. The modified tuning could be a compressed version of the tuning protocol process instead of a full discourse. This is especially true in core classes, which was indicated as the preferred primary source of learning reflective practice over any other required courses. Not only does more collaborative reflection need to occur; but more exposure to reflection over instructional plans should happen throughout a series of lessons instead of just one singular lesson plan at a time. Throughout the duration of the teacher preparation program, preservice teachers need to learn how to reflect with a process that is quick, convenient, and manageable.

We recommend teacher preparation programs develop easier tools to reflect upon one's professional practice. Potentially, this could help first-year teachers who lack the time to reflect on lessons and a busy workplace environment which lacks the application to produce a reflective practitioner. Reflective approaches learned throughout a teacher preparation program should be made a priority in all teacher preparation institutions to produce better practitioners. Experienced educators can provide beginning teachers with critical feedback and knowledge over their lesson plans. In addition, developing reflective practice is a developmental process for most people. It is recommended the teacher education program approaches reflective practice as a developmental

process by introducing it early in the program and continue to develop it throughout started with guided reflection.

Future studies should follow preservice teachers into their first-year of teaching to determine if they are retaining reflective approaches learned and if first-year teachers are trying to develop those reflective practices. This study was a preliminary investigation into reflective approaches utilized by first-year agriculture teachers. Future studies need to take place across different universities and expand beyond agricultural education into different disciplines. The data derived from other teacher preparation programs outside of the agricultural education realm could benefit teacher educators in teaching preservice teachers how to reflect upon their practice. Moreover, future research studies over reflective practices should be studied at a broader approach.

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