

## Perceptions of Agricultural Educators Entering the Profession through Alternative Means

### **Abstract**

*With the continuing national shortage of agricultural educators, alternative certification has become increasingly important. The programs to prepare alternatively certified educators to enter the profession vary in content and length due to state requirements. Alternatively certified agricultural educators tend to struggle more with the curricula development due to their lack of formal pedagogy training. This issue can negatively impact the students' experiences even though alternatively certified teachers possess highly technical agricultural industry knowledge. Effective teachers have many qualities and skills beyond content knowledge, so it is important to determine how alternatively certified educators perceive their careers, their preparation, and themselves. This qualitative study examined the self-reported perceptions of agricultural educators entering the profession through alternative means according to a 2009 content-based model for teaching agriculture by Roberts and Ball. Participants reported regretting not becoming certified sooner. They have always had a passion for youth and agriculture and have loved teaching despite having no plans to teach agriculture after college. Future research should be conducted to determine the areas with which alternatively certified educators struggle most and how to create professional development opportunities and resources that will better suit what these educators need.*

*Keywords:* alternatively certified, agricultural education, professional development, beginning educators

## Introduction

Effective teaching has been a topic of research for more than forty years (Rosenshine, 1976; McDonald, 1976; Young & Shaw, 1999; Wong & Wong, 2010). Research typically measured teacher's efficacy by student achievement and engagement of students (Rosenshine, 1976; McDonald, 1976; Peterson & Fennema, 1985; Fisher et al., 1981). However, effective teaching is difficult to define due to its many in-depth factors including; perspective, methodology, type of class and information, size of class, and the students' abilities (Young & Shaw, 1999). Wong and Wong (2010) attempted to summarize past research relating to effective teaching. The three most significant characteristics of effective teachers are being exceptional at classroom management, knowing how to teach for learning and mastery of content, and having positive expectations for all students' successes (Wong & Wong, 2010).

Key components of being an effective Career and Technical Education (CTE) teacher also include having a focus on real-life connections, content knowledge, and experience. The importance is due to the uniqueness of CTE in comparison to the core curriculum. CTE can be viewed as an application of both life skills and core curriculum (DelliCarpini, 2010; Stone, Alfeld, & Pearson, 2008). These courses were created to prepare students for employment and life after schooling (Iowa Department of Education, 2018). CTE programs in Iowa include "agriculture, family and consumer sciences, health occupations, business, industrial technology, and marketing" (para. 2) according to the Iowa Department of Education (2018). These areas can all be broken down further into more specific fields. Many high school agriculture programs include "environmental science, agribusiness, natural resources, aquaculture, food science and safety, animal and plant sciences, entrepreneurship, and many other areas" (National Association of Agricultural Educators, n.d., p. 1).

Due to the nature of CTE, additional measurements of teacher effectiveness have been researched. Lawver, McKim, Smith, Aschenbrenner, and Enns (2016) found ten constructs that summarized 50 items tested, including the planning and organization of the environment and objectives, lesson plans, and curriculum; professional and ethical behaviors; development of "respect and rapport with students"; usage of various approaches to learning to adapt lessons to different learning styles; "instructional flexibility"; relevance and commitment to collegiality and teaching; connections to real-life in the content; possession of both content knowledge and experience; and accommodation of learners.

Roberts and Dyer (2004a) found 40 characteristics separated into eight categories that represented effective agricultural educators which included many of the same traits, and incorporate having a positive professional image, good classroom management, confidence, motivation, ethical mindset, excellent organization, and more. Roberts and Dyer (2004a) took it a step further by analyzing the characteristics of effective agricultural teachers in regards to FFA, Supervised Agricultural Experiences (SAE), community relations, and marketing, which included having "sound knowledge" of both FFA and SAE; establishing and maintain relations with community, alumni, and advisory groups; and recruiting new students to agricultural courses.

While agricultural education is growing, the demand for teachers is continually not met (Smith, Lawver, & Foster, 2017). Tens of thousands of students across the country are directly impacted due to the annual shortage of 200 to 400 agricultural educators (Blake, 2017).

Programs face the possibility of shutting down when agricultural education positions are left unfilled (Loscalzo & Gensler, 2015). Countless schools across the nation are expanding their current programs, and even more schools are looking to start their own agricultural programs (Boyd, 2017; Husar, 2017; Teitz, 2017; Weber, 2017). To fill these positions, more agricultural educators are needed.

The National Council for Agricultural Education (2016) states every teacher should be “state certified to teach agriculture, food, and natural resource education” and someone who “actively participates in state and national professional agriculture, food, and natural resource education associations” (p. 95). There are few national regulations for the content that pre-service teachers are required to learn (The National Council for Agricultural Education, 2016) despite there being nine standards for the teacher preparation programs (American Association for Agricultural Education, 2001). Therefore, programs for certifying agricultural educators vary greatly across the nation by state and regional needs (Houck & Kitchel, 2010).

Washburn and Myers (2010) claim that “less than half (44%) of the [studied] teachers reported that their undergraduate major was agricultural education” (p. 91). Jeff Perry, a senior lecturer at Cornell University, was interviewed by John Christensen (2017) and said that while there are more than enough students interested in agricultural education degrees, “a certain percentage of those will enter the agriculture industry rather than teaching, due to high demand for agriculture graduates with those skills” (para. 11). Cornell’s Agriculture Outreach Education program and New York State’s Education Department are working together to improve the certification process for non-traditional teachers to fill vacant teaching positions (Christensen, 2017).

Alternative certification pathways are meant for individuals who do not have a baccalaureate degree in education. “The individuals are often certified based upon work experience, completion of coursework, or completion of a baccalaureate degree in the subject area they were hired to teach” (Ruhland & Bremer, 2002a p. 2). Ruhland and Bremer’s (2002a) stated 28% of the 632 CTE teacher respondents indicated they were certified through alternative certification. While these educators have extensive knowledge of their fields, they tend to lack knowledge in pedagogy and instructional activities, such as lesson planning, objectives, explaining content, and navigating controversial topics (Roberts & Dyer, 2004b). With so many agricultural educators lacking background in pedagogy, professional development opportunities with emphases on pedagogy and instructional activities should be provided for these alternatively certified teachers to increase the effectiveness of the teachers (Ruhland & Bremer, 2002a; Robinson & Edwards, 2012).

Alternatively certified agricultural educators tend to struggle more with the curricula development due to their lack of training in pedagogy (Robinson & Hayes, 2011). The inadequate knowledge in pedagogy can negatively impact the students’ experiences despite the high technical knowledge that alternatively certified teachers possess (Robinson & Hayes, 2011). Educating alternatively certified teachers various pedagogical practices could benefit all students. “By focusing on pedagogical practices that work with the most challenging and vulnerable students, it is possible to identify the critical elements of teaching that results in successful for all children,” (Entz, 2007, p. 2).

### Theoretical Framework

Roberts and Ball's (2009) content-based model for teaching agriculture was utilized as the framework for this study. The content-based model proposes the agricultural industry feeds into industry-validated curricula. Educators who have knowledge and experience in agriculture, such as schooling and "at least 2 years of on-farm experience" (Roberts & Ball, 2009, p.83). Agricultural experiences alternatively certified educators possess enable them to effectively educate their students in agriculture. Both the industry-validated curricula and the experience in agriculture then lead to observable skill acquisition while in school. As skilled workers, the students can apply the content and skills learned from their agricultural education to further the agricultural industry, and thus restarting the cycle of the content-based model.

Alternatively certified educators are competent in the technical knowledge, but struggle with pedagogy (Robinson & Hayes, 2011), which impacts into the "Agricultural instruction and skill acquisition" section. Because each component of Roberts and Ball's content-based model for teaching agriculture factors into the strength of the next section of the loop, each area is then influenced. Therefore, alternatively certified educators' perceptions and effectiveness should be considered.

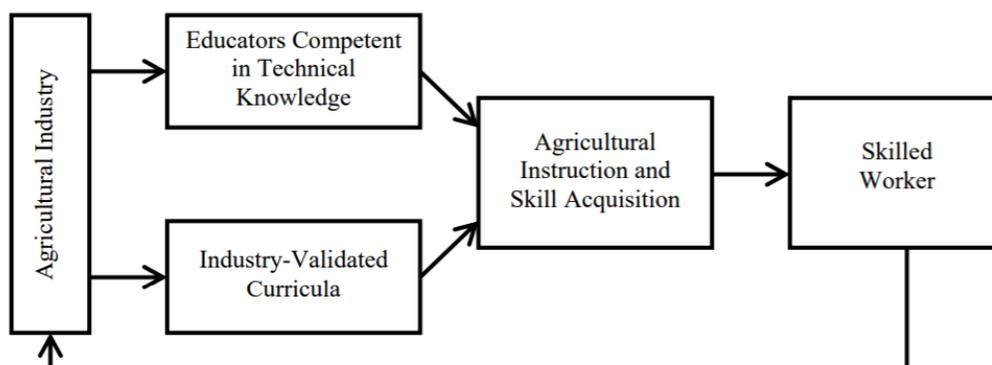


Figure 1. A content-based model for teaching agriculture (Roberts & Ball, 2009)

### Purpose and Objectives

The need in conducting this research study is outlined by the American Association for Agricultural Education's (AAAE) National Research Agenda. This study addresses research priority area five "Efficient and Effective Agricultural Education Programs" (Roberts, Harder, & Brashears, 2016). This research study specifically focuses on "How do school-based agricultural education programs contribute to career and technical education (CTE) and broader educational initiatives?" (Thoron, Myers, & Barrick, 2016, p. 43). This qualitative study aimed to examine the self-reported perceptions of agricultural educators entering the profession through alternative means. The objective was to explore the decision and reasoning resulting from the choice to pursue a career in agricultural education.

### Methods

The purpose of this study was to determine the perceptions of alternatively certified agricultural educators upon entering the profession and the context for the career choice. This

study utilized interviews in which three main questions were asked in order to collect data from alternatively certified agricultural educators. The questions were open-ended and were not leading (Malhotra, 2006). Emails for participants were obtained from a list of alternatively certified teachers from the State Department of Education. Initial emails included the objectives, informed consent, and asked participants to reply to set up a phone interview time. Follow up emails were sent to non-respondents. Phone interviews were conducted and a basic audio recording device was utilized to record the interviews. Field notes were taken during the interviews as well. After the interviews were conducted, the researchers transcribe interviews verbatim and were sent back to the participants to check for accuracy. The transcribed interviews were analyzed and coded individually by researchers (Braun & Clark, 2006). The transcriptions helped the researchers identify significant statements, develop descriptions, and recognize parallels between the participants and their responses (Creswell, 2013). Once researchers individually coded the data, notes were compared and themes identified (Braun & Clark, 2006). Credibility, trustworthiness, and reliability were ensured by utilizing research logs, peer review of study data, and member checks (Lincoln & Guba, 1985).

To provide additional context, researchers created pseudonyms for each participant including a brief background. **Sarah** grew up on a cow/calf ranch but did not take agricultural classes in high school. She majored in Animal Science Production and began teaching high school agriculture directly out of college. **Lisa** raised sheep during high school, and the majority of the people in her town farmed, exposing her to agriculture from a young age. She took agricultural courses from 7<sup>th</sup> through 12<sup>th</sup> grades. Lisa chose to teach high school agriculture after graduating with her Animal Science degree. **Ryan** grew up on a farm, and was heavily involved with high school FFA. He took many agricultural classes during high school and majored in Animal Science with a specialization in Science and Agriculture Leadership before becoming an agricultural educator upon graduating. **Adam** did not have agricultural courses in school and did not personally grow up on a farm. However, his grandparents and friends all farmed, so he was involved in the agriculture industry. He wanted to major in Wildlife and Fisheries but was persuaded to study Medical Technology. Adam eventually switched his major to Biology and finished his education. After graduating he worked as a Wildlife Conservation Officer in [STATE] before teaching high school agriculture. Adam is now finishing his masters in Agricultural Education. **Spencer** took agriculture courses throughout high school. His family had a beef cattle operation until he was in second grade. Spencer studied Electrical Engineering and Agricultural Education before finishing his degree in Agricultural Business. His first career out of college was teaching high school agriculture. **Alex** did not grow up around agriculture or have high school agricultural courses. He studied Bible and Ministry and taught field biology lab while in college. After graduating, Alex did landscaping, worked on a ranch, and worked in school administration. He started to teach agriculture full time 8.5 years after college. **Wesley** took several agricultural courses while in high school. Although he did not grow up on a farm, he did raise rabbits in middle school and was exposed to agriculture in his community. Wesley obtained his Associate Degree in Animal Science and he continued his education studying Dairy

Manufacturing, dropped out, and later returned to finish his degree in General Agriculture. After graduation he worked as a cheese maker at Davisco Foods, at D&E Jerseys, and as a department manager at Runnings before leaving the profession to teach high school agriculture. **Emily** grew up on a ranch and took every agriculture class her high school offered. Her degree in Range Management and Natural Resources helped her in her professional careers which included a customer service representative, a technician at Farm Service Agency, and a secretary in the sheriff's office. She chose to teach high school agriculture after moving to a small, rural town.

### **Findings**

This purpose of this study aimed to examine the self-reported perceptions of agricultural educators entering the profession who were alternatively certified. Participants were asked how and why they began teaching. Four themes emerged from the data, they include: participants did not plan to teach agriculture but had an opportunity arise, participants truly enjoyed teaching, participants knew they wanted to teach and regretted not completing their certifications sooner, and participants had a passion for youth and agriculture regardless of their careers after graduating.

There were a total of eight participants involved in this study. Four were males and four were females. Seven of the participants had an agricultural background while one did not. Five of the eight participants had agricultural classes in high school. Four of the participants had career(s) prior to teaching, while the other four started teaching agriculture in a middle school and/or high school setting right after graduating.

#### **No Plan to Teach but the Opportunity Arose**

All eight participants stated they were not planning on teaching agriculture after graduation. Participants indicated their main reason for choosing agriculture was because the opportunity arose. The opportunity presented itself in many different ways, from family to community support to something happening in their life that pushed them towards high school agriculture.

Spencer's cousin reached out to him because the agricultural teacher at the high school was leaving and he thought Spencer would be a good candidate for the position. Spencer said, "I wasn't certified, but emailed the school and offered to be a long-term sub. The school worked with the state to get me started on alternative certification." Lisa recounted a similar situation and said "my husband suggested I talk to the school to see if they would be interested in hiring. After talking with a few people I learned that I could get my teaching certification after college while working." Sarah explained, "I was heading back to my hometown after graduating college to work on the family ranch... I was then approached to teach."

Even those who had careers prior to teaching said they chose to pursue agricultural education as a career after someone or something persuaded them to look into it. Wesley had three careers before teaching agriculture despite being told by local and state advisors during his high school career he should pursue a career in agricultural education. He explained, "I had a rough week at [work] and when the principal called me I had enough and went to teaching... I choose it because a door opened." While Adam also had other careers before educating high schoolers about agriculture, he chose to seek agricultural education as a career. Adam explained,

“my mother-in-law and brother-in-law who were both teachers encouraged me to look into becoming a teacher.”

### **Enjoy Teaching**

Despite not having a plan to teach agriculture and having not completed a formal agricultural education certification program in college, the participants felt satisfied with the decision to teach. Several of the participants explicitly stated they enjoyed teaching.

Adam recounted “I could have earned more money doing anything else, but I wanted a job that I found interesting... I enjoy working with kids, and I really enjoy learning.” Wesley and Ryan both individually said, “I love teaching,” and Spencer stated, “I love what I do... This is my full-time job and passion.” Lisa indicated, “...though [teaching agriculture] was not a plan of mine until [the school] offered me the job, I am extremely happy in the decision I made,” and Emily stated, “I cannot imagine doing anything else.” Alex explained, “I love agriculture and see the opportunities students have for a future in the field of agriculture.”

### **Regret Not Being Certification Sooner**

The participants’ enjoyment of teaching agriculture was also evident in their regret for not becoming certified to teach sooner. None of the participants initially finished a degree in agricultural education during college, and thus were not certified to teach agricultural education upon graduation. Participants clearly stated they regretted not becoming certified to teach sooner.

Ryan explained, “I knew it was something that always interested me but I never made it my major in college. That is something I regret.” He went on to say, “I like the career choice made, I just wish that I had made that choice in college and not after I graduated.” Spencer had previously majored in Agricultural Education prior to switching to Agricultural Business. He said, “I do regret not finishing out my Ag Ed degree. I have learned a lot in the 6 years I’ve taught and have worked hard to fill in the blanks on what I missed out on.” Adam explained,

I gained a lot of experience and maturity while working as a Wildlife Conservation Officer in addition to being able to develop more skills dealing with people... That allowed me to develop relationships and a reputation locally which helped with the school administration.

Lisa said, “I do not regret getting my animal science degree as that will always be my greatest passion and is helping me extensively teaching in a community that has mostly cattle farmers.” However, Lisa claimed, “I do wish I could have graduated with a teaching certificate.”

### **Passion for Youth and Agriculture**

While the participants were not asked if they felt they were passionate for youth and agriculture, all of the participants stated the fact either directly or indirectly. Regardless of the participants’ backgrounds, teaching experience, and path to education, they all had a passion for youth and agriculture.

Sarah explained, “I’ve always been passionate about learning and agriculture although I never imagined teaching.” Alex made the switch to agricultural education because he wanted to “have an impact on students and show them the opportunities that are out there.” Adam said, “I choose [agricultural education] because I enjoy working with kids and ... learning about plants, animals, and mechanics and then taking that information and trying to distill it into something

that students understand.” Wesley explained his passion for agriculture saying, “I loved Ag classes and FFA. I was a state officer for 3 years and ran for national office.” When Lisa heard the local high school did not have an agricultural education teacher, she pursued the position. She said, “It was extremely important for the young people of such an agriculture-based community to get some agriculture education in high school.” Similarly, Ryan began teaching after he graduated and explained, “It was always in my mind to teach agriculture, especially during college. I always thought it would be something I would enjoy.”

### **Conclusion/Recommendations/Implications**

The purpose of this qualitative study was to examine the self-reported perceptions of agricultural educators entering the profession through alternative means. The intent of this study was not to generalize the results to all teachers who have been alternatively certified. Discretion should be used to ensure that results are not generalized to a broader population.

Overall, participants indicated they enjoyed teaching agricultural education despite not having the plan nor formal education to teach. Participants were glad they chose to pursue their passion for youth and agriculture by teaching agriculture once the opportunity to do so arose. However, many participants regretted not becoming immersed in the profession earlier in their careers. As indicated in the content-based model for teaching agriculture (Roberts & Ball, 2009), experience in the agricultural industry factors into the industry-validated curricula that is taught in agricultural classes. Alternatively certified educators do have extensive knowledge and experience in the agricultural industry, which should aid them in creating industry-validated curricula for classroom and/or laboratory instruction.

While alternatively certified educators are very effective in the classroom and are needed to help decrease the current shortage of agricultural teachers (Smith, Lawver, & Foster, 2017), they should receive professional development that is tailored to them. These professional development experiences should provide alternatively certified teachers more background in pedagogy, especially classroom management (Schonfeld & Feinman, 2012) and incorporating areas like shop and FFA into the agricultural classroom (Roberts & Dyer, 2004b).

According to Ruhland and Bremer (2002b) only one of five alternatively certified teachers felt the certification program met their needs. Several of the respondents indicated they would have been better prepared if their certification programs provided more in-depth and practical training, more opportunities to gain classroom experience prior to teaching, more workshops, and more training in how to plan curriculum and working with students who have exceptionalities (Ruhland & Bremer, 2002b).

Alternatively certified educators need opportunities to account for the lack of formal agricultural education, such as a professional development in the form of a mentoring program. Mentoring programs which “provide trained mentors who have the time and resources to plan lessons with candidates, share curricula, demonstrate lessons, and provide feedback after frequent classroom observations” are highly effective (Humphrey, Wechsler, & Hough, 2008, p.2). Support throughout the first few years of teaching has been shown to positively impact teachers’ experiences in the profession (Ruhland & Bremer, 2002b). An extra component which could be added by an agricultural educator mentorship is resources for including shop and FFA into the classroom and how to start a new program. These areas are unique to agricultural

education when compared with core content areas and should be expressed to alternatively certified teachers.

Providing alternatively certified teachers with a formal mentor in another agricultural education program as well as a more local CTE educator as a supplemental mentor could be very beneficial. The Texas Education Agency (TEA) has created the Career and Technical Education New Mentoring Program, which offers mentoring and professional development, such as “help with lesson planning, assessments, curricular materials, and classroom management, through year-long mentoring activities and just-in-time assistance” for new teachers (Resources for Learning, n.d., para. 1). There are Facebook communities provided through this program that connect new CTE teachers with each other in order to share information, advice, ideas, and more. This community creates a slightly similar atmosphere by providing a local mentor and allowing educators to make connections with other teachers.

New teachers could also benefit from a Beginning Teacher Guide which includes tips, advice, and timelines for what to do when getting to a new community and/or starting a new program. CTE teachers sometimes struggle creating positive relationships with community members and local businesses (Weingarten, Johnson, & Picker, 2015). Having a guidebook from other agricultural educators could help new CTE teachers learn how to build the CTE program, create relationships with the community, and fellowship with other local teachers. The Survival Guide for New Teachers that was published in an attempt to help new teachers learn how to effectively work with veteran teachers, parents, principals (DePaul, 2000). However, it is aimed at all beginning teachers rather than specifically agricultural educators, and thus lacks information on a CTE program.

Future research should be conducted in areas of pedagogy alternatively certified teachers struggle most with. Another area of focus to study is the additional struggles alternatively certified educators face. Both of these topics of research could be utilized to better develop the process of becoming alternatively certified or to create more useful professional development opportunities which better fit what these teachers need to improve upon. Furthermore, a long-term mentoring program or induction program that lasts for at least five years could be beneficial for alternatively certified educators. Rather than having support for the first year or two of teaching, educators could have guidance for the first five years during which they would be able to establish a program of their own. While professional development is a great way to further improve both alternatively certified and beginning educators, professional development may need to be tailored differently to the two groups. Both groups of teachers have different needs, and thus varying types of professional development. Therefore, the two types of professional development opportunities should be marketed to their respective intended audiences. Further research should be conducted on how to provide better professional development.

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